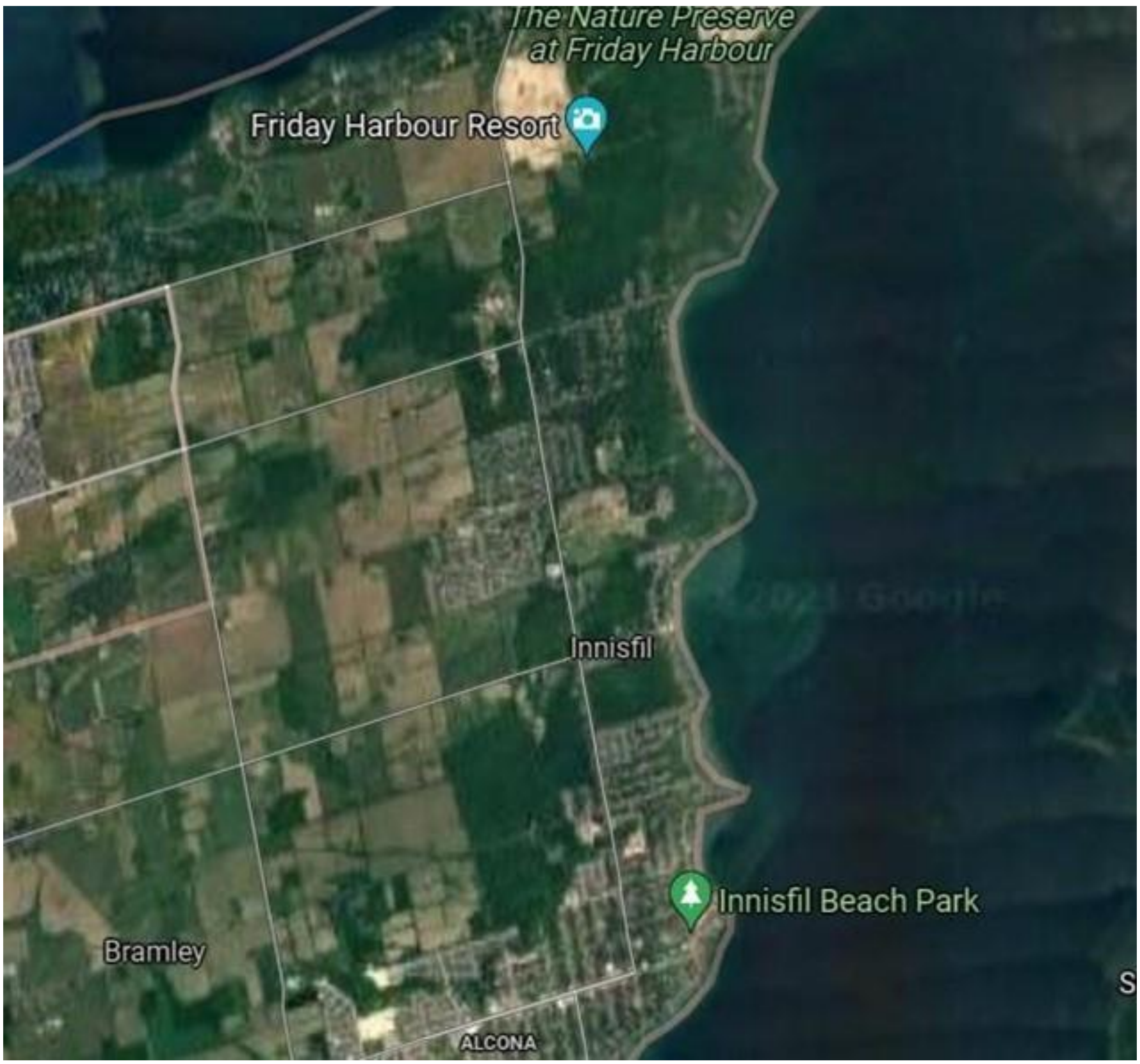
Town of Innisfil

Preliminary Design & Reconstruction Plan of 25th Sideroad, Town of Innisfil

Stormwater Management Report

August 04, 2022 FINAL



Preliminary Design & Reconstruction Plan of 25th Sideroad, Town of Innisfil

Stormwater Management Report

Town of Innisfil

FINAL

Project No.: 211-06027-00
Date: August 04, 2022

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Revision History

FIRST ISSUE	
September 14, 2021	Draft for comment / review
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Ellie Fazeli, Designer	Tahmineh Sarabian, Project Engineer
REVISION 1	
October 21, 2021	Address Client comments
Prepared by	Reviewed by
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REVISION 2	
April 18, 2022	Address Client comments
Prepared by	Reviewed by
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FINAL	
July 21, 2022	Preliminary Report
Prepared by	Reviewed by
Ellie Fazeli, Designer	Steven van Haren, Manager
Responding Comments	
August 4, 2022	Preliminary Report
Prepared by	Reviewed by
Ellie Fazeli, Designer	Steven van Haren, Manager

Signatures

Prepared by

August 4, 2022

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Designer, Water Resources

Date

Approved[1] by (must be reviewed for technical accuracy prior to approval)

August 4, 2022

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Date

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Proof (non-technical) / Format	Melinda Nowak

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1 INTRODUCTION

1.1 Scope

WSP has been retained by Town of Innisfil to provide a preliminary stormwater management plan for implementing Low Impact Development (LID) systems within the proposed reconstruction of the 25th Side Road (approximately 7 kilometres from Big Bay Point Road / 13th Line to Innisfil Beach Road) and a proposed roundabout at the intersection of 25th Side Road and 9th Line. The Town also seeks to implement roadway improvements to accommodate growth while prioritizing active transportation along the length of the project. The objective of this report is to:

- Provide preliminary direction for planning
- Design a range of LID systems appropriate for the subject site
- Analyze the capacity of the 25th Side Road existing crossing culverts
- Review the condition of existing culverts and recommend repair or replacement of the existing culverts

This report will illustrate how each requirement will be addressed as informed by the goals of the Town of Innisfil Engineering Design Standards and Specifications Manual, Technical Guidelines for Stormwater Management Submission LSRCA (2016), and MOE (now MECP) Stormwater Management Planning and Design Manual (Ontario Ministry of Environment, 2003).

The study area is located within the Innisfil Creeks subwatershed under the jurisdiction of the Lake Simcoe Conservation Authority (LSRCA).

The existing 25th Side Road is a two-lane roadway and can be classified as a collector roadway with rural cross-sections along the corridor. The following images present the existing conditions of the road. Please refer to **Figures 1-A, 1-B, 5** and **9** for the existing road cross-sections in **Appendix A**.

Image 1-1: Existing Conditions of 25th Sideroad © 2022 Goggle Earth

Image 1-2: Existing Conditions of 25th Side Road **© 2022 Goggle Earth**

Image 1-3: Existing Conditions of 25th Side Road © 2022 Goggle Earth

Under post-development conditions, WSP proposes the following contexts to illustrate the varying roadway character:

Context 1 (Low-density Residential):

Includes the community of Alcona from 80 m north of Innisfil Beach Road to Rose Lane (2.0 km) and through Sandy Cove Acres from Lockhart Road to 300 m south of Mapleview Drive (1.1 km).

Context 2 (Green Space):

Includes the segment north of Mapleview Drive (1.4 km) which is adjacent to rural and key natural heritage feature areas. Context 2 includes rural cross-sections and will have limited driveways.

Context 3 (Downtown Commercial):

Includes the first 80 m north of Innisfil Beach Road, the Innis Village development in Sandy Cove Acres (~0.7 km) and the future urban area south of Mapleview Drive inclusive of the intersection approaches (0.3 km). Context 3 includes urbanized cross-sections. This portion of the road will be designed for on-street parking, streetscaping, placemaking, walkable development, and lower vehicle travel speeds.

The location of the proposed Contexts 1 to 3 is shown in the map below.

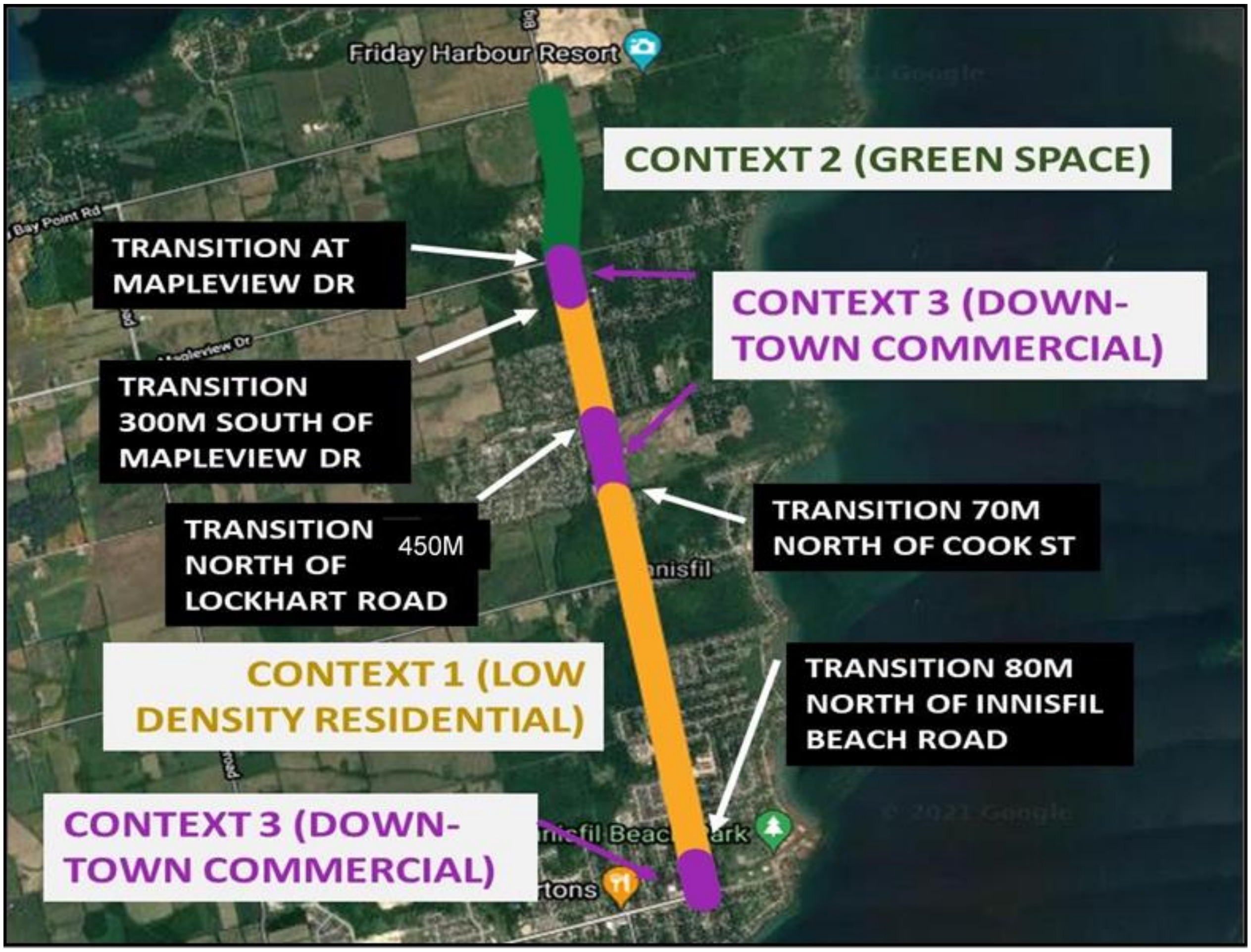
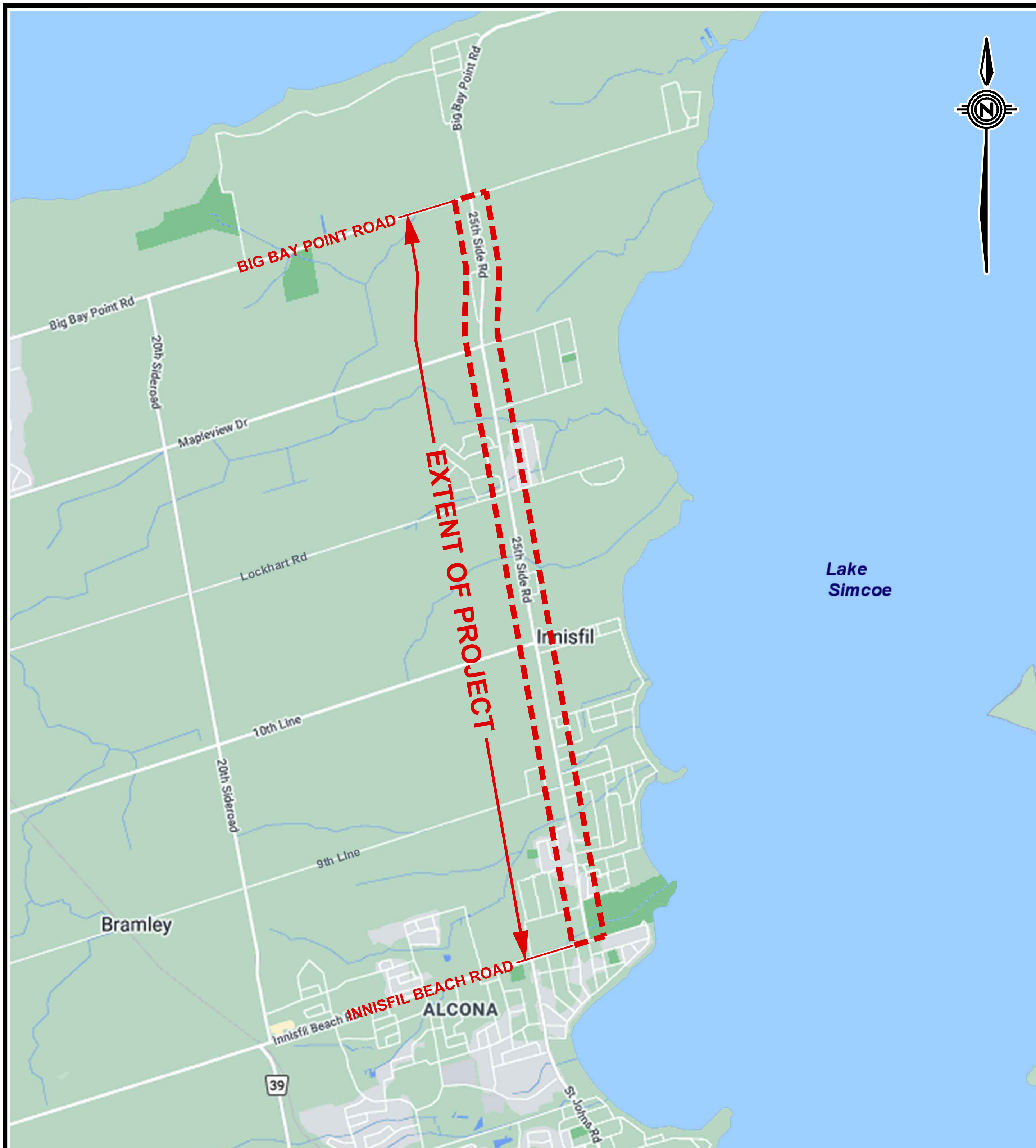


Image 1-4: Map of the Study Area including the Three Corridor Contexts

1.2 Site Location

This section of the 25th Side Road is bounded by Innisfil Beach Road to the south, Lake Simcoe to the east, Big Bay Point Road to the north and residential and agricultural lands to the west. Please refer to **Figure 1-1** for the location of the site.



@2021 Google - Map data @2021 Tele Atlas

0 0.5 1.0 1.5 2.0 2.5km

CLIENT
TOWN OF INNISFIL

TITLE
25th SIDE ROAD, INNISFIL

SITE LOCATION

wsp

Checked S.v.H.	Drawn AutoCAD/B.K.B.
Date SEPTEMBER 2021	Proj. No. 211-06027-00
Scale AS SHOWN	Figure No. 1.1

FIGURE 1.1 - 25th SR Innisfil.dwg - Site Location C:\Users\baileyb\ACCDocs\WSP Canada projects (AMER)\Land Development Ontario\Project Files\211-06027-00 P-20-24 Innisfil 25 Sideroad\SWM\CAD\FIGURES\ Sep 13, 2021 - 11:31am

1.3 Design Criteria

1.3.1 Stormwater Drainage System Policies and Design Guidelines

The following documents were referenced in the assessment of the drainage system:

- Town of Innisfil Engineering Design Standards and Specifications Manual (Revision # 6 May 2020)
- Technical Guidelines for Stormwater Management Submission LSRCA (2016)
- Low Impact Development Stormwater Management Planning and Design Guide, 2010, CVC and TRCA
- Ministry of Environment (MOE, now MECP) Stormwater Management Planning and Design Manual, March 2003
- MTO Drainage Management Manual, 1997
- Comprehensive Stormwater Management Master Plan (CSMMP) Town of Innisfil prepared by C.C. Tatham & Associated Ltd, dated October 2016
- Alcona North Secondary Plan Town of Innisfil prepared by C.C. Tatham & Associated Ltd, dated August 2011
- City of Toronto, Wet Weather Flow Management Guidelines, November 2006

The MTO Highway Drainage Design Standards (HDDS, 2008) prescribe standards for designing Surface Drainage Systems (SD) and Water Crossings (WC). The standards that are relevant to this study are as follows:

- **Road Crossing and Entrance Culverts:**
  - The minimum sizes for entrance and road crossing culverts are 400 mm and 500 mm, respectively.
  - The conveyance capacity of the culvert must be sufficient to ensure that the maximum depth of ponding as indicated in the table below is not exceeded.

LOCATION	STORM RETURN FREQUENCY (YEARS)		
	5	25	100/Hazel
Local Roads (2 Lane)	No ponding	0.05m above crown	0.15m above crown
Collector (4 lane+), Local and Industrial Roads (extra wide lanes)	1.0 m wide in gutter or 0.10m deep at low point catchbasins	up to crown “contradictions” - discuss	0.10 m above crown maximum depth of flooding of 0.3 m

Source: WC-7; MTO Highway Drainage and Design Standards. January 2008.

– The minimum depth of cover for all culverts is 300 mm unless otherwise indicated by the Town.

– **SD-1 Design Flows for Surface Drainage Systems:**

This standard identifies the minimum design flows that shall be used for the sizing of road surface drainage systems. The selected design flow shall be applied to size the minor and major drainage systems (piped and surface flow) for various MTO road types as shown in **Table 1-1**.

Table 1-1: Design Flow for Minor system and Major System

Functional Road Classification	Drainage System Type	Design Flow
Freeway	Minor System	10-Year
Arterial (Urban)	Major System	100-Year
Arterial (Rural)	**Minor System**	**10-Year**
Collector (Urban and Rural)	**Major System**	**100-Year**
Local Road (Urban and Rural)	Minor System	5-Year
	Major System	-

Source: SD-1: MTO Highway Drainage Design Standards. January 2008.

Road grading must direct flows from the right-of-way to a safe outlet at specified low points. Roads may be used for major system overland flow conveyance during the Regulatory Event (i.e., the larger of the 100-yr storm or Hurricane Hazel) storm subject to a water depth limitation of 0.10 m above crown of road for collector roads.

– **SD-9 Roadside Ditches (Conveyance Only):**

This standard identifies the minimum design requirement of roadside ditches for the conveyance of flow. It does not address the design of roadside ditches for improvement of water quality. Roadside ditches shall be designed to convey both the Minor System Design Flow and the Major System Design Flow, as defined in Standard SD-1, Design Flows for Surface Drainage.

– **WC-1 Design Flows (Bridges and Culverts):**

This standard identifies the minimum design flows for the sizing of bridges and culverts for flow conveyance on Regulated and Non-regulated watercourses as shown in **Table 1-2**. It also identifies the requirement for accommodating the regulatory flow on regulated watercourses, and for determining the maximum allowable increase in flood elevations upstream of a bridge or culvert.

Table 1-2: Design Flow Return Period for Bridges and Culverts – Standard Road Classification

Functional Road Classification	Return Period of Design Flows (Years) 1, 2, 3		Check Flow for Scour
	Total Span less than or equal to 6.0 m	Total Span greater than 6.0 m	
Freeway, Urban Arterial	50	100	130% of 100 year
Rural Arterial, Collector Road	**25**	50	**115% of 100 year**
Local Road	10	25	100% of 100 year

Source: WC-1; MTO Highway Drainage Design Standards. January 2008.

- **WC-7 Culvert Crossings on a Watercourse:**

  This standard identifies the minimum Freeboard (**Table 1-3**), the minimum Clearance, and the maximum Flood Depth at culvert crossings (**Table 1-4**).

Table 1-3: Freeboard for Culverts

Road Type	Freeboard
Freeways, Arterials, Collectors	≥ 1.0 m
Highway Ramps	≥ 1.0 m
Local Roads including Private Entrances	**≥ 0.3 m**

Table 1-4 depicts the design standard for Flood Depth at the upstream face of a culvert. It is expressed as a ratio of the Flood Depth at the upstream face of the culvert to the diameter or rise of the culvert (HW/D).

Table 1-4: Flow Depths at Culverts

<table>
<tr><th>Functional Road Classification</th><th>Design Flow</th><th>HW/D Ratio</th></tr>
<tr><td>Freeways, Arterials, Collectors</td><td>See Standard WC-1</td><td rowspan="2">Culverts with diameter or rise < 3.0 m HW/D ≤ 1.5
Culverts with diameter or rise 3.0 to 4.5 m HW ≤ 4.5 m
Culverts with diameter or rise > 4.5 m HW/D ≤ 1.0</td></tr>
<tr><td>Highway Ramps, Other Roads, and Private Entrances</td><td>See Standard SD-13</td></tr>
</table>

1.3.1.1 Stormwater Management Policies and Design Guidelines

- **Quantity Control:**

  The post-development peak flow rates are not to exceed the corresponding predevelopment peak flow rates for the 1 in 2 year, 1 in 5 year, 1 in 10 year, 1 in 25 year, 1 in 50 year and the 1 in 100 year design storm events.

- **Volume Control:**

  Linear redevelopment projects on sites without restrictions that create 0.5 or greater hectares of new and/or fully reconstructed impervious surfaces, shall capture and retain / treat on site, the larger of the following:

1. The runoff from a 12.5 mm event from the fully reconstructed impervious surface and newly constructed impervious area.
2. The runoff from a 25 mm event from the net increase in impervious area on the site.

- **Water Quality:**
  - **Suspended Solids**

  The required suspended solids removal treatment is MOECC (now MECP) Enhanced Protection Level (Level 1). This corresponds to a long-term average removal of 80% of suspended solids.

  - **Phosphorus**

  LSRCA initiated the Lake Simcoe Phosphorus Offsetting Policy (LSPOP) in 2017, which requires that all new development must control 100% of the phosphorus from leaving their property. This is referred to as the Zero Export Target. Under this policy, any remaining phosphorus load that cannot be controlled would trigger the need for an offset to achieve a net zero target.

- **Water Balance:**

  Maintain pre-development infiltration rates under proposed development conditions.

1.4 Rainfall Information

Rainfall Intensity-Duration-Frequency (IDF) parameters for various return period design storms were obtained based on the IDF tables developed by Environment Canada for Barrie Water Pollution Control Centre (WPCC) including a 15% increase in rainfall intensity data to account for climate change. The parameters, 4-hour, 6-hour and 12-hour rainfall depths are summarized in **Table 1-5**.

Table 1-5: Rainfall Parameters

Return Period (Years)	2	5	10	25	50	100
A	678.085	853.608	975.865	1146.275	1236.152	1426.408
B	4.699	4.699	4.699	4.922	4.699	5.273
C	0.781	0.766	0.760	0.757	0.751	0.759
Equation for Rainfall Intensity	$I = A/(t + B)^C$					
Rainfall Depth, mm (4 hour)	37.0	50.5	59.7	71.3	79.5	87.6
Rainfall Depth, mm (6 hour)	42.3	59.5	70.8	85.2	95.9	106.5
Rainfall Depth, mm (12 hour)	46.7	64.3	76.0	90.7	101.7	112.5

1.4.1 Storm Distribution

A hydrologic study was completed by C.C. Tatham Associates Ltd. within the Comprehensive Stormwater Management Master Plan (CSMMP) Town of Innisfil Report dated October 2016 for subwatersheds within the study area (i.e., Bon Secours, Leonard, Mooselanka, and Sandy Cove Creeks). The hydrologic study was completed using Visual OTTHYMO (VO2) hydrologic model software and applied the 4-hour Chicago and 12- hour SCS Type II design storms. For the purpose of this study, the CSMMP model data and catchment delineations have been used where possible. For the SCS storms, a 12-hour SCS Type II mass storm file has been used, using total precipitation depths for the 12-hour storm event from the Barrie WPCC data. The 4-hour Chicago storm event has also been modelled using the Barrie WPCC rainfall data to determine the peak flows under existing and future conditions. In order to model a climate change scenario using only the 12-hour SCS storms, we have selected the Barrie WPCC data as our baseline and applied a 15% increase in rainfall intensity. The total rainfall depths for the 12-hour SCS Type II storms are summarized in **Table 1-6**.

Table 1-6: Total Rainfall Depths

Storm Event	Depth (mm)	
	12-hr SCS (no climate change)	12-hr SCS (climate change)
2-year	40.8	46.8
5-year	56.4	64.8
10-year	66.0	75.6
25-year	79.2	91.2
50-year	88.8	102.0
100-year	98.4	112.8
Regional (Hazel)	212	

1.5 Geotechnical Investigations

1.5.1 Geotechnical Investigation 25th Side Road

A preliminary Geotechnical investigation report was provided by WSP Canada Inc. (WSP), dated April 2022 for the subject site. Fourteen boreholes ranging between 1.5 m to 2.1 m depth below ground surface (bgs) and seven coreholes were installed through the existing road surface to determine the type and thickness of the pavement structure. Six hand-dug holes were implemented to confirm topsoil thickness for the proposed new active transportation facilities (cycle tracks, multi-use paths, and sidewalks) within the study limits. Based on the Geotechnical Investigation Report a flexible pavement structure (asphalt over granular fill material) was encountered. The existing pavement structure consists of:

- Asphalt Thickness: 125 mm
- Granular Base Thickness: 200 mm
- Granular Subbase Thickness: 290 mm
- Total Pavement Structure Thickness: 615 mm

Subgrade soil material consists mostly of sand, except in areas of BH1 and BH5 where silty clay was observed.

1.5.2 Geotechnical Investigation (Proposed Roundabout)

Peto MacCallum Ltd. (PML) conducted a geotechnical investigation in 2018 on 9th Line between Ralph Street and Lake Simcoe. A total of 12 boreholes were drilled to a depth of 2 m.

For the preliminary design of the roundabout, the recommended pavement design will be based on the findings of BH17 from the PML report (18BF060), which was drilled approximately 30 meters east of the intersection. A flexible pavement structure (asphalt over granular fill material) was encountered within BH17. The existing pavement structure consists of:

— Asphalt Thickness: 70 mm
— Granular Base Thickness: 150 mm
— Granular Subbase Thickness: 280 mm
— Total Pavement Structure Thickness: 500 mm

A deposit of sand with a trace of gravel and silt was encountered below the granular subbase in BH17 at a depth of 0.5 m and was present up to borehole termination depth (2 m).

1.5.3 Groundwater and Hydraulic Conductivity

Groundwater was not encountered during the WSP investigation, and all of the boreholes remained open and dry upon completion. It should be noted that groundwater levels can vary and are prone to seasonal fluctuations in response to major weather events. The lowest permeability (i.e., hydraulic conductivity) of the subgrade has been estimated in Boreholes BH1 and BH5 (i.e., between 1 x 10^{-8} to 1x 10^{-10}). The medium permeability (i.e., 1 x 10^{-4}) has been estimated in Borehole BH3.

The Geotechnical Investigation Report was provided in a separate package.

2 EXISTING CONDITIONS

2.1 General

The existing road is a two-lane, two-direction roadway classified as a collector roadway. Within the study limits, the existing road is a flexible pavement with a rural cross-section (i.e., surface water drains towards ditches on either side of the road crown except for the first 80 m north of Innisfil Beach Road, which drains to the existing catchbasins along the road). Please refer to **Appendix A** for existing cross-sections of the road.

The 25th Side Road study area is located within the Innisfil Creek subwatershed (see **Appendix A / Figure 2-1**). Some portions of the four named streams (i.e., Bon Secours Creek, Leonard's Creek, Moosenlanka Creek and Sandy Cove Creek) were identified within the study boundary, all of the subwatershed's streams have headwaters in agricultural areas and then flow downstream toward the existing 25th Side Road crossing culverts prior to being discharged into Lake Simcoe. Refer to **Figure 2-1** for the location of Bon Secours, Moosenlanka, Sandy Cove, and Leonard Creeks. **Figure 2-2** illustrates the subwatershed boundaries within the study area.

Although the majority of the study area includes agricultural lands, some settlement areas (i.e., Alcona, Sandy Cove and Big Bay Point) are identified within the study area as well.

The Alcona settlement area consists of a total of 1569.1 ha of land and a total of 21 existing SWM facilities. The Sandy Cove settlement area is 501.5 ha of land in size and hosts two existing SWM facilities. The Big Bay Point settlement area consists of a total of 239.1 ha of land with no existing SWM facility identified. Please refer to **Appendix A**, **Figures 9A** and **9F** for the location of the existing SWM facilities within the Alcona and Sandy Cove settlement areas. Some portions of Alcona, Sandy Cove and Big Bay Point settlement areas are located on the west side of the subject site (**Figure 2-2**).

2.1.1 Existing 25th Side Road Culvert Capacity Analysis

To estimate the capacity of the existing 25th Side Road crossing culverts, the study area was delineated into 12 catchments (i.e., Catchments 101, 101-1, 102 to 111). A Visual OTTHYMO (VO6.1) model was simulated to estimate the existing peak flow rates for Catchments 101,101-1 to 111. Peak flow rates for the 4-hour Chicago and 12-hour SCS Type II design storms were determined for the 25- and 100-year return periods (**Table 1-2** / **Section 1.3**).

The model has been developed using the existing land use data provided within the Comprehensive Stormwater Management Master Plan (CSMMP) Town of Innisfil Report.

As mentioned previously, there are some SWM facilities within the study area which control runoff generated from the settlement areas prior to being discharged into the 25th Side Road existing crossing culverts. The impact of the existing SWM facilities has been considered for the capacity analysis of the existing 25th Side Road crossing culverts.

The hydrologic model within the CSMMP report includes catchment delineations for Bon Secours, Leonard, Moosenlanka and Sandy Cove Creeks. Although the details of the CSMMP's Visual OTTHYMMO model outputs and SWM facilities release rates are not available, the CSMMP's Visual OTTHYMMO model data and catchment delineation within the settlement areas were used to estimate flow rates at the location of the 25th Side Road existing culverts. Refer to **Figures 9-A** and **9-F** in **Appendix A** for further details.

Under existing conditions, to estimate the capacity of the existing 25th Side Road crossing culvert (i.e., Bon Secours Creek crossing culvert), Catchment 101 was divided into two sub-catchments. The immediate catchment on the west side of 25th Side Road (i.e., Catchment 101-1) was modelled in this report. Since there are some existing SWM facilities within the remaining areas of Catchment 101, the CSMMP's Visual OTTHYMO modelling results for Catchments AC100 to AC107 were used for the remaining areas of Catchment 101.

Figure 9-A in **Appendix A** shows the location of Catchments AC100 to AC107.

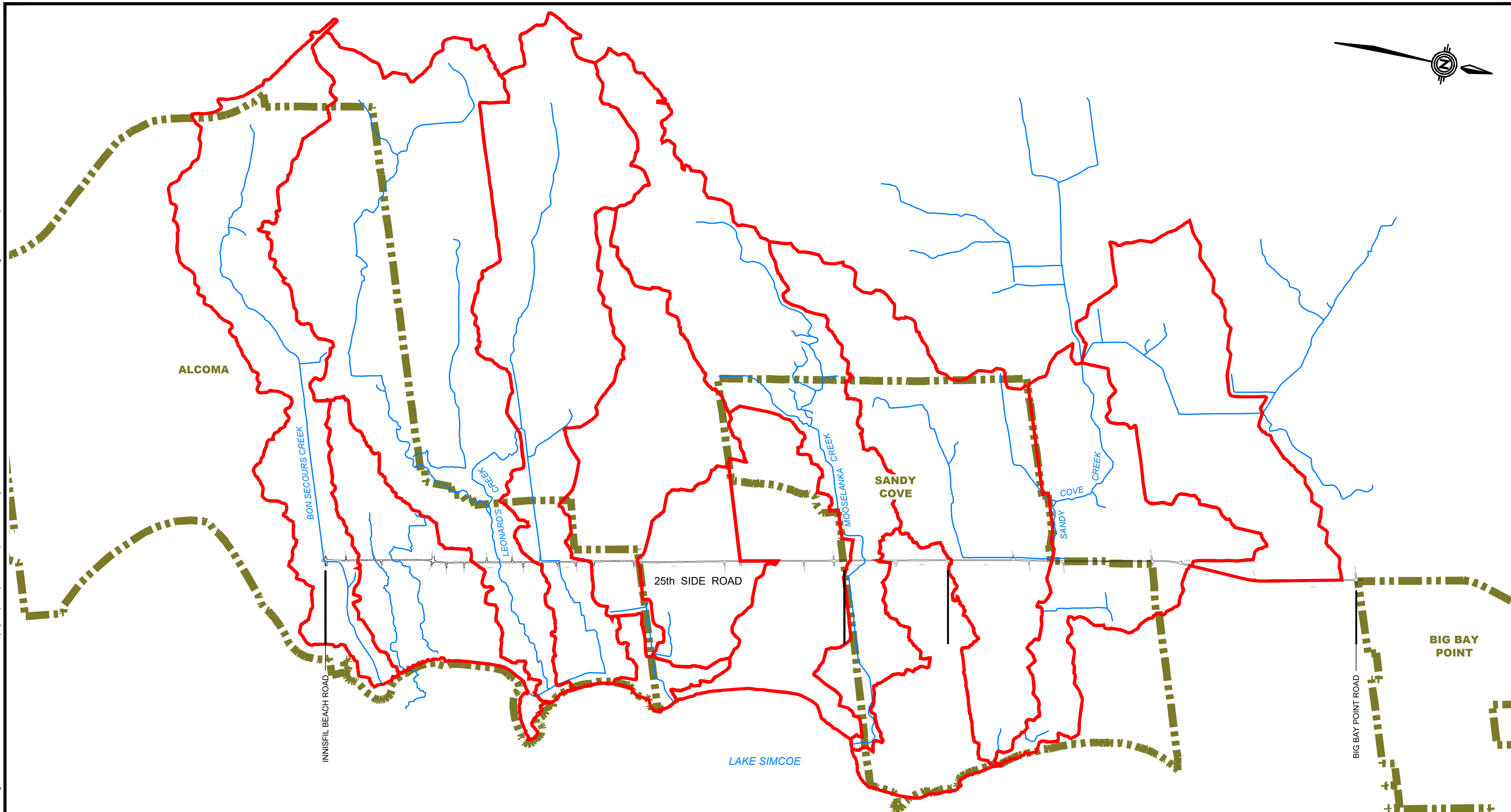
Figure 1 in **Appendix A** shows a sketch of the CSMMP existing Visual OTTHYMO model for Catchments AC100 to AC 107. No SWM facility exists within Catchment 102, therefore, WSP modelled Catchment 102.

Runoff generated from portions of Catchment 103 is controlled by the existing SWM facilities (i.e., 8-3, 8-4, 8-5 and 8-9). Please refer to **Figure 9-A** in **Appendix A** for the location of these SWM facilities. The function of these existing SWM facilities has been modelled within the Alcona North Secondary Master Drainage Plan study prepared by C.C. Tatham & Associated (CCTA) Ltd. dated, August 2011 (see **Figure 9-A** in **Appendix A** for the location of Alcona North Secondary Plan). Although the details of the modelling results are not available, a summary of the peak flow rates expected at the 25th Side Road has been provided in Table 2 of the CCTA report. Based on the results, the performance of the existing SWM facilities in reducing the flow rate within Catchment 103 closely matches existing conditions (i.e., without SWM facilities). Thus, the existing flood prone areas within Catchment 103 downstream of the 25th Side Road existing culverts are not reduced by controlling flow rates within the SWM facilities. The Alcona North Secondary report indicates some stormwater management plans to reduce runoff generated from this portion of the study area, which has not been constructed. Therefore, within the current Visual OTTHYMO model WSP disregarded the existing SWM facilities within Catchment 103.

There is no existing SWM facility within Catchments 104 to 111. As such, Catchments 104 to 111 have been modelled.

Table 2-1 summarizes drainage areas, the assumed CN numbers corresponding to each land use, the TIMP and XIMP values for STANDHYD commands and the time to peak (Tp) values for NASHYD commands within the Visual OTTHYMO model. The time to peak values for the catchment areas was calculated using the Airport Method for runoff coefficients less than 0.4. Please refer to **Appendix B**.

Under existing conditions, the existing culvert capacities were evaluated using CulvertMaster. The physically measured properties of the culverts, including diameter, length, and slope, were applied to a CulvertMaster model from the existing survey plan. Based on the CulvertMaster modelling results, the capacities of the existing culverts are significantly lower than the 25- and 100-year storm events (**Table 2-2**). CulvertMaster was used to estimate the minimum required size of the culverts to pass the 25-year design storms. The results are provided in **Table 2-2** and **Appendix B**. The details of the Visual OTTHYMO and CulvertMaster modelling results are provided in **Appendix C** and **D** respectively.



LEGEND

CATCHMENT BOUNDARY

SETTLEMENT BOUNDARY

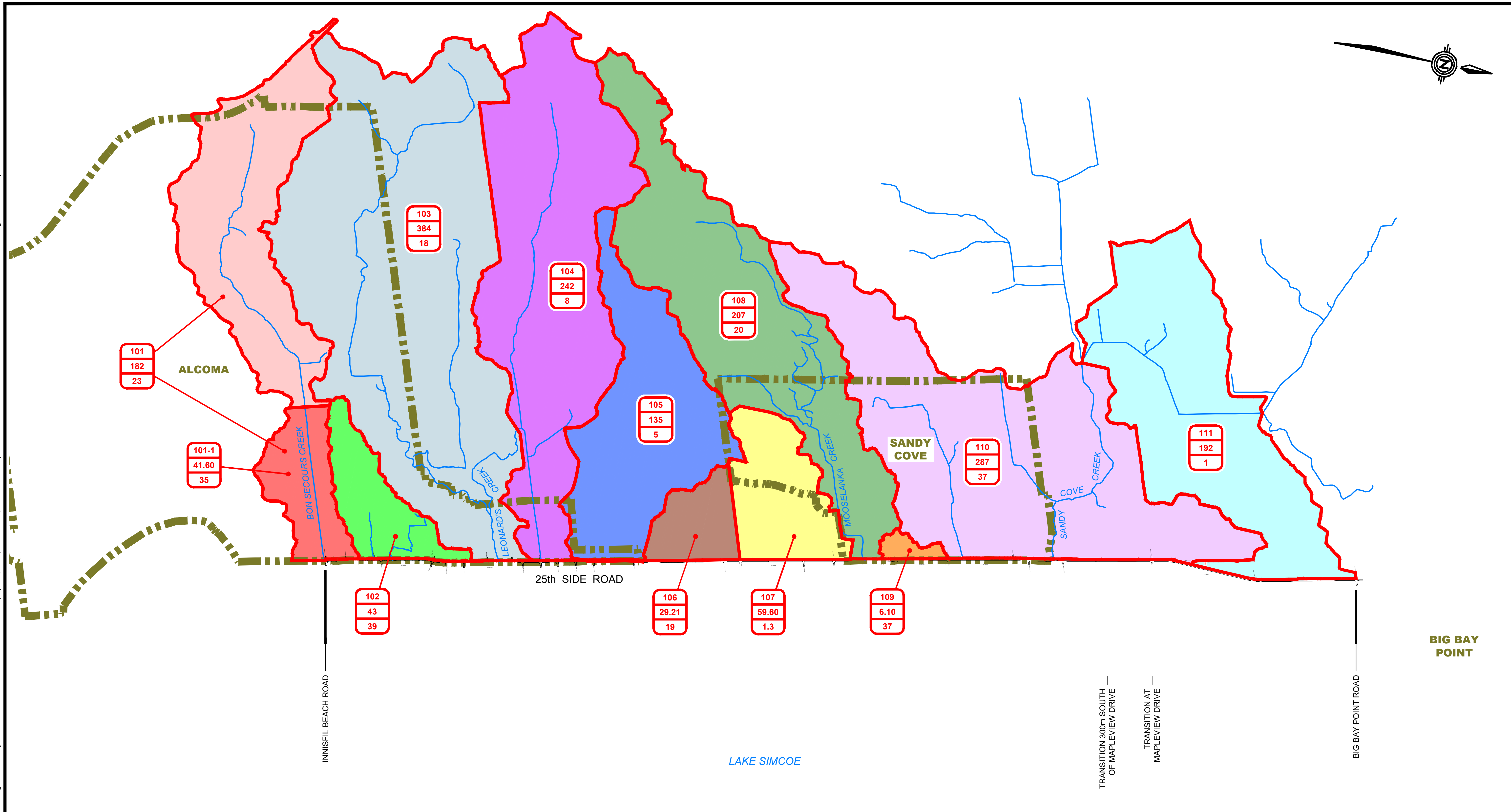
WATERCOURSE

0 0.2 0.4 0.6 0.8 1.0km

CLIENT	TOWN OF INNISFIL
TITLE	25th SIDE ROAD, INNISFIL EXISTING SUB-CATCHMENT DRAINAGE AREAS

wsp

Checked S.v.H.	Drawn AutoCAD/B.K.B.
Date AUGUST 2022	Proj. No. 211-06027-00
Scale AS SHOWN	Figure No. 2.1



LEGEND

CATCHMENT BOUNDARY

SETTLEMENT BOUNDARY

WATERCOURSE

101 — CATCHMENT ID.

182 — DRAINAGE AREA (ha)

23 — RUNOFF COEFFICIENT

CLIENT

TOWN OF INNISFIL

TITLE

25th SIDE ROAD, INNISFIL

EXISTING SUB–CATCHMENT DRAINAGE AREAS WITHIN STUDY AREA

Checked: S.v.H.	Drawn: AutoCAD/B.K.B.
Date: AUGUST 2022	Proj. No.: 211–06027–00
Scale: AS SHOWN	Figure No.: 2.2

Table 2-1: Visual OTTHYMO Parameters for Existing Conditions

Catchment Name	Catchment Area (ha)	TIMP (%)	XIMP (%)	CN	TP (hr)	Existing Culvert Size
101-1	42	35	30	63.57	N/A	1800 mm
101 (includes 101-1)	182	21	0.18	55	N/A	
102	43	39	31	66.18	N/A	500 mm and 600 mm
103	384	18	15	65	1.87	1100 mm x 1650 mm
104	242	8	7	59	1.66	800 mm
105	135	5	3	53.4	0.35	1200 mm
						800 mm
106	29.21	20	18	53.4	0.61	500 mm x 700 mm
107	59.6	1.3	1.2	53.4	0.93	800 mm
108	207	20	18	51.2	1.86	1000 mm x 700 mm and 900 mm
109	6	37	30	72	N/A	450 mm
110	287	37	30	72	N/A	6 m x 3.2 m Bridge and 900 mm
111	192	1	0.8	63.2	2.72	400 mm

Table 2-2: Full Capacity of the Existing Culverts

Catchment Name	Watercourse Name	Ex. Culvert		25- year 12 hr SCS II (m^3/s)	100- year 12 hr SCS II (m^3/s)	25- year 4- hr Chicago (m^3/s)	100- year 4- hr Chicago (m^3/s)	Culvert Capacity (m^3/s)	Required Culvert size to pass 25-year flow (m)
		Span / d (m)	Height / d (m)						
101-1	Bon Secours	1.8	1.8	3.9	5	4.26	5.34	4.38	3.6 x 1.5
101 (includes 101-1)				9.41	12.25	9.50	12.01		
102	N/A	0.5	0.5	4.24	5.4	4.70	5.86	0.45	3 x 1.2
		0.6	0.6						
103	Leonard's Creek	1.1	1.65	8.87	12.825	6.69	9.68	3.69	3.6 x 1.2
104		0.8	0.8	2.47	3.63	1.83	2.68	0.66	2.4 x 1.5
105	N/A	1.2	1.2	6.13	9.13	3.90	5.86	1.99	2.1 x 1.2
		0.8	0.8						1.2 x 0.9
106	N/A	0.5	0.7	0.90	1.34	0.60	0.90	0.44	0.5 x 0.7
									0.5 x 0.7
107	N/A	0.8	0.8	1.35	2.00	0.93	1.39	0.58	1.5 x 0.9
108	Moosenlanka	0.7	1	2.52	3.79	1.85	2.77	1.41	2.1 x 0.9
		0.9	0.9						0.9 x 0.9
109	N/A	0.45	0.45	0.71	0.97	0.75	0.94	0.58	0.6 x 0.6
110	Sandy Cove	6	3.2	22.46	29.43	22.38	28.37	42	Not Required
		0.9	0.9						
111	N/A	0.4	0.4	2.48	3.63	1.88	2.75	0.10	2.1 x 0.9

2.1.2 Existing Road Drainage Areas

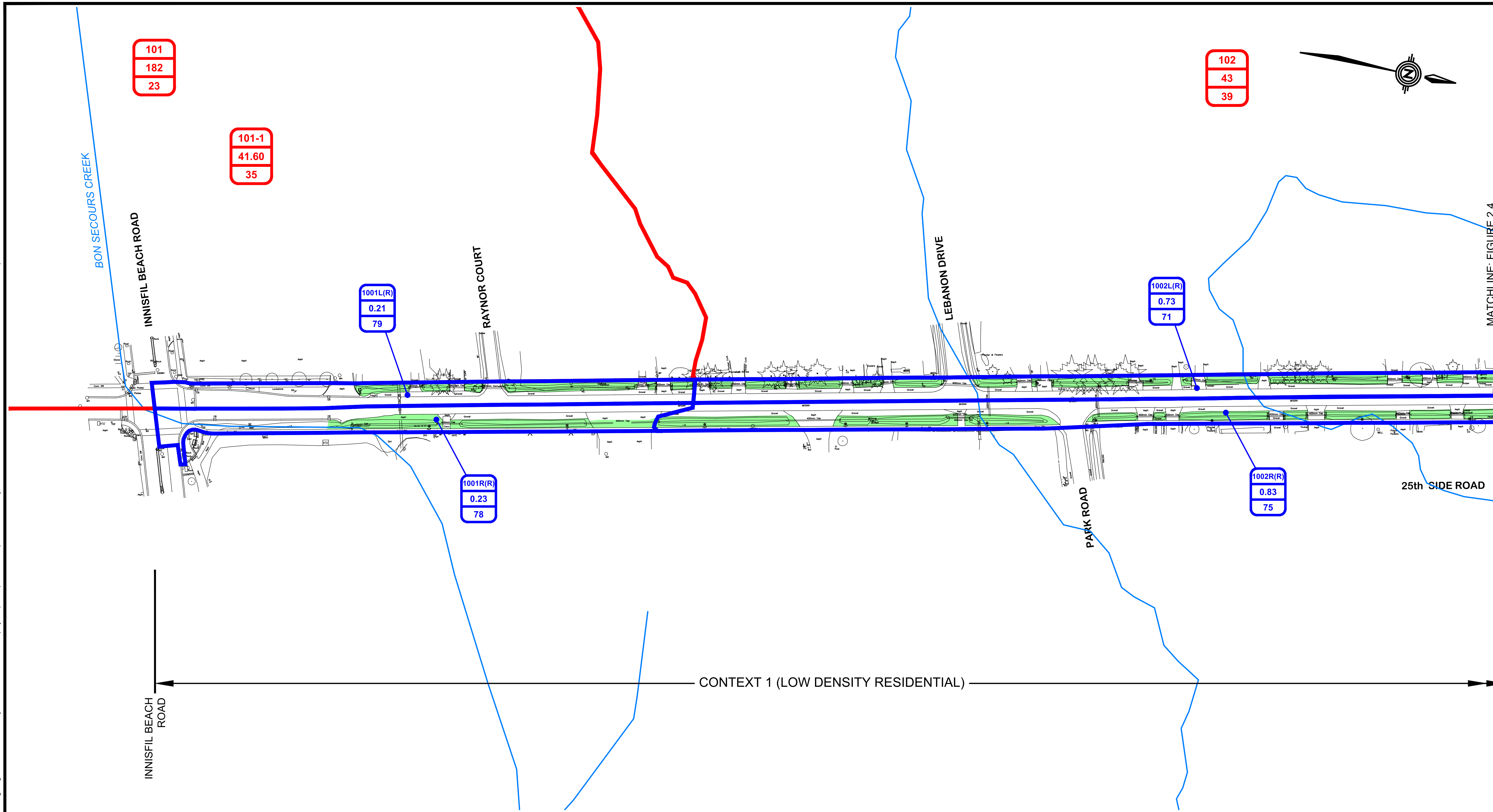
Under existing conditions, the roadway runoff is conveyed predominantly by roadside ditches prior to being discharged into the existing 25th Side Road culverts. Minor flows from a small portion of the roadway areas between Raynor Court and Innisfil Beach Road discharge into the existing storm pipes. Road drainage areas are identified in **Figure 2-3** to **Figure** 2-14.

Roadway runoff from the west side of 25th Side Road is discharged into the existing culverts along 25th Side Road prior to being discharged into Lake Simcoe southerly. Under existing conditions, the left and right sides of the road were delineated into 12 catchments as shown in **Table 2-3**. A Visual OTTHYMO (VO) model was simulated to estimate the existing peak flow rates for road drainage areas. Peak flow rates for the 4-hour Chicago and 12-hour SCS Type II design storms were determined for the 25- and 100-year return periods (**Table 2-3**). More details are provided in **Appendix C**.

Table 2-3: Road Drainage Area Runoffs

Catchment Name	Watercourse Name	Area (ha)	Imp (%)	Ex. Culvert Span /d (m)	Ex. Culvert Height /d (m)	25- year 12 hr SCS II (m^3/s)	100- year 12 hr SCS II (m^3/s)	25- year 4- hr Chicago (m^3/s)	100- year 4- hr Chicago (m^3/s)
1001L (R)	Bon Secours	0.21	79	1.8	1.8	0.066	0.083	0.077	0.098
1001R (R)		0.23	78			0.072	0.091	0.084	0.107
1002L (R)	N/A	0.73	71	0.5	0.5	0.218	0.282	0.253	0.314
				0.6	0.6				
1002R (R)		0.83	75	0.5	0.5	0.258	0.324	0.296	0.366
				0.6	0.6				
1003L (R)	Leonard's Creek	0.38	66	1.1	1.65	0.112	0.142	0.124	0.159
1003R (R)		0.39	79	1.1	1.65	0.123	0.154	0.143	0.182
1004L (R)	Leonard's Creek	0.35	69	0.8	0.8	0.104	0.135	0.12	0.149
1004R (R)		0.38	74	0.8	0.8	0.118	0.148	0.135	0.167
1005L (R)	N/A	0.37	66	1.2	1.2	0.118	0.138	0.135	0.155
1005R (R)		0.36	62	0.8	0.8	0.104	0.133	0.114	0.142
1006L (R)	N/A	0.65	65	0.5	0.7	0.190	0.241	0.209	0.269
1006R (R)		0.66	62	0.5	0.7	0.191	0.243	0.208	0.260
1007L (R)	N/A	0.72	60	0.8	0.8	0.210	0.263	0.220	0.280
1007R (R)		0.74	71	0.8	0.8	0.220	0.285	0.320	0.319

Catchment Name	Watercourse Name	Area (ha)	Imp (%)	Ex. Culvert		25- year 12 hr SCS II (m^3/s)	100- year 12 hr SCS II (m^3/s)	25- year 4- hr Chicago (m^3/s)	100- year 4- hr Chicago (m^3/s)
				Span /d (m)	Height /d (m)				
1008L (R)	Moosenlanka	0.21	52	0.7	1	0.059	0.075	0.061	0.078
				0.9	0.9				
1008R (R)		0.16	87	0.7	1	0.068	0.085	0.083	0.101
				0.9	0.9				
1009L (R)	N/A	0.5	74	0.45	0.45	0.155	0.195	0.178	0.220
1009R (R)		0.63	71	0.45	0.45	0.200	0.250	0.234	0.296
1100L (R)	Sandy Cove	0.91	55	6	3.2	0.260	0.326	0.270	0.340
				0.9	0.9				
1100R (R)		0.88	72	6	3.2	0.270	0.340	0.307	0.380
				0.9	0.9				
1110L (R)	N/A	1.06	59	6	3.2	0.302	0.385	0.324	0.407
				0.9	0.9				
1110R (R)		0.97	78	6	3.2	0.304	0.382	0.352	0.435
				0.9	0.9				
1120L (R)	N/A	1.21	68	0.4	0.4	0.360	0.461	0.410	0.510
1120R (R)		1.22	69	0.4	0.4	0.360	0.466	0.414	0.516



LEGEND

CATCHMENT BOUNDARY

101 — CATCHMENT ID.
182 — DRAINAGE AREA (ha)
23 — IMPERVIOUSNESS (%)

ROAD CATCHMENT BOUNDARY

1001L (R) — CATCHMENT ID.
0.21 — DRAINAGE AREA (ha)
79 — IMPERVIOUSNESS (%)

PERVIOUS LANDSCAPE

SETTLEMENT BOUNDARY

WATERCOURSE

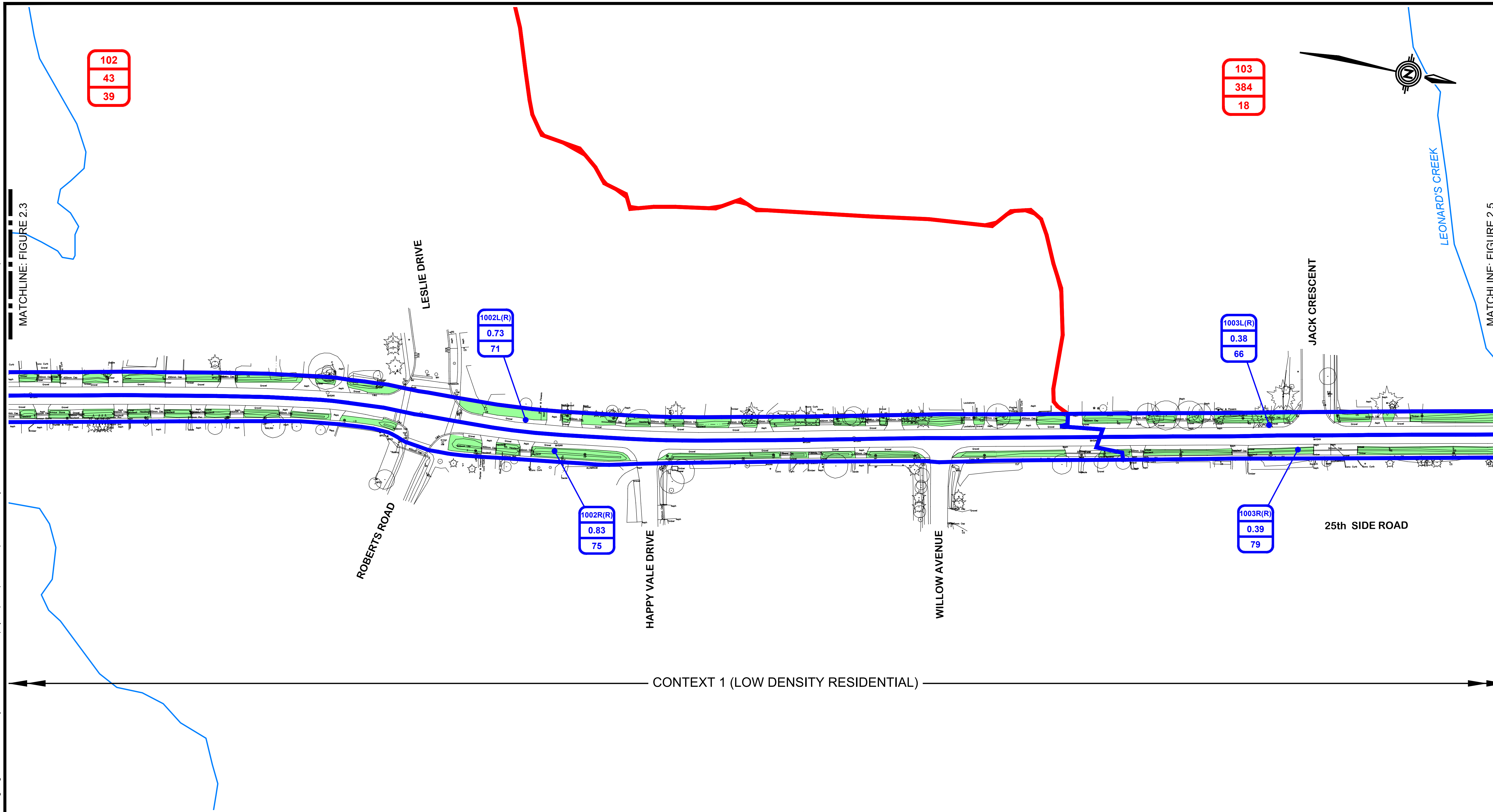
0 10 25 50 75m

CLIENT	TOWN OF INNISFIL
TITLE	25th SIDE ROAD, INNISFIL
	EXISTING ROAD DRAINAGE AREAS

wsp

Checked S.v.H.	Drawn AutoCAD/B.K.B.
Date SEPTEMBER 2021	Proj. No. 211-06027-00
Scale AS SHOWN	Figure No. 2.3

FIGURE 2.3 - 2.14 - 25th SR Innisfil - Ex Rd Drainage Areas.dwg - Figure 2.3 C:\Users\baileyb\ACCDocs\WSP Canada projects (AMER)\Land Development Ontario\Project Files\211-06027-00 P-20-24 Innisfil 25 Sideroad\SWM\CAD\FIGURES\ Sep 10, 2021 - 9:29am



LEGEND

CATCHMENT BOUNDARY	ROAD CATCHMENT BOUNDARY
101 — CATCHMENT ID.	1001L (R) — CATCHMENT ID.
182 — DRAINAGE AREA (ha)	0.21 — DRAINAGE AREA (ha)
23 — IMPERVIOUSNESS (%)	79 — IMPERVIOUSNESS (%)

PERVIOUS LANDSCAPE

SETTLEMENT BOUNDARY

WATERCOURSE

0 10 25 50 75m

CLIENT

TOWN OF INNISFIL

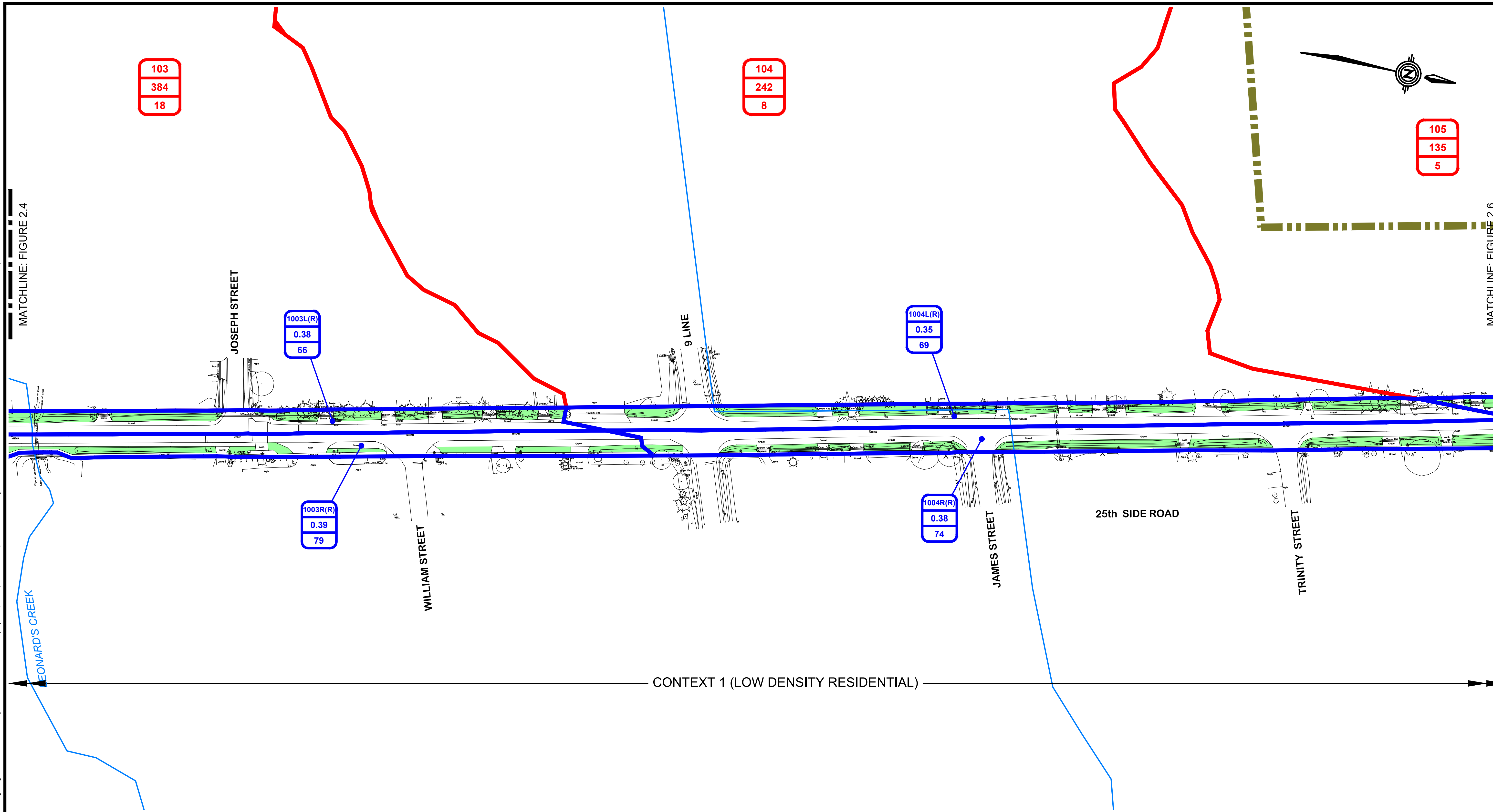
TITLE

25th SIDE ROAD, INNISFIL

EXISTING ROAD DRAINAGE AREAS

Checked S.v.H.	Drawn AutoCAD/B.K.B.
Date SEPTEMBER 2021	Proj. No. 211-06027-00
Scale AS SHOWN	Figure No. 2.4

FIGURE 2.3 - 2.14 - 25th SR Innisfil - Ex Rd Drainage Areas.dwg - Figure 2.4 C:\Users\baileyb\ACCDocs\WSP Canada projects (AMER)\Land Development Ontario\Project Files\211-06027-00 P-20-24 Innisfil 25 Sideroad\SWM\CAD\FIGURES\ Sep 10, 2021 - 9:30am



LEGEND

CATCHMENT BOUNDARY	ROAD CATCHMENT BOUNDARY	PERVIOUS LANDSCAPE	
101 — CATCHMENT ID.	1001L (R) — CATCHMENT ID.	SETTLEMENT BOUNDARY	
182 — DRAINAGE AREA (ha)	0.21 — DRAINAGE AREA (ha)	WATERCOURSE	
23 — IMPERVIOUSNESS (%)	79 — IMPERVIOUSNESS (%)		

0 10 25 50 75m

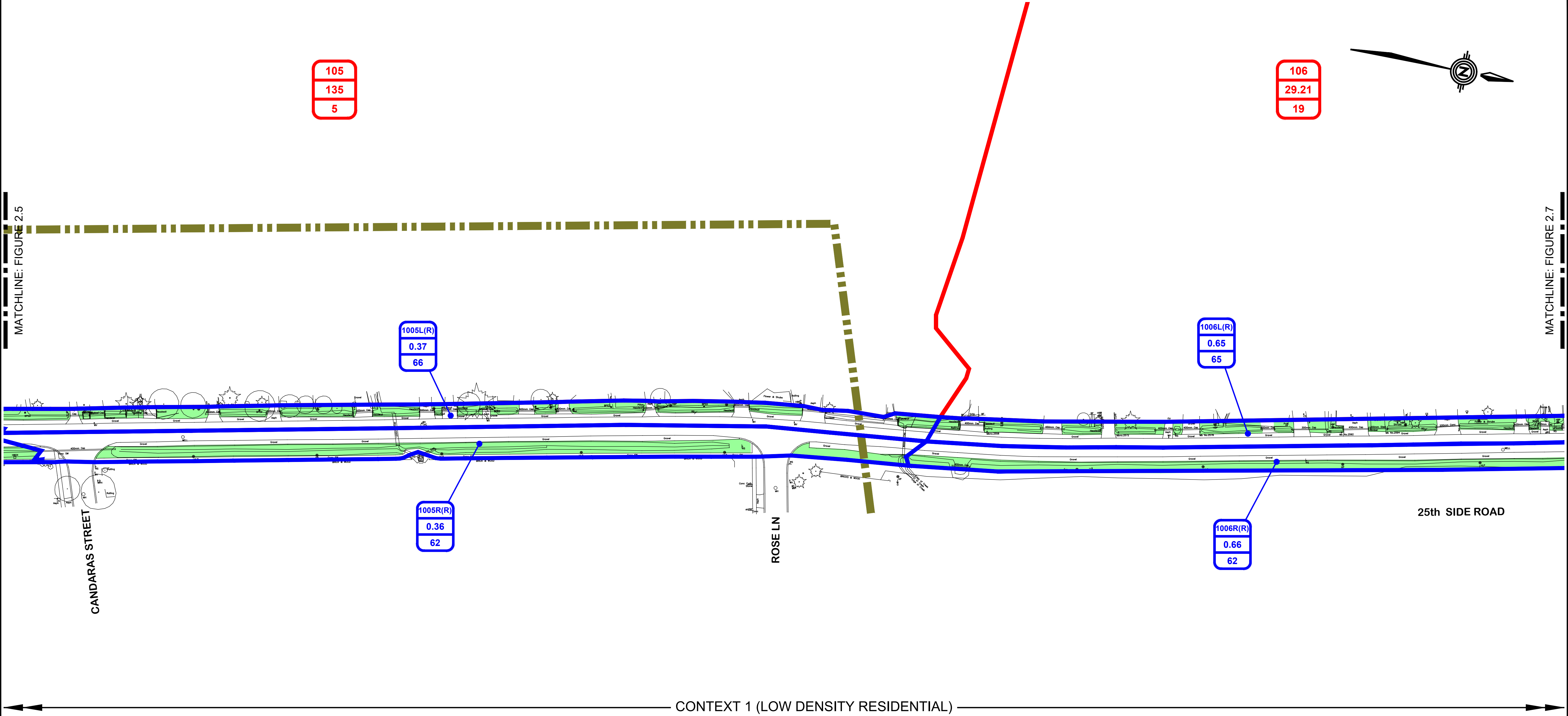
CLIENT
TOWN OF INNISFIL

TITLE
25th SIDE ROAD, INNISFIL

EXISTING ROAD DRAINAGE AREAS

wsp

Checked S.v.H.	Drawn AutoCAD/B.K.B.
Date SEPTEMBER 2021	Proj. No. 211-06027-00
Scale AS SHOWN	Figure No. 2.5



LEGEND

CATCHMENT BOUNDARY	ROAD CATCHMENT BOUNDARY
101 — CATCHMENT ID.	1001L (R) — CATCHMENT ID.
182 — DRAINAGE AREA (ha)	0.21 — DRAINAGE AREA (ha)
23 — IMPERVIOUSNESS (%)	79 — IMPERVIOUSNESS (%)

PERVIOUS LANDSCAPE

SETTLEMENT BOUNDARY

WATERCOURSE

0 10 25 50 75m

CLIENT	TOWN OF INNISFIL
TITLE	25th SIDE ROAD, INNISFIL
	EXISTING ROAD DRAINAGE AREAS

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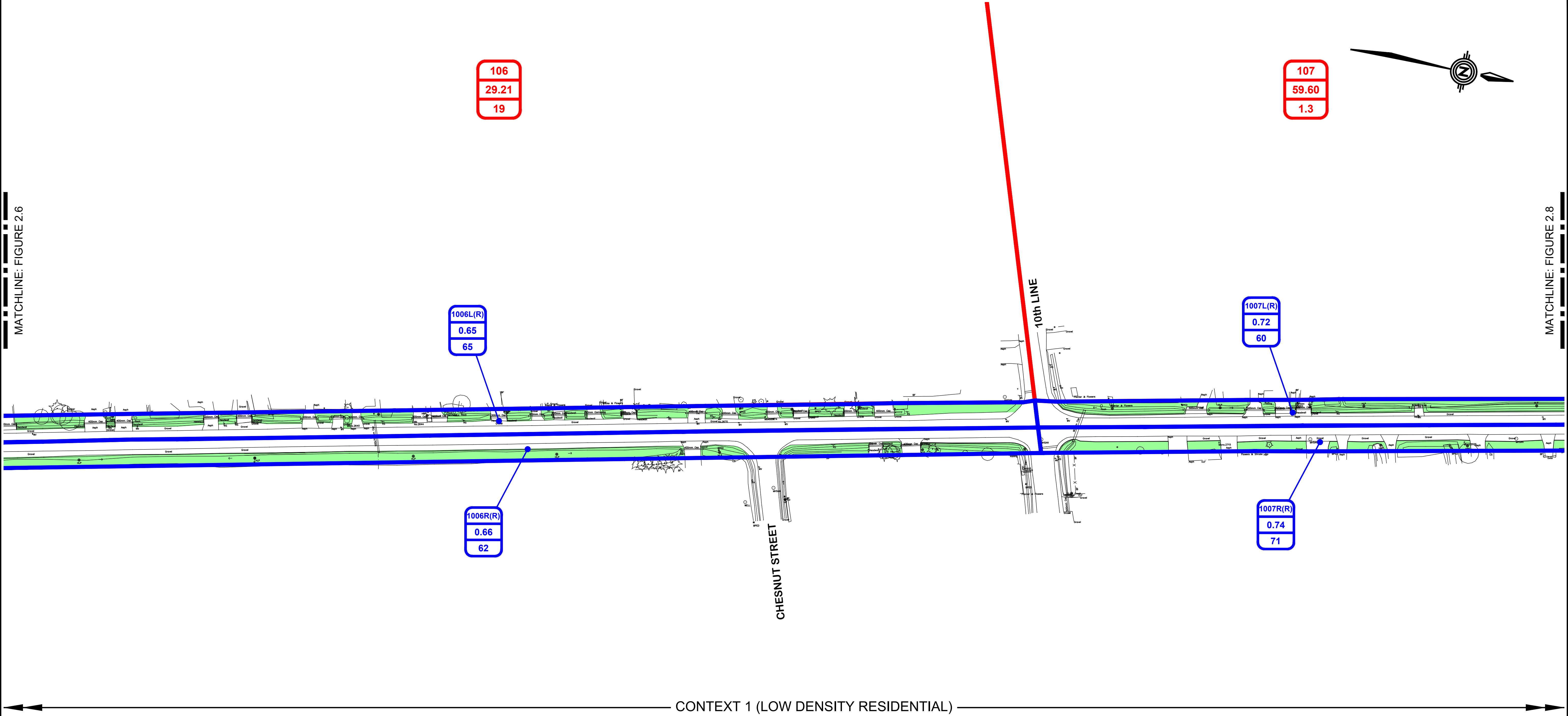
Date SEPTEMBER 2021	Proj. No. 211-06027-00
Scale AS SHOWN	Figure No. 2.6



LEGEND

CATCHMENT BOUNDARY

101 — CATCHMENT ID.
182 — DRAINAGE AREA (ha)
23 — IMPERVIOUSNESS (%)

ROAD CATCHMENT BOUNDARY

1001L (R) — CATCHMENT ID.
0.21 — DRAINAGE AREA (ha)
79 — IMPERVIOUSNESS (%)

PERVIOUS LANDSCAPE

SETTLEMENT BOUNDARY

WATERCOURSE

0 10 25 50 75m

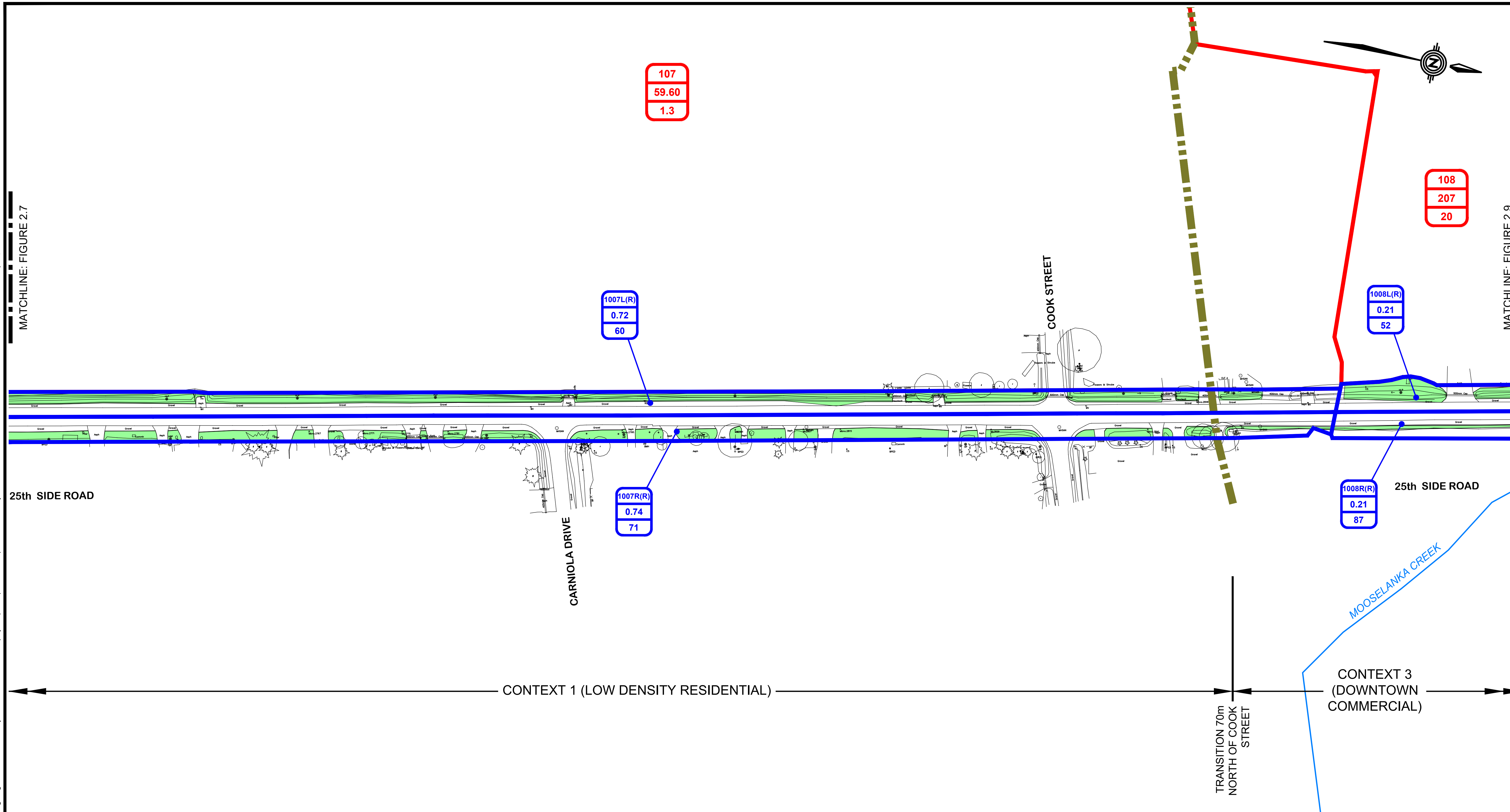
CLIENT
TOWN OF INNISFIL

TITLE
25th SIDE ROAD, INNISFIL

EXISTING ROAD DRAINAGE AREAS

wsp

Checked S.v.H.	Drawn AutoCAD/B.K.B.
Date SEPTEMBER 2021	Proj. No. 211-06027-00
Scale AS SHOWN	Figure No. 2.7



LEGEND

CATCHMENT BOUNDARY (red line)	
101	CATCHMENT ID.
182	DRAINAGE AREA (ha)
23	IMPERVIOUSNESS (%)
ROAD CATCHMENT BOUNDARY (blue line)	
1001L (R)	CATCHMENT ID.
0.21	DRAINAGE AREA (ha)
79	IMPERVIOUSNESS (%)
PERVIOUS LANDSCAPE	
SETTLEMENT BOUNDARY	
WATERCOURSE	

0 10 25 50 75m

CLIENT	TOWN OF INNISFIL
TITLE	25th SIDE ROAD, INNISFIL
	EXISTING ROAD DRAINAGE AREAS

wsp

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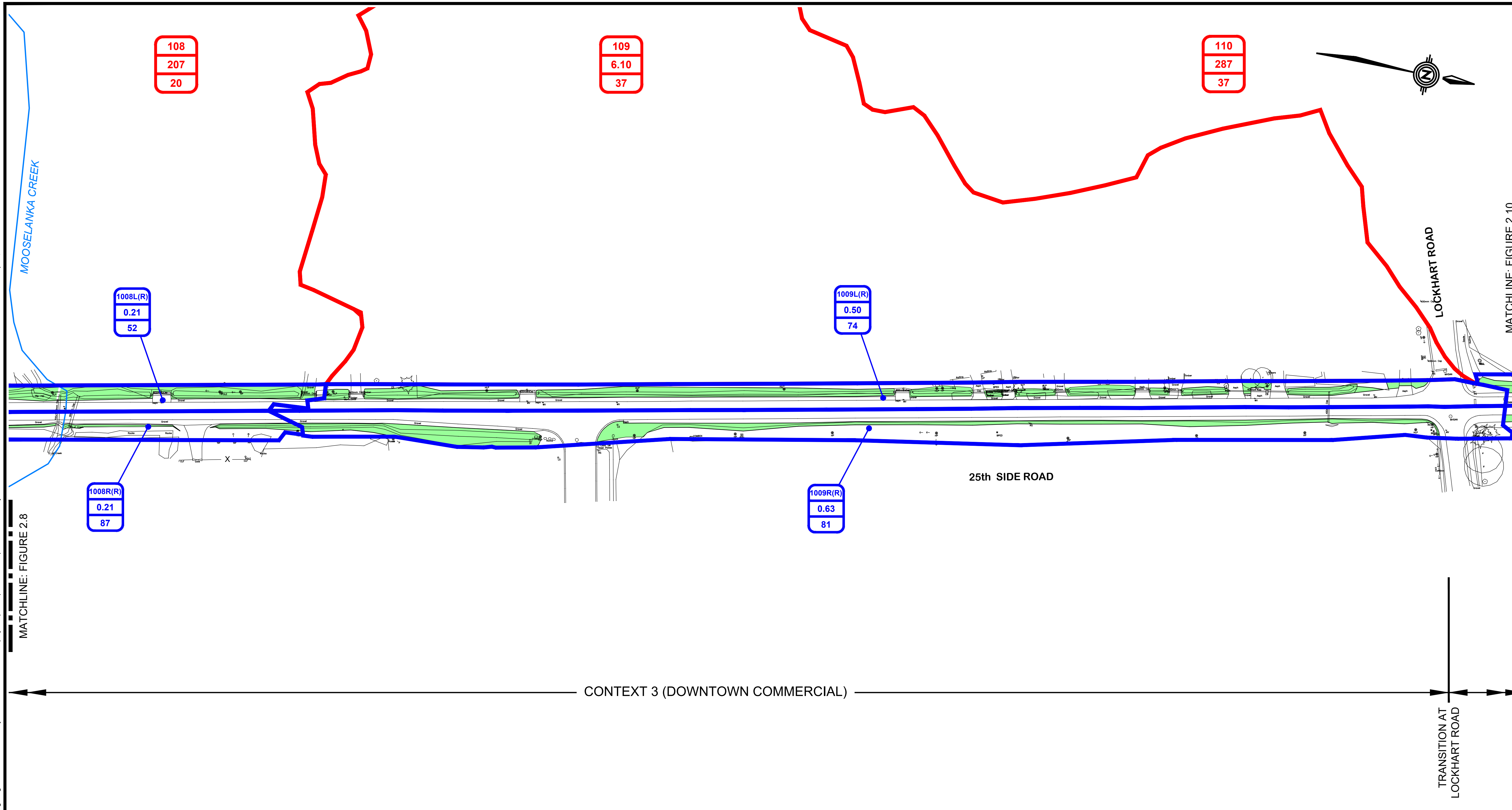
Date SEPTEMBER 2021	Proj. No. 211-06027-00
Scale AS SHOWN	Figure No. 2.8



LEGEND

CATCHMENT BOUNDARY

101 — CATCHMENT ID.
182 — DRAINAGE AREA (ha)
23 — IMPERVIOUSNESS (%)

ROAD CATCHMENT BOUNDARY

1001L (R) — CATCHMENT ID.
0.21 — DRAINAGE AREA (ha)
79 — IMPERVIOUSNESS (%)

PERVIOUS LANDSCAPE

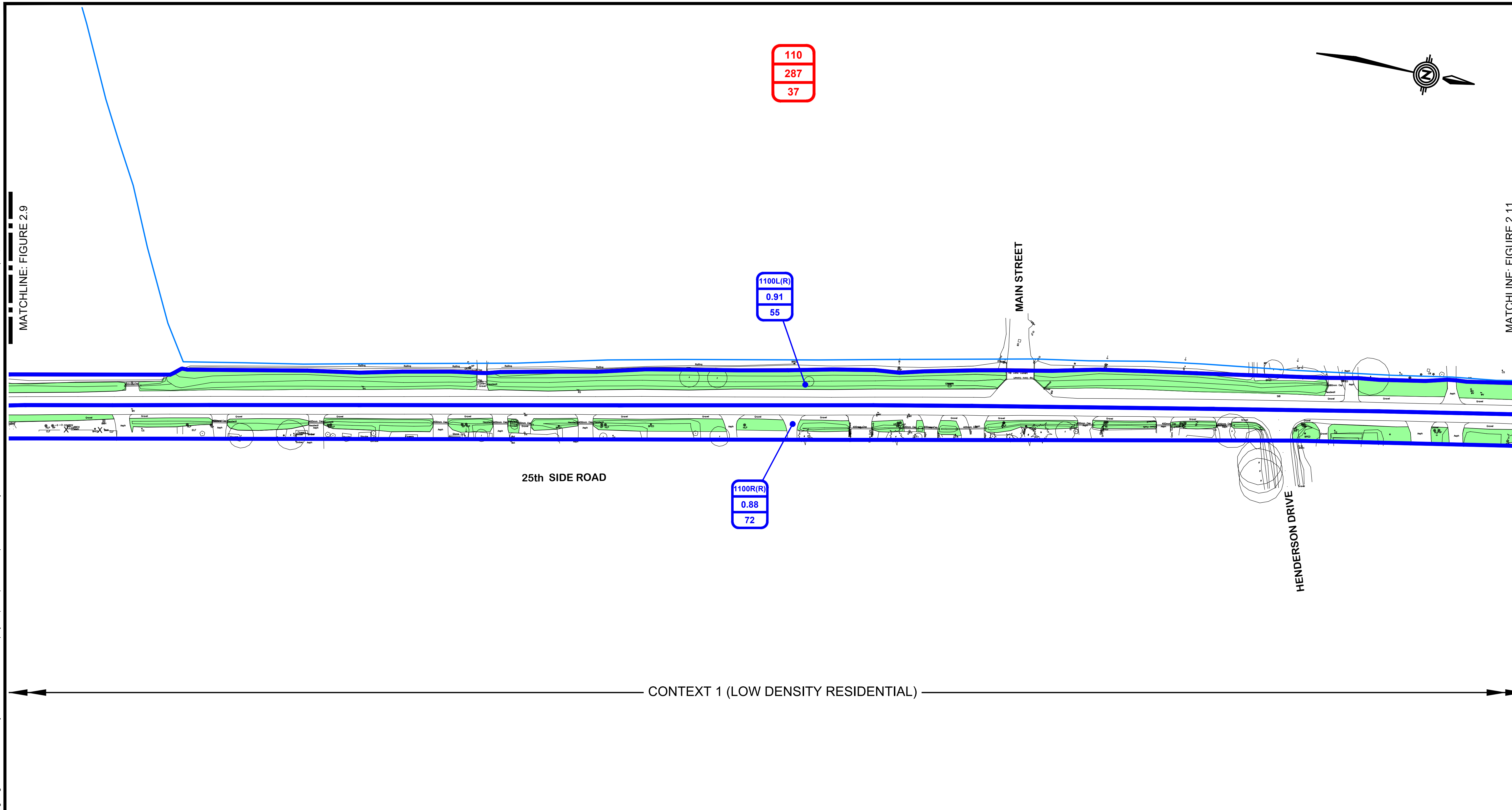
SETTLEMENT BOUNDARY

WATERCOURSE

0 10 25 50 75m

CLIENT	TOWN OF INNISFIL
TITLE	25th SIDE ROAD, INNISFIL EXISTING ROAD DRAINAGE AREAS
Checked	S.v.H.
Drawn	AutoCAD/B.K.B.
Date	SEPTEMBER 2021
Proj. No.	211–06027–00
Scale	AS SHOWN
Figure No.	2.9

FIGURE 2.3 - 2.14 - 25th SR Innisfil - Ex Rd Drainage Areas.dwg - Figure 2.9 C:\Users\baileyb\ACCDocs\WSP Canada projects (AMER)\Land Development Ontario\Project Files\211-06027-00 P-20-24 Innisfil 25 Sideroad\SWM\CAD\FIGURES\ Sep 10, 2021 - 9:34am



LEGEND

CATCHMENT BOUNDARY

101 — CATCHMENT ID.
182 — DRAINAGE AREA (ha)
23 — IMPERVIOUSNESS (%)

ROAD CATCHMENT BOUNDARY

1001L (R) — CATCHMENT ID.
0.21 — DRAINAGE AREA (ha)
79 — IMPERVIOUSNESS (%)

PERVIOUS LANDSCAPE

SETTLEMENT BOUNDARY

WATERCOURSE

0 10 25 50 75m

CLIENT
TOWN OF INNISFIL

TITLE
25th SIDE ROAD, INNISFIL

EXISTING ROAD DRAINAGE AREAS

wsp

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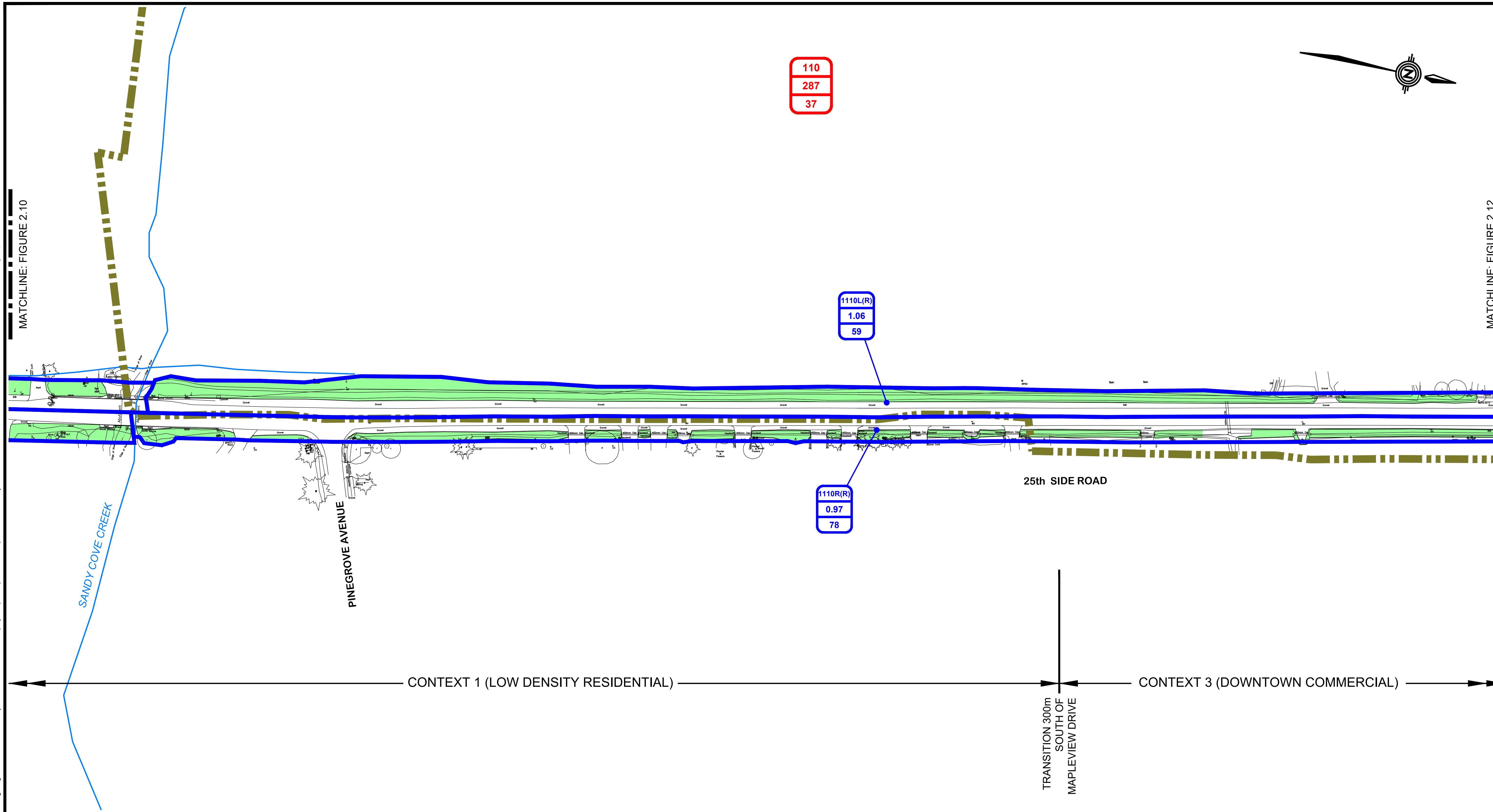
Date SEPTEMBER 2021	Proj. No. 211-06027-00
Scale AS SHOWN	Figure No. 2.10

FIGURE 2.3 - 2.14 - 25th SR Innisfil - Ex Rd Drainage Areas.dwg - Figure 2.10 C:\Users\baileyb\ACCDocs\WSP Canada projects (AMER)\Land Development Ontario\Project Files\211-06027-00 P-20-24 Innisfil 25 Sideroad\SWM\CAD\FIGURES\ Sep 10, 2021 - 9:34am



LEGEND

CATCHMENT BOUNDARY

101 — CATCHMENT ID.
182 — DRAINAGE AREA (ha)
23 — IMPERVIOUSNESS (%)

ROAD CATCHMENT BOUNDARY

1001L (R) — CATCHMENT ID.
0.21 — DRAINAGE AREA (ha)
79 — IMPERVIOUSNESS (%)

PERVIOUS LANDSCAPE

SETTLEMENT BOUNDARY

WATERCOURSE

0 10 25 50 75m

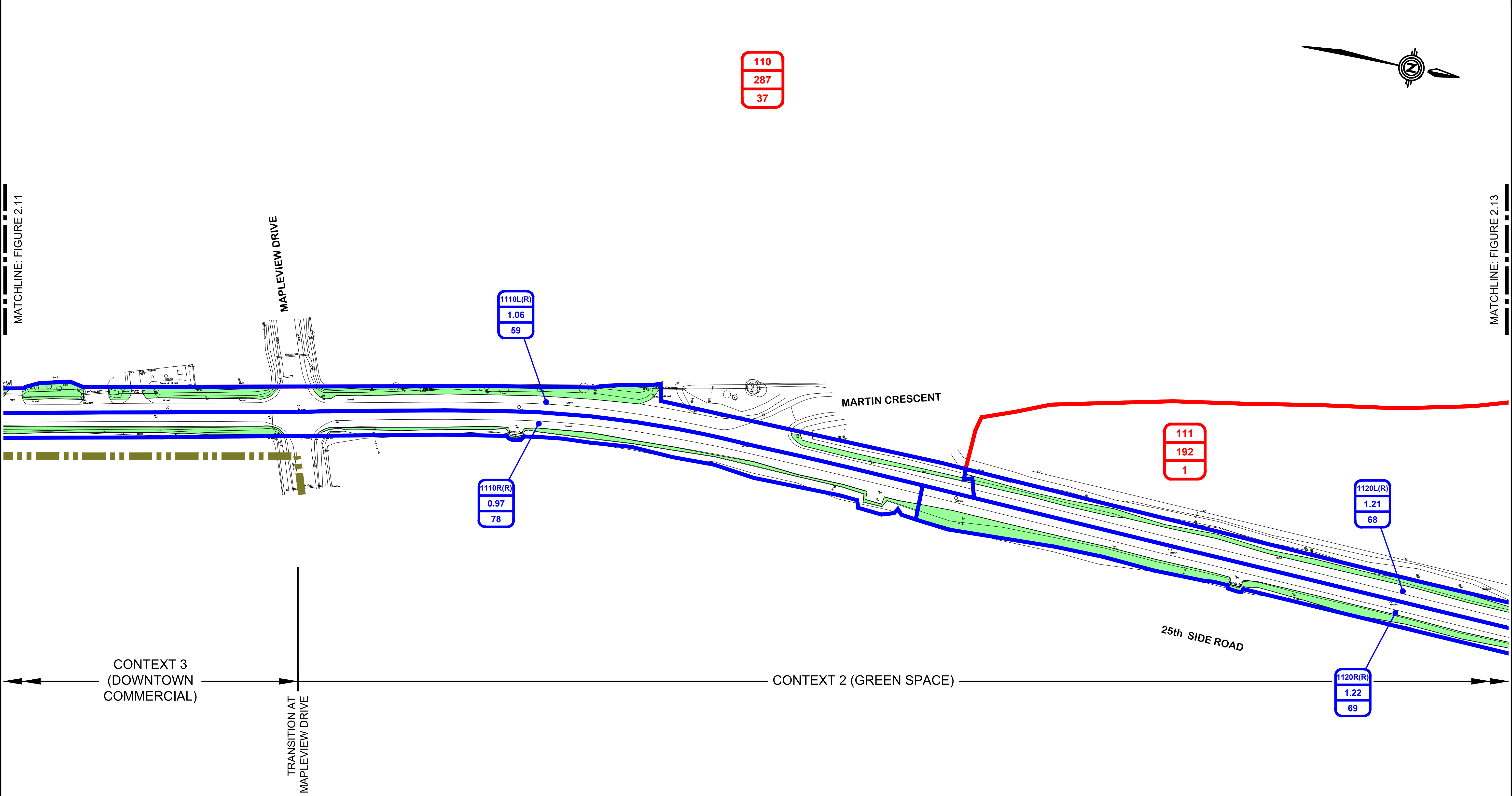
CLIENT
TOWN OF INNISFIL

TITLE
25th SIDE ROAD, INNISFIL

EXISTING ROAD DRAINAGE AREAS

Checked S.v.H.	Drawn AutoCAD/B.K.B.
Date SEPTEMBER 2021	Proj. No. 211-06027-00
Scale AS SHOWN	Figure No. 2.11

FIGURE 2.3 - 2.14 - 25th SR Innisfil - Ex Rd Drainage Areas.dwg - Figure 2.11 C:\Users\baileyb\ACCDocs\WSP Canada projects (AMER)\Land Development Ontario\Project Files\211-06027-00 P-20-24 Innisfil 25 Sideroad\SWM\CAD\FIGURES\ Sep 10, 2021 - 9:35am



LEGEND

CATCHMENT BOUNDARY

101 — CATCHMENT ID.
182 — DRAINAGE AREA (ha)
23 — IMPERVIOUSNESS (%)

ROAD CATCHMENT BOUNDARY

1001L (R) — CATCHMENT ID.
0.21 — DRAINAGE AREA (ha)
79 — IMPERVIOUSNESS (%)

PERVIOUS LANDSCAPE

SETTLEMENT BOUNDARY

WATERCOURSE

0 10 25 50 75m

CLIENT	TOWN OF INNISFIL
TITLE	25th SIDE ROAD, INNISFIL
	EXISTING ROAD DRAINAGE AREAS
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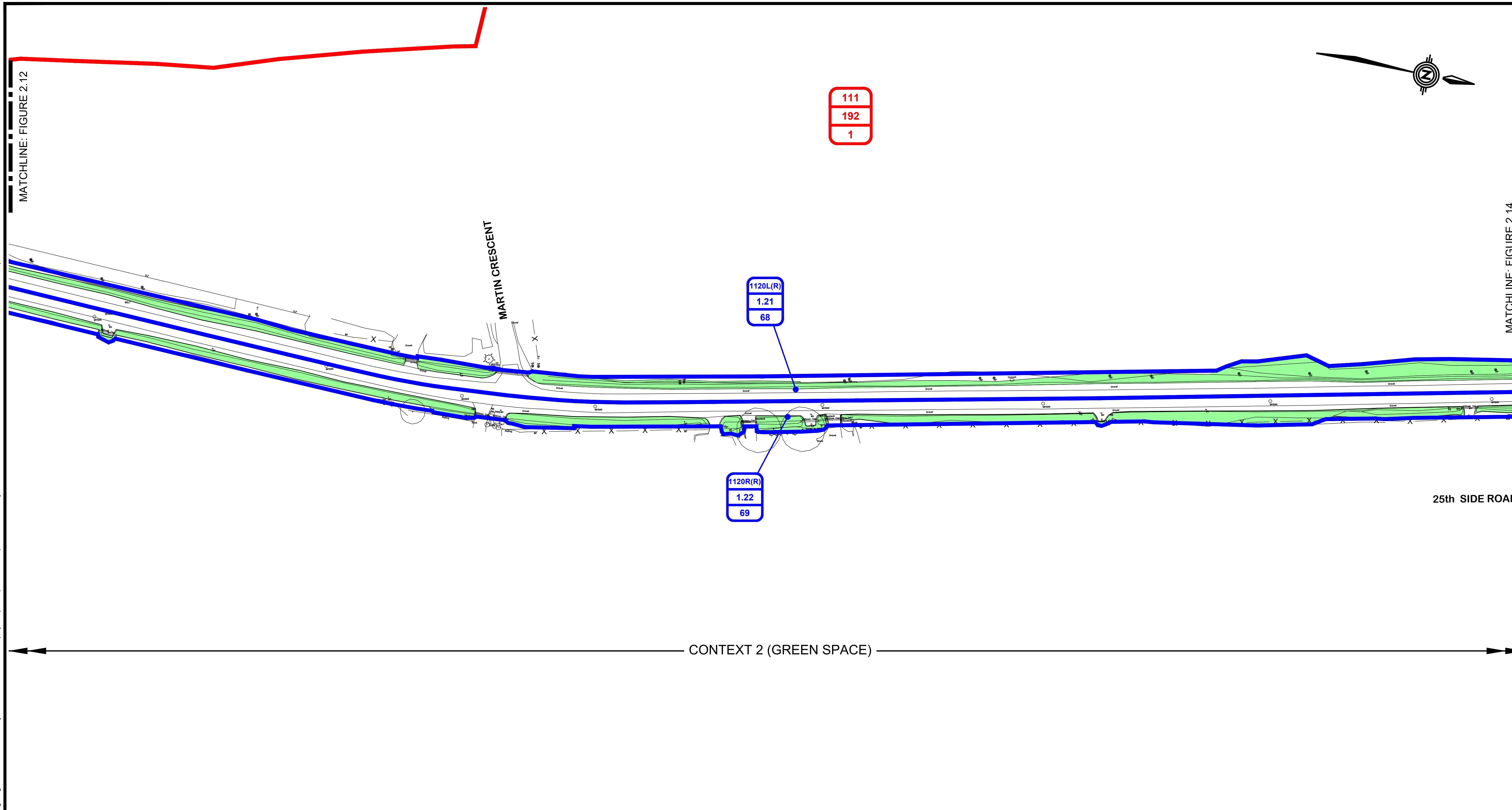
Date SEPTEMBER 2021	Proj. No. 211–06027–00
Scale AS SHOWN	Figure No. 2.12



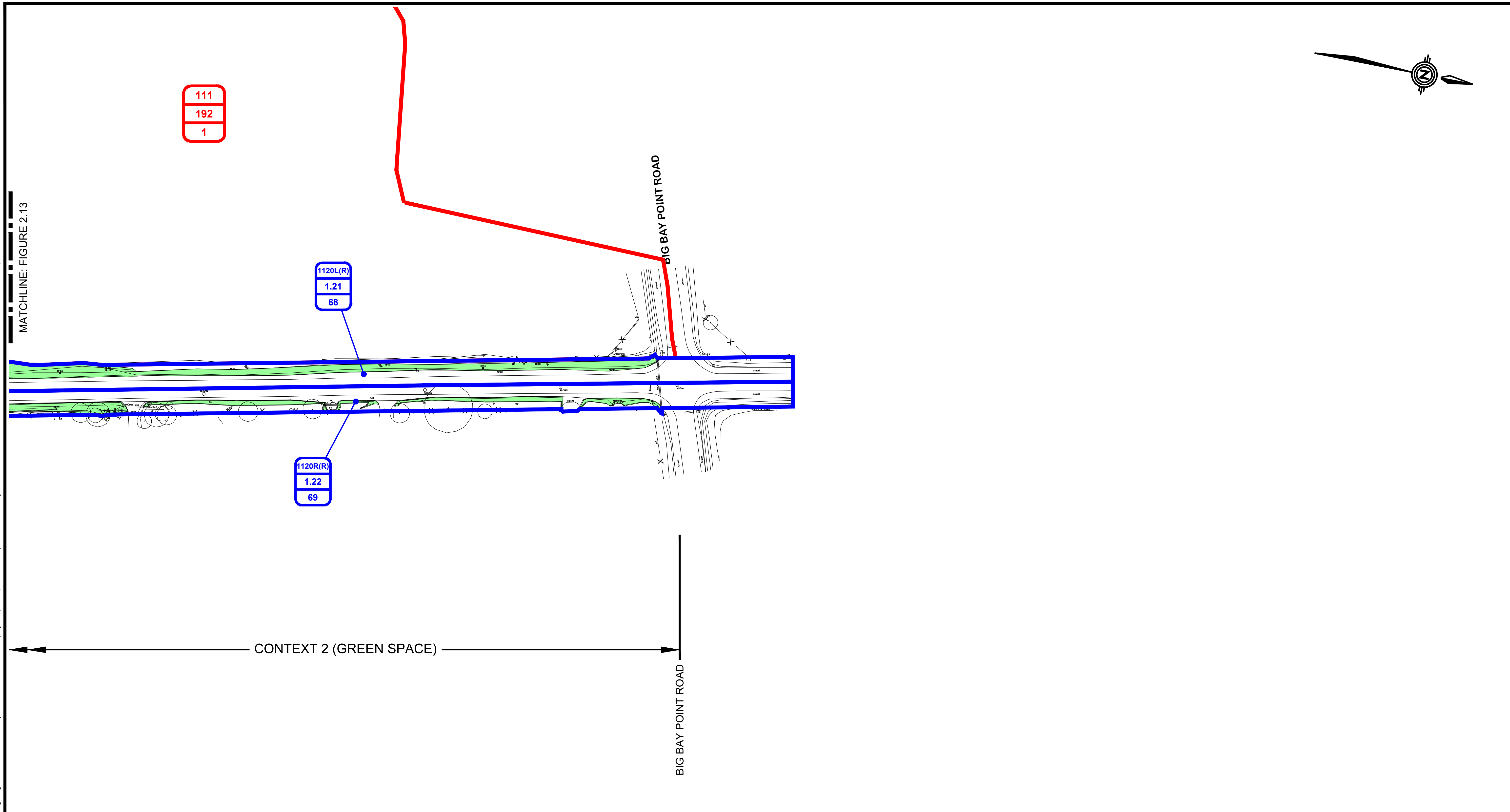
LEGEND

- CATCHMENT BOUNDARY
- 101 — CATCHMENT ID.; 182 — DRAINAGE AREA (ha); 23 — IMPERVIOUSNESS (%)
- ROAD CATCHMENT BOUNDARY
- 1001L (R) — CATCHMENT ID.; 0.21 — DRAINAGE AREA (ha); 79 — IMPERVIOUSNESS (%)
- PERVIOUS LANDSCAPE
- SETTLEMENT BOUNDARY
- WATERCOURSE

0 10 25 50 75m

CLIENT	TOWN OF INNISFIL
TITLE	25th SIDE ROAD, INNISFIL EXISTING ROAD DRAINAGE AREAS

Checked S.v.H.	Drawn AutoCAD/B.K.B.
Date SEPTEMBER 2021	Proj. No. 211–06027–00
Scale AS SHOWN	Figure No. 2.13



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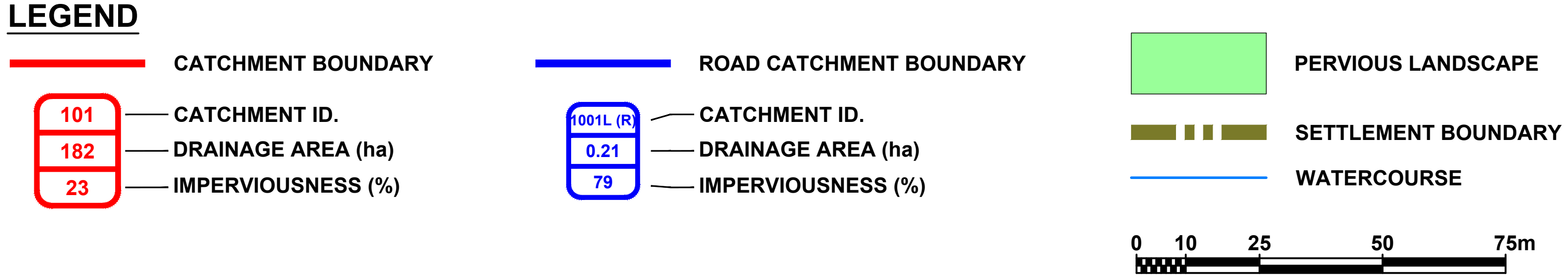


CLIENT	TOWN OF INNISFIL
TITLE	25th SIDE ROAD, INNISFIL EXISTING ROAD DRAINAGE AREAS
Checked	S.v.H.
Drawn	AutoCAD/B.K.B.
Date	SEPTEMBER 2021
Proj. No.	211-06027-00
Scale	AS SHOWN
Figure No.	2.14

FIGURE 2.3 - 2.14 - 25th SR Innisfil - Ex Rd Drainage Areas.dwg - Figure 2.14 C:\Users\baileyb\ACCDocs\WSP Canada projects (AMER)\Land Development Ontario\Project Files\211-06027-00 P-20-24 Innisfil 25 Sideroad\SWM\CAD\FIGURES\ Sep 10, 2021 - 9:37am

3 POST DEVELOPMENT CONDITIONS

Under post-development conditions, the drainage area for the west and east sides of 25th Side Road were delineated into 12 catchments (i.e., Catchments 2001, to 2012) as shown in **Table 3-1**. Please refer to **Figures 3-1** to **3-5** for the details of the post-development road drainage areas and **Figures 3-6** for the post-development drainage areas plan.

Table 3-1: Post-Development Conditions Road Drainage Areas

Catchment Name	Catchment Area (ha)	TIMP (%)	XIMP (%)	LID Footprint Area (ha)	Vegetated Area (ha)	Existing Culvert Size
Catchment 2001.1 L Context 3	0.100	90	90	0.006	0.01	Existing Storm Pipe
Catchment 2001.1 R Context 3	0.099	79	79	0.011	0.02	
Catchment 2001.2 L Context 1	0.11	91	91	0.01	0.01	(1800 mm and 900 mm diameter Existing Culverts)
Catchment 2001.2 R Context 1	0.13	86	86	0.02	0.02	
Catchment 2002 L Context 1	0.70	93	93	0.05	0.08	(500 mm diameter Existing Culvert)
Catchment 2002 R Context 1	0.80	88	88	0.09	0.12	
Catchment 2003 L Context 1	0.43	90	90	0.017	0.04	(1100 mm x 1500 mm diameter Existing Culvert)
Catchment 2003 R Context 1	0.47	87	87	0.04	0.06	
Catchment 2004 L Context 1	0.35	89	89	0.015	0.04	800 mm diameter Existing Culvert
Catchment 2004 R Context 1	0.36	85	85	0.05	0.05	

Catchment Name	Catchment Area (ha)	TIMP (%)	XIMP (%)	LID Footprint Area (ha)	Vegetated Area (ha)	Existing Culvert Size
Catchment 2005 L Context 1	0.28	90	90	0.01	0.03	1200 mm and 800 mm diameters Existing Culverts
Catchment 2005 R Context 1	0.29	78	78	0.05	0.06	
Catchment 2006 L Context 1	0.65	88	88	0.06	0.08	500 mm x 700 mm diameter Existing Culverts
Catchment 2006 R Context 1	0.73	80	80	0.14	0.15	
Catchment 2007 L Context 1	0.58	85	85	0.08	0.09	800 mm diameter Existing Culvert
Catchment 2007 R Context 1	0.64	84	84	0.07	0.11	
Catchment 2008-1 L Context 1	0.07	84	84	0.007	0.011	700 mm x 1000 mm diameter Existing Culverts and 900 mm diameter Existing Culvert
Catchment 2008-1 R Context 1	0.07	83	83	0.006	0.012	
Catchment 2008-2 L Context 3	0.38	70	70	0.07	0.117	
Catchment 2008-2 R Context 3	0.39	59	59	0.08	0.160	
Catchment 2009 L Context 3	0.40	77	77	0.06	0.093	450 mm diameter Existing Culvert
Catchment 2009 R Context 3	0.39	77	77	0.06	0.091	
Catchment 2010 L Context 3	0.25	82	82	0.05	0.04	Existing Bridge 6 m x 3.2 m
Catchment 2010 R Context 3	0.25	82	82	0.01	0.04	
Catchment 2010 L Context 1	0.47	74	74	0.06	0.12	

Catchment Name	Catchment Area (ha)	TIMP (%)	XIMP (%)	LID Footprint Area (ha)	Vegetated Area (ha)	Existing Culvert Size
Catchment 2010 R Context 1	0.47	85	85	0.03	0.07	
Catchment 2011 L Contexts 3 & 2	0.87	67	67	0.21	0.28	450 mm diameter Existing Culvert
Catchment 2011 R Contexts 3 & 2	0.90	80	80	0.10	0.18	
Catchment 2012 L Context 2	1.11	56	56	0.49	0.49	400 mm diameter Existing Culvert
Catchment 2012 R Context 2	1.11	81	81	0.21	0.21	

As mentioned previously, it is proposed to provide a preliminary stormwater management plan and a direction for designing a range of LID systems appropriate for the 25th Side Road study area. Typically, LID features are designed to implement the functions of natural drainage systems by attenuating, filtering and infiltrating stormwater runoff as close as possible to where it is generated. With this approach, stormwater runoff can be reduced substantially when coupled with appropriate environmental conditions.

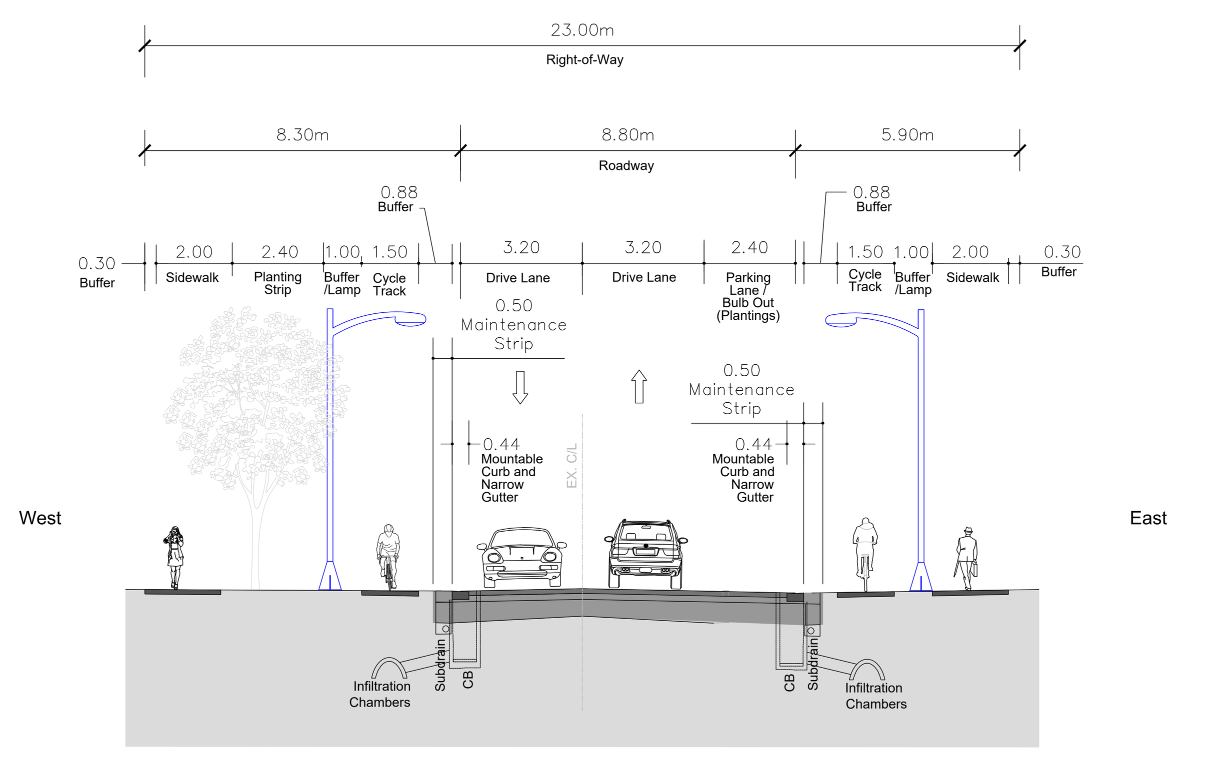
LID systems can be installed in areas where runoff is controlled or uncontrolled to provide additional stormwater quantity and quality control as well as promote infiltration and groundwater recharge. LID opportunities will depend on available space, soil and groundwater conditions. The applicable LID systems within Catchments 2001 to 2012 are:

— Bioswale
— Infiltration Chamber

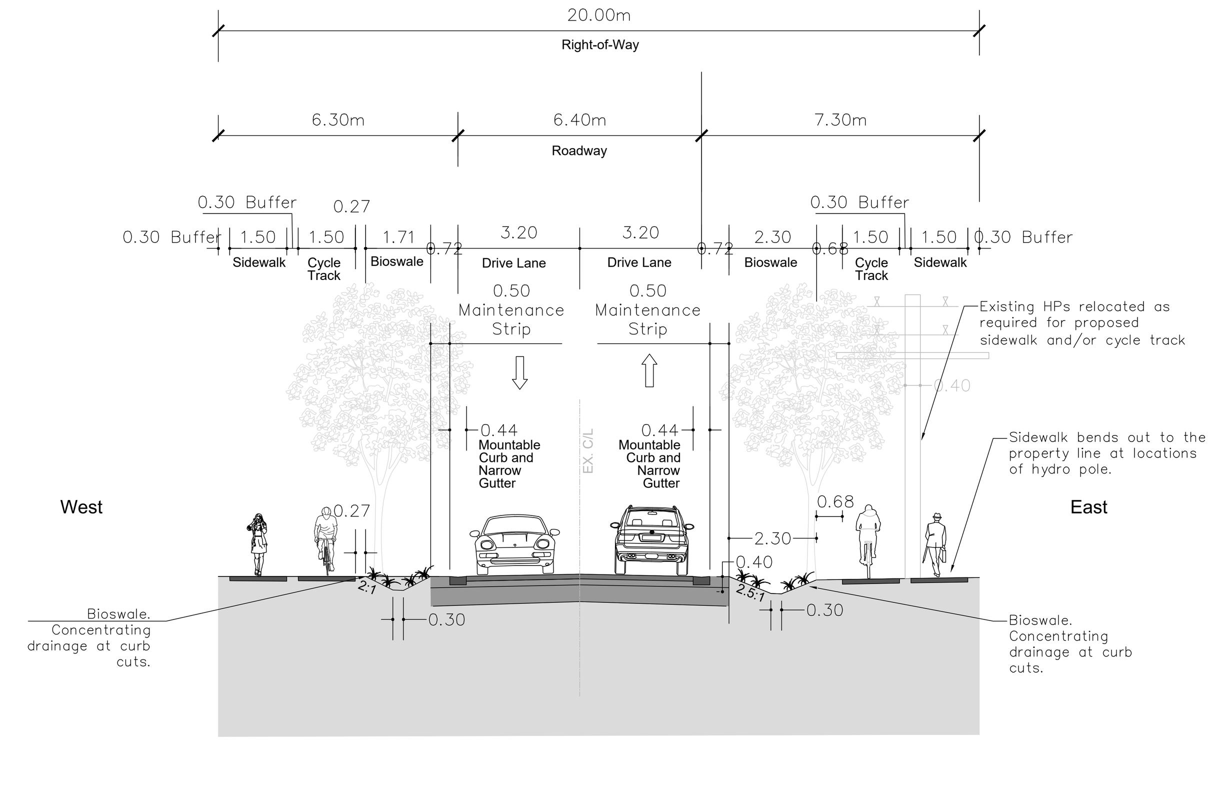
TYPICAL CROSS-SECTIONS

25th SideRoad Plan view-1
From Innisfil Beach Road to North of Willow Avenue
Context 1 and Context 3

25th SideRoad Plan view-2
From North of Willow Avenue to North of Candaras Street
Context 1



Context 3
(Downtown Commercial)
From Innisfil Beach Road to 80m North of Innisfil Beach



Context 1
(Low Density Residential)
From 80m North of Innisfil Beach to 70m North of Cook Street

- DRIVEWAY PAVEMENT
- PROPOSED GRAVEL SHOULDER
- EXISTING 25TH SIDE ROAD CROSSING CULVERTS
- SUB-WATERSHED BOUNDARY
- 2003L(R) — SUB-CATCHMENT ID.
- 0.43 — DRAINAGE AREA (ha)
- 88 — IMPERVIOUSNESS (%)
- ROAD DRAINAGE AREA
- ROAD DRAINAGE AREA
- EXISTING WATER
- EXISTING SANITARY
- EXISTING GAS SERVICE
- EXISTING GAS
- FLOW DIRECTION
- CONTOURS
- UNDER GROUND INFILTERATION CHAMBER
- PROPOSED BIOSWALE

GENERAL NOTES:
SIGNAGE AND PARKING LIMITS TO BE COMPLETED IN DETAILED DESIGN

TOWN OF INNISFIL
25TH SIDE ROAD

MAY, 2022

LEGEND

- PROPOSED ASPHALT ROADWAY (PARTIAL DEPTH)
- 1.5m - 2 m PROPOSED CONCRETE SIDEWALK
- 1.5m - 2.0m PROPOSED CYCLE LANE
- PROPOSED HARDSCAPE BUFFER
- 3.0 m PROPOSED MULTI USE PATH
- 2.4 m PROPOSED BI-DIRECTIONAL CYCLE LANE
- PLANTING STRIP
- PROPOSED HYDRO POLE
- MISC. REMOVALS
- 2.4m PARKING/LANDSCAPING
- 0.5m ASPHALT BUFFER / MAINTENANCE STRIP
- PROPOSED MOUNTABLE CURB
- 2.15m FURNISHING STRIP/ZONE
- EXISTING PROPERTY LINE
- FUTURE PROPERTY LINE
- 1.5m - 2 m PROPOSED CROSS RIDE
- 2.5 m PROPOSED CROSSWALK
- 0.3-0.9 m PROPOSED SOD
- PROPOSED CULVERT
- REMOVE EXISTING CULVERT AND BEDDING MATERIALS
- PROPOSED CATCH BASIN
- TACTILE PLATE

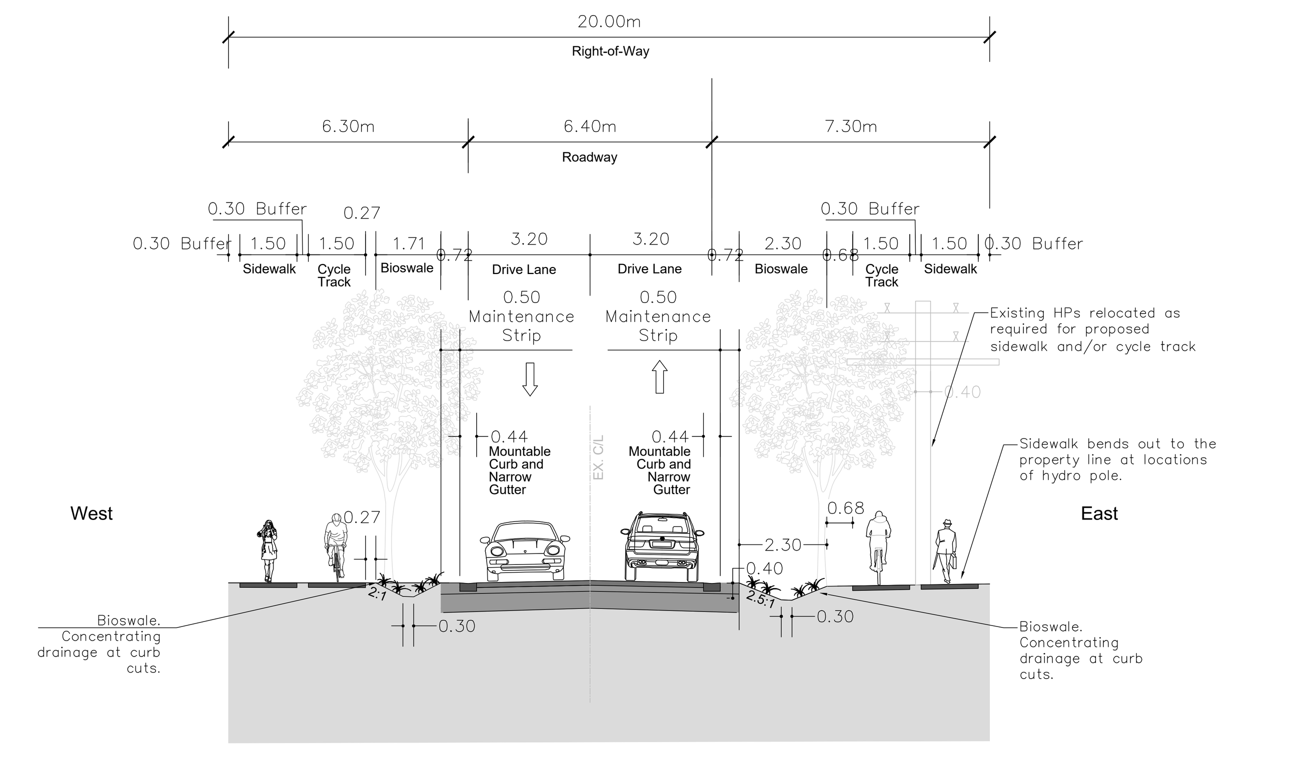
TITLE :
POST-DEVELOPMENT CONDITIONS
FIGURE 3-1

PRELIMINARY DESIGN

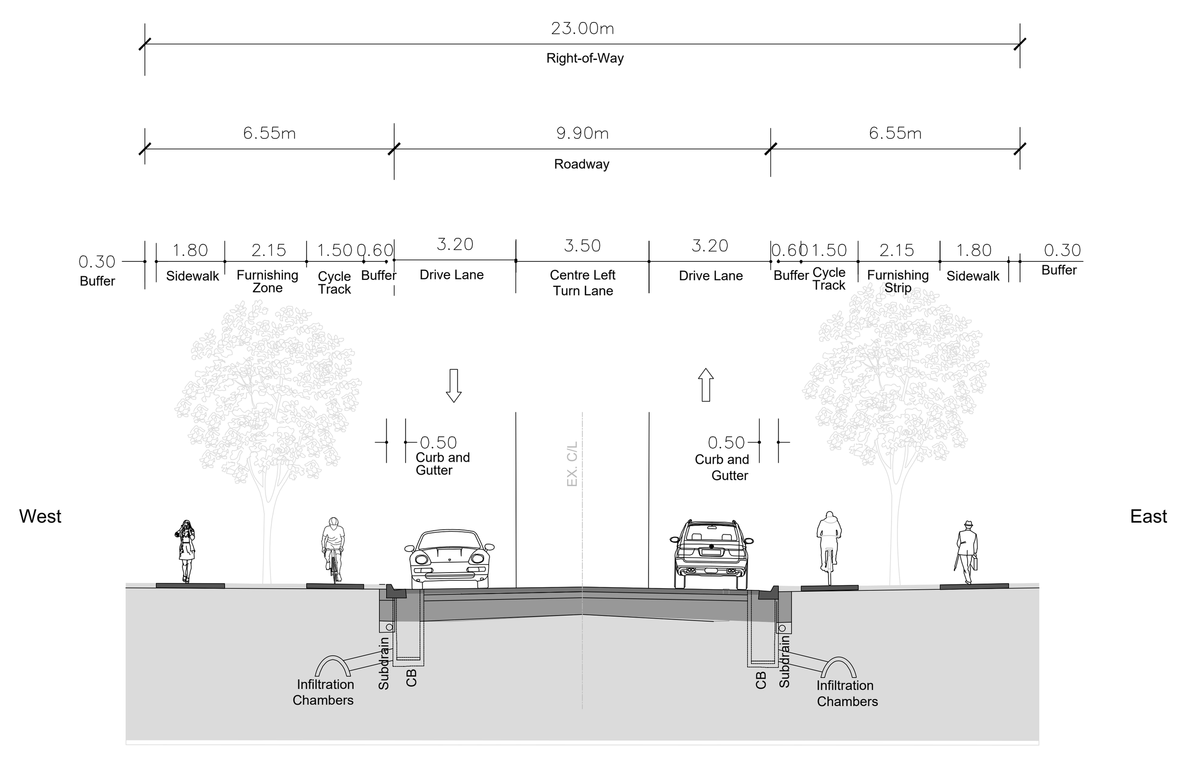
25th SideRoad Plan view-3
From North of Candaras Street to North of 10th Line
Context 1

25th SideRoad Plan view-4
From North of 10th Line to North of Cook Street
Context 1 and Context 3

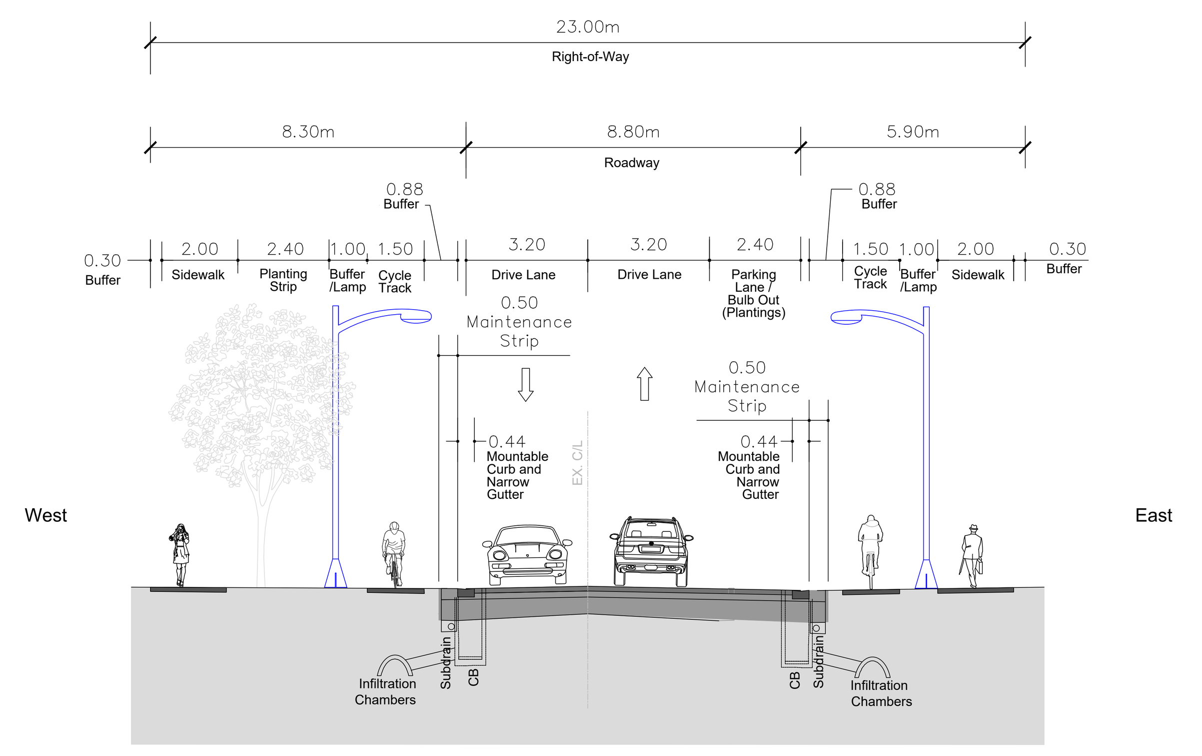
TYPICAL CROSS-SECTIONS



Context 1
(Low Density Residential)
From 80m North of Innisfil Beach to 70m North of Cook Street



Context 3
(Downtown Commercial)
From 450m South of Lockhart Road to 50m North of Lockhart



Context 3
(Downtown Commercial)
From 70m North of Cook Street to 450 m South of Lockhart Road

DRIVEWAY PAVEMENT
PROPOSED GRAVEL SHOULDER
EXISTING 25TH SIDE ROAD CROSSING CULVERTS
SUB-WATERSHED BOUNDARY
SUB-CATCHMENT ID
DRAINAGE AREA (ha)
IMPERVIOUSNESS (%)
ROAD DRAINAGE AREA
ROAD DRAINAGE AREA
EXISTING WATER
EXISTING SANITARY
EXISTING GAS SERVICE
EXISTING GAS
FLOW DIRECTION
CONTOURS
UNDER GROUND INFILTRATION CHAMBER
PROPOSED BIOSWALE

GENERAL NOTES:
SIGNAGE AND PARKING LIMITS TO BE COMPLETED IN DETAILED DESIGN

TOWN OF INNISFIL
25TH SIDE ROAD

MAY, 2022

LEGEND

PROPOSED ASPHALT ROADWAY (PARTIAL DEPTH)
1.5m - 2 m PROPOSED CONCRETE SIDEWALK
1.5m - 2.0m PROPOSED CYCLE LANE
PROPOSED HARDSCAPE BUFFER
3.0 m PROPOSED MULTI USE PATH
2.4 m PROPOSED BI-DIRECTIONAL CYCLE LANE
PLANTING STRIP
PROPOSED HYDRO POLE
MISC. REMOVALS
2.4m PARKING/LANDSCAPING
0.5m ASPHALT BUFFER / MAINTENANCE STRIP
PROPOSED MOUNTABLE CURB
2.15m FURNISHING STRIP/ZONE
EXISTING PROPERTY LINE
FUTURE PROPERTY LINE
1.5m - 2 m PROPOSED CROSS RIDE
2.5 m PROPOSED CROSSWALK
0.3-0.9 m PROPOSED SOD
PROPOSED CULVERT
REMOVE EXISTING CULVERT AND BEDDING MATERIALS
PROPOSED CATCH BASIN
TACTILE PLATE

TITLE :
POST-DEVELOPMENT CONDITIONS
FIGURE 3-2

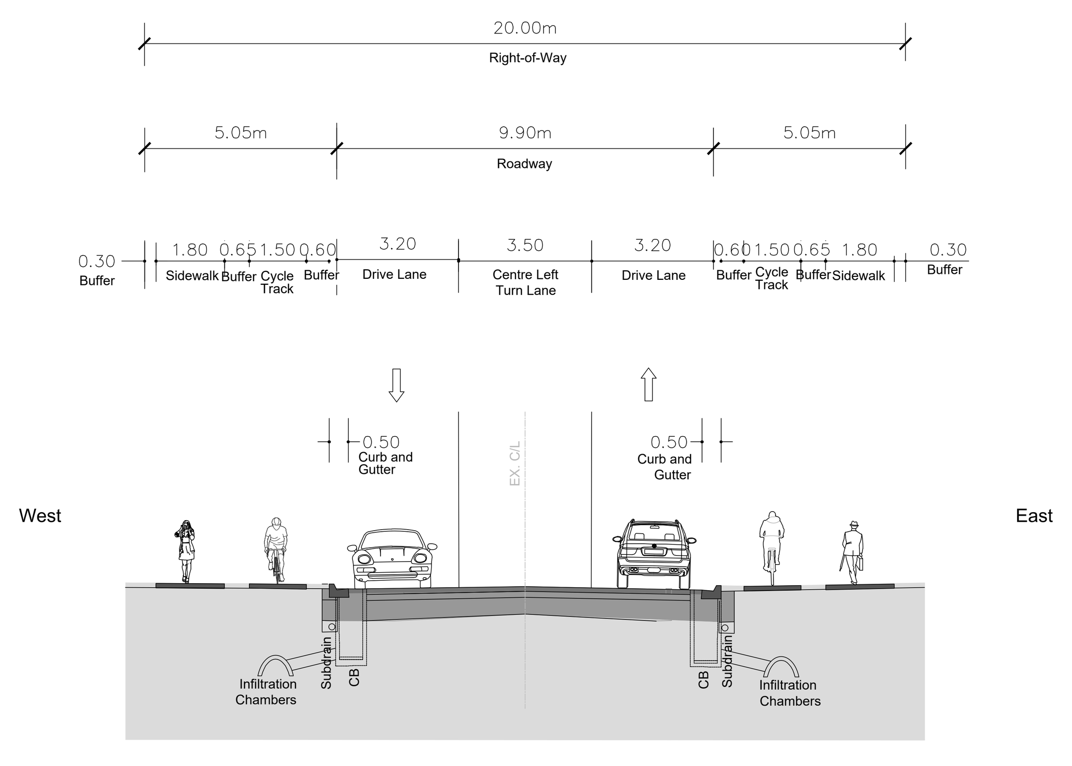
wsp

PRELIMINARY DESIGN

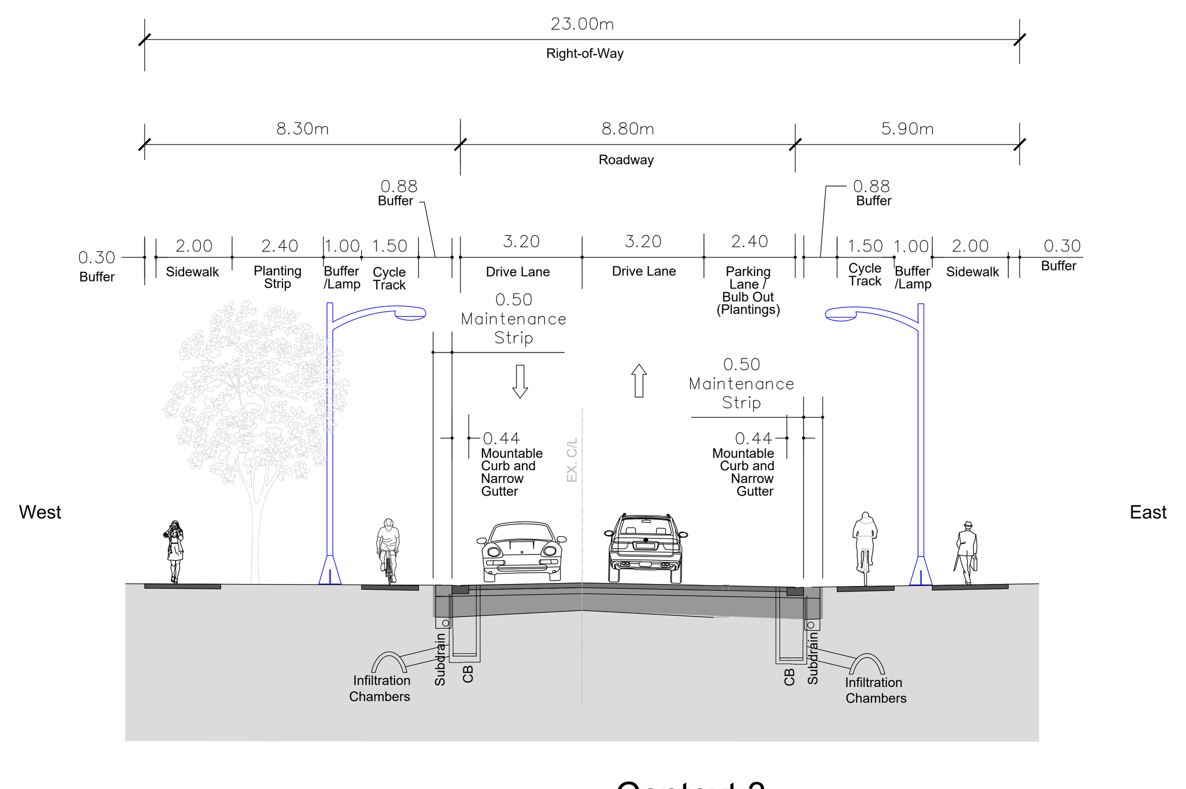
25th SideRoad Plan view-5
From South of Lockhart St. to North of Pinegroove Ave.
Context 3 and Context 1

25th SideRoad Plan view-6
From North of Pinegroove Ave. to North of Martin Crescent
Context 1 Context 3 and Context 2

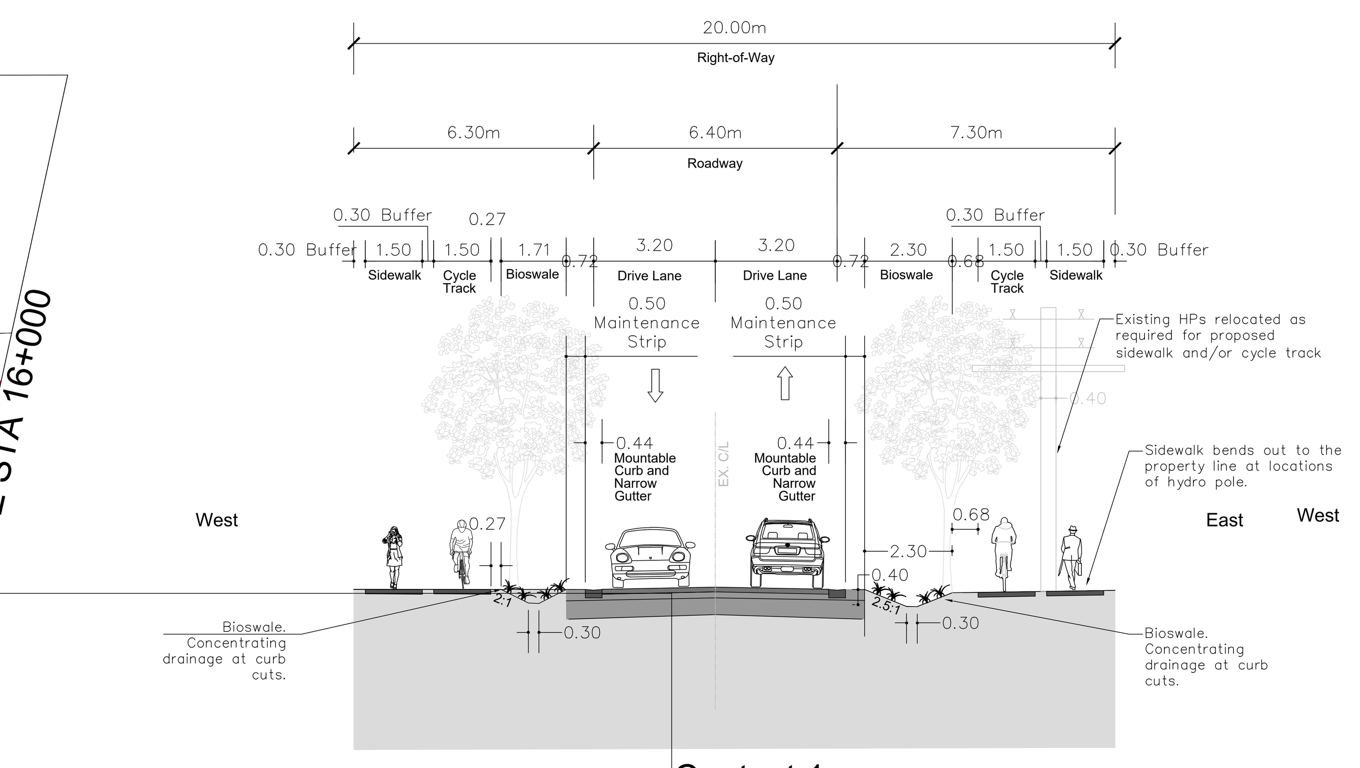
TYPICAL CROSS-SECTIONS



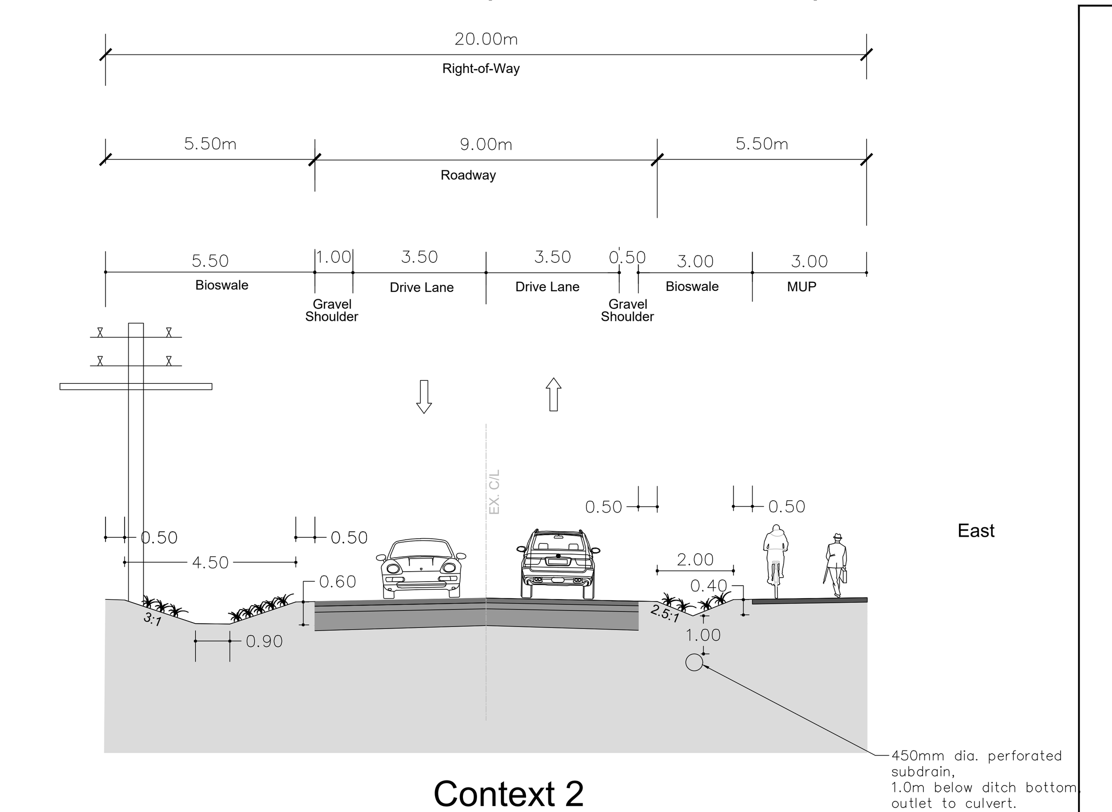
Context 1
(Low Density Residential)
From 50m North of Lockhart to 200m North of Lockhart



Context 3
(Downtown Commercial)
From 300m South of Maple View Drive to Maple View Drive



Context 1
(Low Density Residential)
From 200m North of Lockhart to 300m South of Maple View Drive



Context 2
(Green Space)
From Maple View Drive to Bay Point Road

TOWN OF INNISFIL
25TH SIDE ROAD

MAY, 2022

LEGEND

- PROPOSED ASPHALT ROADWAY (PARTIAL DEPTH)
- 1.5m - 2 m PROPOSED CONCRETE SIDEWALK
- 1.5m - 2.0m PROPOSED CYCLE LANE
- PROPOSED HARDSCAPE BUFFER
- 3.0 m PROPOSED MULTI USE PATH
- 2.4 m PROPOSED BI-DIRECTIONAL CYCLE LANE
- PLANTING STRIP
- PROPOSED HYDRO POLE
- MISC. REMOVALS
- 2.4m PARKING/LANDSCAPING
- 0.5m ASPHALT BUFFER / MAINTENANCE STRIP
- PROPOSED MOUNTABLE CURB
- 2.15m FURNISHING STRIP/ZONE
- EXISTING PROPERTY LINE
- FUTURE PROPERTY LINE
- 1.5m - 2 m PROPOSED CROSS RIDE
- 2.5 m PROPOSED CROSSWALK
- 0.3-0.9 m PROPOSED SOD
- PROPOSED CULVERT
- REMOVE EXISTING CULVERT AND BEDDING MATERIALS
- PROPOSED CATCH BASIN
- TACTILE PLATE
- DRIVEWAY PAVEMENT
- PROPOSED GRAVEL SHOULDER
- EXISTING 25TH SIDE ROAD CROSSING CULVERTS
- SUB-WATERSHED BOUNDARY
- 2003L(R) — SUB-CATCHMENT ID.
- 0.43 — DRAINAGE AREA (ha)
- 88 — IMPERVIOUSNESS (%)
- ROAD DRAINAGE AREA
- ROAD DRAINAGE AREA
- EXISTING WATER
- EXISTING SANITARY
- EXISTING GAS SERVICE
- EXISTING GAS
- FLOW DIRECTION
- CONTOURS
- UNDER GROUND INFILTERATION CHAMBER
- PROPOSED BIOSWALE

GENERAL NOTES:
SIGNAGE AND PARKING LIMITS TO BE COMPLETED IN DETAILED DESIGN

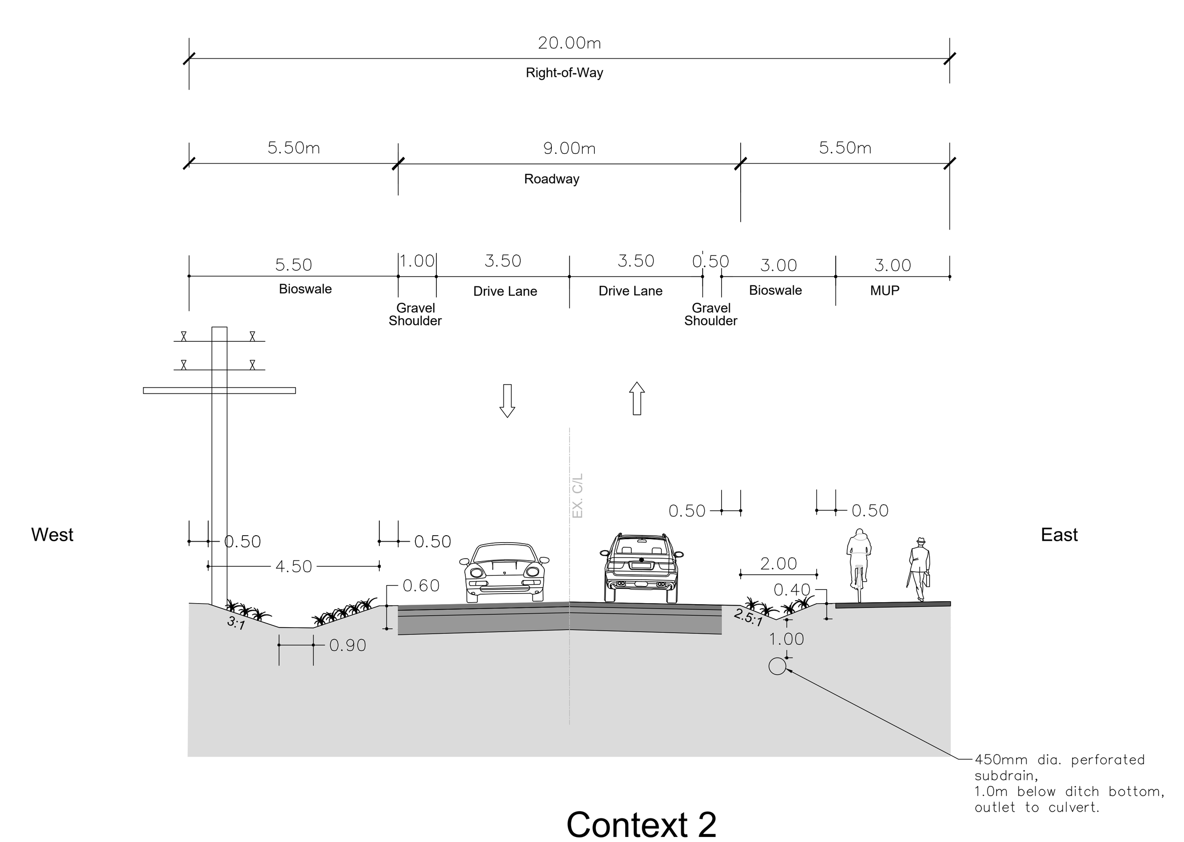
TITLE :
POST-DEVELOPMENT CONDITIONS
FIGURE 3-3

wsp

PRELIMINARY DESIGN

25th SideRoad Plan view-7
From South of Martin Crescent to Big Bay Point Road
Context 2

TYPICAL CROSS-SECTIONS



Context 2
(Green Space)
From Maple View Drive to Bay Point Road

DRIVEWAY PAVEMENT
PROPOSED GRAVEL SHOULDER
EXISTING 25TH SIDE ROAD CROSSING CULVERTS
SUB-WATERSHED BOUNDARY
SUB-CATCHMENT ID.
DRAINAGE AREA (ha)
IMPERVIOUSNESS (%)
ROAD DRAINAGE AREA
ROAD DRAINAGE AREA
EXISTING WATER
EXISTING SANITARY
EXISTING GAS SERVICE
EXISTING GAS
FLOW DIRECTION
CONTOURS
UNDER GROUND INFILTRATION CHAMBER
PROPOSED BIOSWALE

GENERAL NOTES:
SIGNAGE AND PARKING LIMITS TO BE COMPLETED IN DETAILED DESIGN

TOWN OF INNISFIL
25TH SIDE ROAD

MAY, 2022

LEGEND

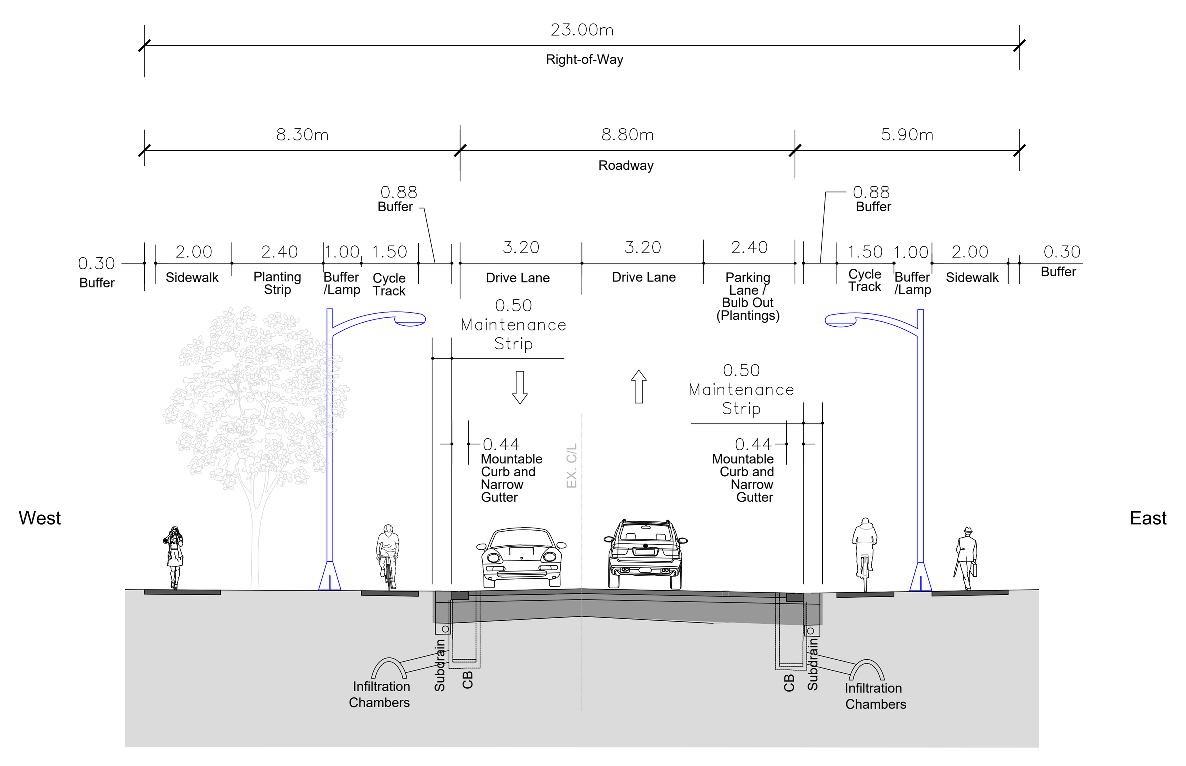
PROPOSED ASPHALT ROADWAY (PARTIAL DEPTH)
1.5m - 2 m PROPOSED CONCRETE SIDEWALK
1.5m - 2.0m PROPOSED CYCLE LANE
PROPOSED HARDSCAPE BUFFER
3.0 m PROPOSED MULTI USE PATH
2.4 m PROPOSED BI-DIRECTIONAL CYCLE LANE
PLANTING STRIP
PROPOSED HYDRO POLE
MISC. REMOVALS
2.4m PARKING/LANDSCAPING
0.5m ASPHALT BUFFER / MAINTENANCE STRIP
PROPOSED MOUNTABLE CURB
2.15m FURNISHING STRIP/ZONE
EXISTING PROPERTY LINE
FUTURE PROPERTY LINE
1.5m - 2 m PROPOSED CROSS RIDE
2.5 m PROPOSED CROSSWALK
0.3-0.9 m PROPOSED SOD
PROPOSED CULVERT
REMOVE EXISTING CULVERT AND BEDDING MATERIALS
PROPOSED CATCH BASIN
TACTILE PLATE

TITLE :
POST-DEVELOPMENT CONDITIONS
FIGURE 3-4

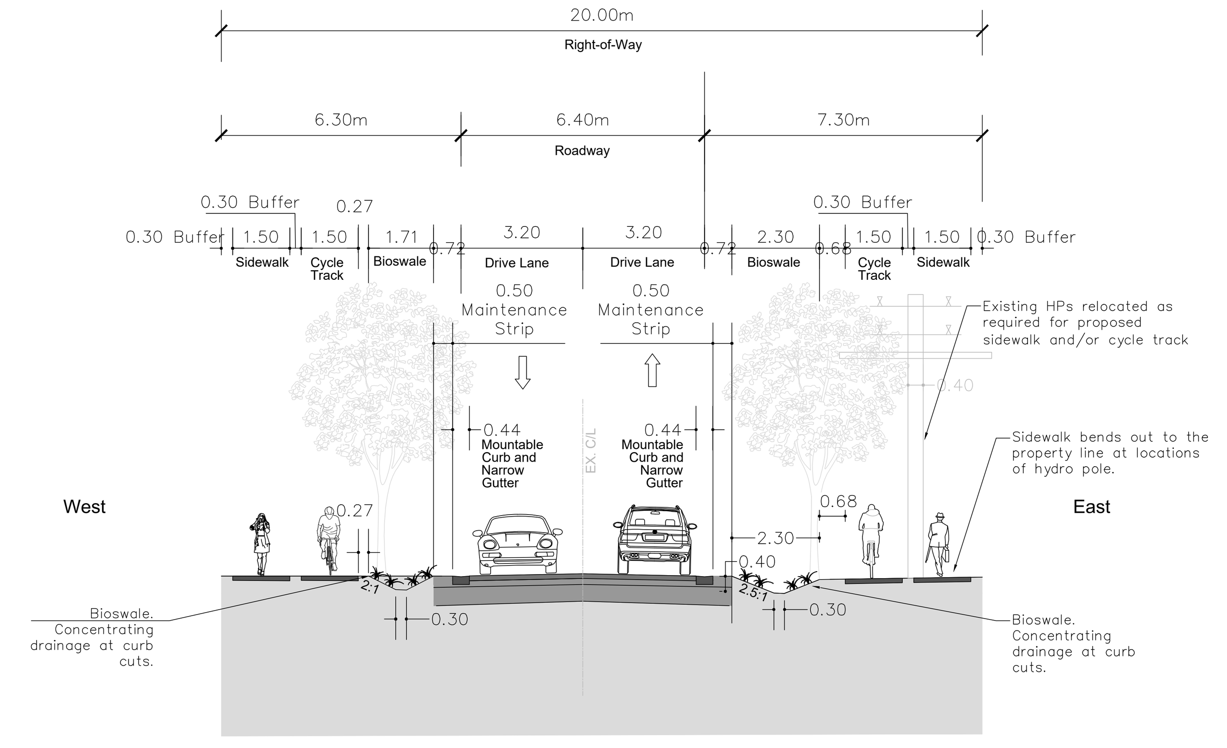
PRELIMINARY DESIGN

25th SideRoad Plan view-2
From North of Willow Avenue to North of Candaras Street
Context 1

TYPICAL CROSS-SECTIONS



Context 3
(Downtown Commercial)
From Innisfil Beach Road to 80m North of Innisfil Beach



Context 1
(Low Density Residential)
From 80m North of Innisfil Beach to 70m North of Cook Street

- DRIVEWAY PAVEMENT
- PROPOSED GRAVEL SHOULDER
- EXISTING 25TH SIDE ROAD CROSSING CULVERTS
- SUB-WATERSHED BOUNDARY
- 2003L(R) — SUB-CATCHMENT ID.; 0.43 — DRAINAGE AREA (ha); 88 — IMPERVIOUSNESS (%)
- ROAD DRAINAGE AREA
- ROAD DRAINAGE AREA
- EXISTING WATER
- EXISTING SANITARY
- EXISTING GAS SERVICE
- EXISTING GAS
- FLOW DIRECTION
- CONTOURS
- UNDER GROUND INFILTERATION CHAMBER
- PROPOSED BIOSWALE

GENERAL NOTES:
SIGNAGE AND PARKING LIMITS TO BE COMPLETED IN DETAILED DESIGN

TOWN OF INNISFIL
25TH SIDE ROAD

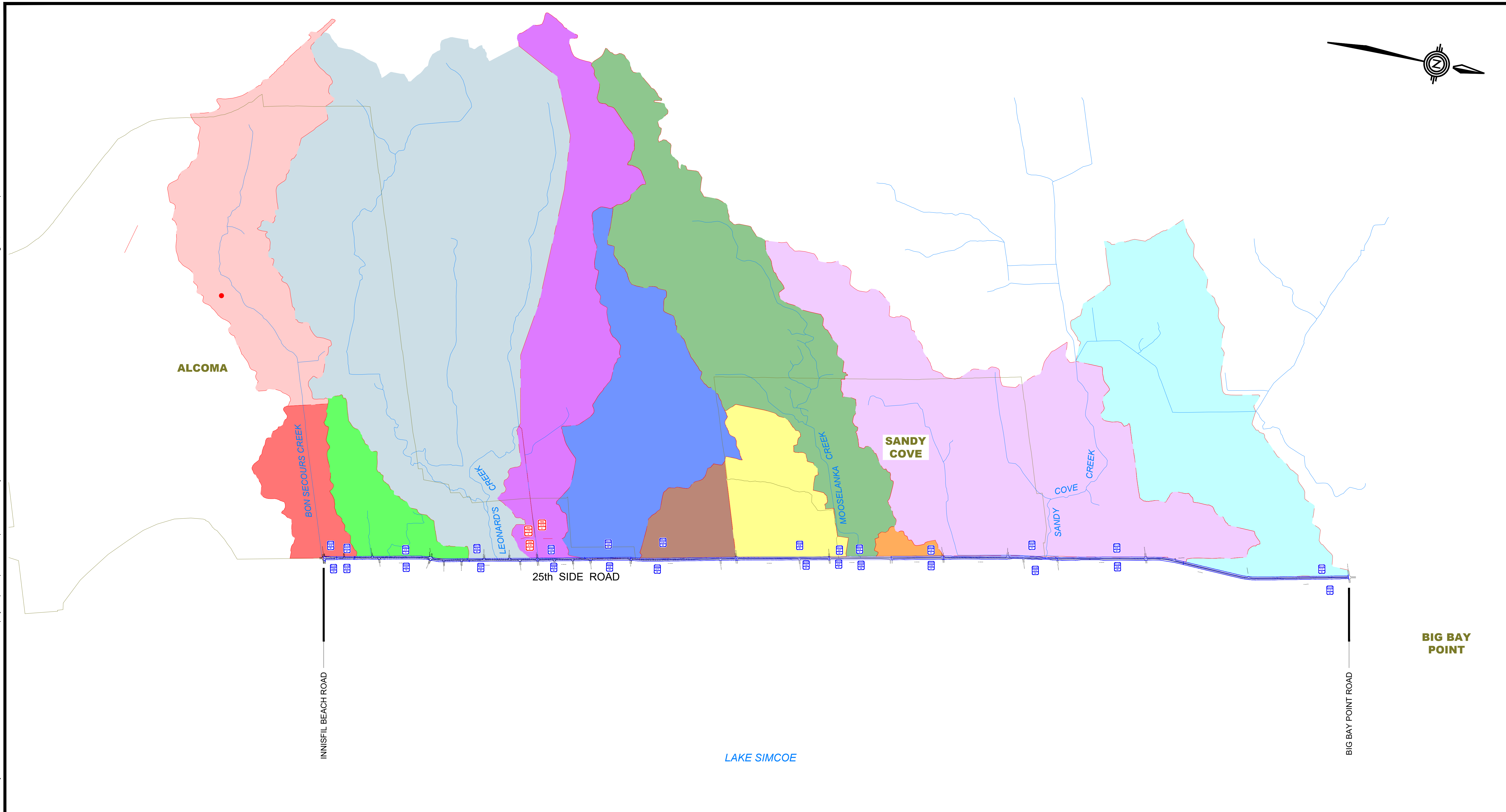
MAY, 2022

LEGEND

- PROPOSED ASPHALT ROADWAY (PARTIAL DEPTH)
- 1.5m - 2 m PROPOSED CONCRETE SIDEWALK
- 1.5m - 2.0m PROPOSED CYCLE LANE
- PROPOSED HARDSCAPE BUFFER
- 3.0 m PROPOSED MULTI USE PATH
- 2.4 m PROPOSED BI-DIRECTIONAL CYCLE LANE
- PLANTING STRIP
- PROPOSED HYDRO POLE
- MISC. REMOVALS
- 2.4m PARKING/LANDSCAPING
- 0.5m ASPHALT BUFFER / MAINTENANCE STRIP
- PROPOSED MOUNTABLE CURB
- 2.15m FURNISHING STRIP/ZONE
- EXISTING PROPERTY LINE
- FUTURE PROPERTY LINE
- 1.5m - 2 m PROPOSED CROSS RIDE
- 2.5 m PROPOSED CROSSWALK
- 0.3-0.9 m PROPOSED SOD
- PROPOSED CULVERT
- REMOVE EXISTING CULVERT AND BEDDING MATERIALS
- PROPOSED CATCH BASIN
- TACTILE PLATE

TITLE :
POST-DEVELOPMENT CONDITIONS
FIGURE 3-5

PRELIMINARY DESIGN



LEGEND

CATCHMENT BOUNDARY

2002 L — CATCHMENT ID.
0.70 — ROAD DRAINAGE AREA (ha)
71 — IMP (%)

ROAD DRAINAGE BOUDARY

SETTLEMENT BOUNDARY

WATERCOURSE

0 0.2 0.4 0.6 0.8 1.0km

CLIENT	TOWN OF INNISFIL
TITLE	25th SIDE ROAD, INNISFIL PROPOSED ROAD DRAINAGE AREAS

WSP

Checked S.v.H.	Drawn AutoCAD/B.K.B.
Date AUGUST 2022	Proj. No. 211-06027-00
Scale AS SHOWN	Figure No. 3.6

3.1 Bioswales and Underground Infiltration Chambers

3.1.1 Bioswales

Bioswale units are soil filter systems that temporarily store and filter stormwater runoff. These units rely on the engineered soil media placed below the channel invert to provide stormwater runoff reductions and improve water quality.

The proposed bioswale within the subject site contains:

1 Filter Media Layer
  a Sand (0.05 to 2 mm dia.)
  b Fines
  c Organic components

2 Mulch Layer:

75 mm layer of shredded hard wood on the surface of the filter bed.

3 Storage layer:

Gravel reservoir storage (i.e., granular material should be 50 mm diameter clear stone).

4 Pea gravel layer:

100 mm deep layer of pea gravel (i.e., a 3 to 10 mm diameter clear stone should be placed on top of the coarse gravel storage layer as a choking layer separating it from the overlying filter media bed).

5 Underdrain to remove excess water
6 Overflow pipe

The depths of the bioswale facilities within the subject site were estimated based on the required storage volumes for stormwater management control, infiltration rate of the native soil, porosity (void space ratio) of the gravel storage layer media and the targeted time period to achieve complete drainage between storm events. The proposed bioswales will have between 1.2 m to 1.5 m depths.

Bioswales should be separated from the seasonally high water table by a minimum of 1 m to ensure groundwater does not intersect the filter bed. Based on the results of the WSP geotechnical report (Section 1.5) groundwater was not encountered and all of the boreholes remained open and dry upon completion. Capped vertical standpipes consisting of an anchored 100 mm to 150 mm diameter perforated pipe with a lockable cap will be installed to the bottom of the bioswale facility to monitor the length of time required to fully drain between storms. The location of the monitoring pipes will be determined at the detailed design stage. Overflow pipes are proposed within the bioswales to direct the excess runoff to the existing 25th Side Road crossing culverts in the event that the runoff from a storm exceeds the capacity of the bioswales.

Typical ratios of impervious drainage areas to bioswale footprint areas were considered to be between 5:1 to 15:1.

Under post-development conditions road runoff will be discharged into the proposed bioswales. A pre-treatment area consisting of a small trench filled with pea gravel between the edge of pavement and the bioswale is recommended to help prevent clogging of the bioswale facilities by coarse sediment particles before they reach the filter bed.

Image 3-1 and **Image 3-2** show the sketch of the proposed bioswales within Contexts 1 and 2.

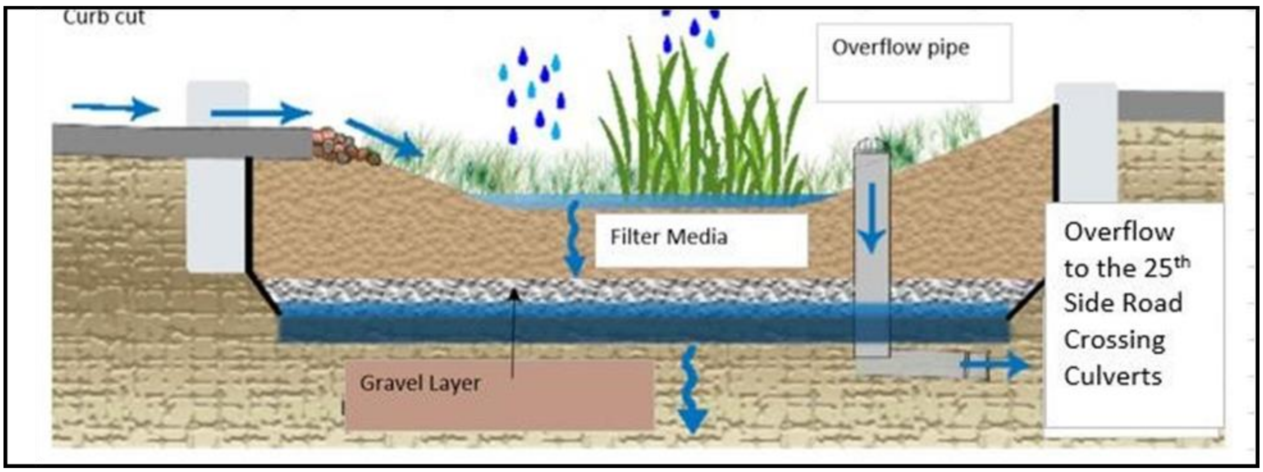


Image 3-1: Context 1 Bioswale Sketch

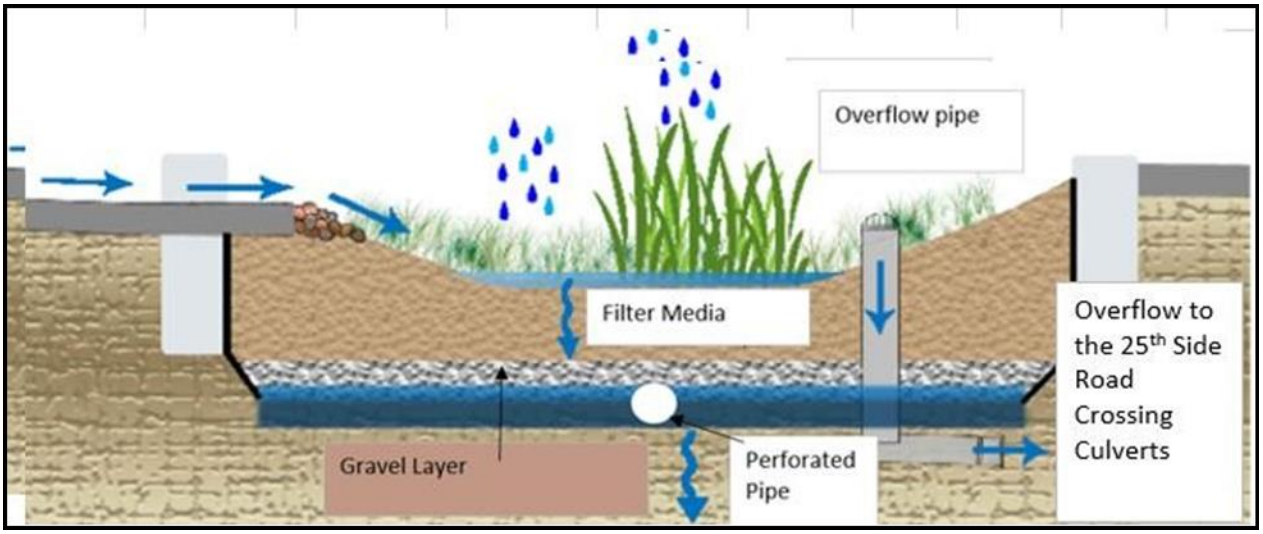


Image 3-2: Context 2 Bioswale Sketch

A detailed sketch of the proposed bioswale unit, the footprint area, size of the overflow pipes, bioswale depths and the estimated drawdown time of the bioswale within each catchment can be located within **Appendix A**.

Bioswales Maintenance

Routine visual inspection and standard maintenance are required for the proposed bioswale systems.

Since the engineering soil bed is constructed to meet the specified infiltration rate, the following policies should be implemented:

- Do not park or drive vehicles across the swale
- Do not mow the vegetation of the bottom of the swale. Mowing of grass/nuisance vegetation near the edges of the channel is acceptable.

Bioswale requires routine inspection and maintenance of the landscaping as well as periodic inspection for less frequent maintenance needs or remedial maintenance. Generally, routine maintenance will be the same as for any other landscaped area, weeding, pruning, and litter removal. Routine operation and maintenance tasks are key to public acceptance of highly visible bioretention units. Periodic inspections after major storm events will determine whether corrective action is necessary to address gradual deterioration or abnormal conditions.

For the first two years following construction the facility should be inspected semi-annually and after every major storm event (> 25 mm). Subsequently, inspections should be conducted in the spring each year and after major storm events.

While maintenance can be performed by landscaping contractors who are already providing similar landscape maintenance services on the subject site, they will need some additional training on bioretention needs.

This training should focus on elevation differences needed for ponding, mulching requirements, acceptability of ponding after a rainstorm, and fertilizer requirements. The planting plan should be kept for maintenance records and used to help maintenance staff identify which plants are weeds or invasive.

Bioretention maintenance requirements are summarized below.

- Inspect for vegetation density (at least 80% coverage), damage by foot or vehicular traffic, channelization, accumulation of debris, trash and sediment, and structural damage to pre-treatment devices (semi-annually for the first two years, and annually thereafter).
- Regular watering may be required during the first two years until vegetation is established (as needed for the first two years of operation).
- Remove trash and debris from pre-treatment devices (if installed), the bioretention area surfaces and inlets and outlets (at least twice annually, more frequently if desired for aesthetic reasons or if located in an area with high public exposure).
- Remove accumulated sediment from inlets and outlets as needed.
- Trim trees and shrubs as needed.
- Replace dead vegetation, remove invasive growth as needed.
- Repair eroded or sparsely vegetated areas as needed.
- Remove accumulated sediment on the bioretention area surface when dry and exceeds 25 mm depth (PDEP, 2006)
- If gullies are observed along the surface, re-grading and re-vegetating may be required.
- Flush out accumulated sediment with hoses or pressure washers from monitoring wells, underdrains, and overflow outlets annually.
- If visual inspection observes that standing water is present 72 hours after a rainfall event, then the practice may not be infiltrating at the desired rate, triggering further evaluation of the infiltration rate. Schedules may need to be adjusted over time as issues arise. If the monitored infiltration rate falls below the design rate, the practice should be investigated to determine the cause of the reduced rate. Quick, approximate soil texture tests can also be easily incorporated into a visual inspection to help determine whether the soil media might be clogged. If the soil media texture has become more silty or clayey, further investigation is warranted into a potential replacement of the soil media.

3.1.2 Underground Infiltration Chambers

Underground infiltration chambers are constructed below grade and therefore take up little or no space at the surface. The chambers can be installed below a broad range of land uses such as parking areas, lawns, pedestrian plazas, driveways, parks, and sports fields, but should generally be directed away from areas of heavy vehicular loading. They include a range of proprietary manufactured modular structures installed underground, that create large void spaces for the temporary storage of stormwater runoff and allow it to infiltrate into the underlying native soil. Stone reservoirs of the infiltration chamber systems should be filled with uniformly-graded, washed stone that provides 30 to 40% void space. Granular material should be a minimum 50 mm clear stone.

The proposed underground chamber systems within the subject site will have open bottoms, perforated side walls, and underlying granular stone reservoirs.

Capped vertical standpipes consisting of anchored 150 mm diameter perforated pipes with lockable caps will be installed at the bottom of the facilities to provide a means of inspecting and flushing the facilities out as part of routine maintenance. The location of the standpipes will be determined at the detailed design stage.

A non-woven, needle punched, or woven monofilament geotextile fabric will be installed around the stone reservoir of the underground infiltration chambers. The primary function of the geotextile is a separation between two dissimilar soils. When a finer-grained soil overlies a coarser grained soil or aggregate layer (e.g., stone reservoir), the geotextile prevents clogging of the void spaces from downward migration of soil particles. When a coarser grained aggregate layer (e.g., stone reservoir) overlies a finer grained native soil, the geotextile prevents slumping from downward migration of the aggregate into the underlying soil. Geotextile material specifications should conform to Ontario Provincial Standard Specification (OPSS) 1860 for Class II geotextile fabrics.

The bottom of the facility should be vertically separated by one meter from the seasonally high water table or top of bedrock elevation. Refer to Section 1.5 for the geotechnical results.

Typical ratios of impervious drainage areas to chamber footprint areas within the subject site were considered to be between 5:1 to 10:1.

Infiltration Chamber Maintenance

During construction, proper care should be taken to prevent sediment from entering the subsurface system, which may include installation of silt fencing and the bypassing of surface runoff around the system until the site is fully stabilized. At a minimum, all site erosion and sediment protection BMPs should be installed and maintained. Careful removal and disposal of ESC measures once the site is stabilized will prevent occlusion and prevent collected debris from washing into the chamber system. Flush the system thoroughly upon completion.

Chamber system (with infiltration facilities) require regular inspection to ensure they continue to function as designed. Maintenance typically consists of cleaning out leaves, debris and accumulated sediment caught in pre-treatment devices, inlets and outlets annually or as needed. During the first two years of service, inspection and maintenance will be used to determine the pattern and timing of sediment and debris build up. Inspection via monitoring wells shall also be used to determine whether the facility drains within the maximum acceptable length of time (typically 72 hours). Inspection should be carried out within 24 hours following every major storm event (>25 mm single rainfall event where reports of localized flooding occur within the municipality), else semi-annually at a minimum.

1 Inspect all observation ports, the inflow and outflow connections, and any pre-treatment devices.
2 Measure the sediment accumulation within the system
3 Record any system backup / backflow, incomplete discharging of system or permanent water remaining in system.

If the time required to fully drain exceeds 72 hours, cleaning may be required to dislodge accumulated debris or sediment blockages.

4 Clean out any pre-treatment devices (OGS units, sediment traps / shields, filter system etc.). Follow manufacturer recommendations.
5 Remove sediments from all inflow and outflow connections using a vacuum pump, flushing the system with water to further dislodge debris from the chambers.

If after cleaning, the time to fully drain exceeds 72 hours cleanout of the underdrain pipe can be attempted. If slow drainage persists, the system may need removal and replacement of granular material and/or geotextile fabric. The expected lifespan of infiltration practices is not well understood; however, it can be expected that it will vary depending on pre-treatment practice maintenance frequency, and the sediment texture and load coming from the catchment.

Bioswale and Infiltration Chamber Maintenance Costs

Based on the Assessment of Life Cycle Costs for Low Impact Development Stormwater Management Practices report prepared by Toronto and Region Conservation dated April 2013, annual maintenance cost for a bioswale with a footprint area of 130 m^2 and infiltration chamber with footprint area of 104.7 m^2 would be $952 and $1,212 respectively. Thus the total maintenance cost for bioswale and infiltration chamber system would be $58,347.9 and $ 23,655 respectively.Please refer to **Appendix A** for more details.

Context 1: The design includes 1.5 m of sidewalks and 1.5 m of unidirectional cycle tracks on both sides of the road. A 3.2 m drive lane is proposed in each direction (excluding gutters) and a 0.44 m mountable curb with a narrow gutter is proposed. A 0.5 m maintenance strip to accommodate snow storage and allow overhanging of snow plow blades has also been included. It should be noted that space was dedicated on the west and east side of the road within Context 1 to implement bioswale facilities (i.e., 2 m and 2.3 m respectively), however, due to the presence of underground utilities (Bell Canada, Hydro, gas pipes, water mains and sanitary pipes) the available space to implement bioswale facilities within Context 1 will be smaller than what was shown in the Proposed Context 1 Cross-Section Sketch (**Image 3-3**).

Image 3-3: Proposed Context 1 Cross-Section

The proposed 25th Side Road will be graded on both sides of the road at detail design in such a way as to have sheet flow from the center of the road towards the curbs and from the sidewalks towards the bioswales. Curb cuts are proposed to direct roadway runoff from the center of the road to the proposed bioswales. Sheet flow from sidewalks and Cycle Tracks will be directed to the proposed bioswales as well. In addition, sheet flow from the adjacent neighbouring areas (west side of the road) will be discharged into the proposed bioswale. To provide pre-treatment at the location of curb-cuts between the edge of the pavement and the bioswale facilities small trenches filled with pea gravel are proposed. The runoff will then be infiltrated into the underlying native soil of the bioswales. As the upstream bioswale planter fills up with runoff, it overflows out and enters to the next downstream planter. Granular check dams will be placed within the bioswale alignments to reduce water velocity. The location and number of the required check dams will be determined at detail design. The check dams will be designed to provide a maximum 0.2 m allowable ponding depths within the proposed bioswales.

Overflow pipes are proposed within the bioswales to direct the excess runoff to the existing 25th Side Road crossing culverts in the event that the runoff from a storm exceeds the capacity of the bioswales. The inlet of the proposed overflow pipes should be placed above the allowable bioswale ponding depths (i.e., 0.2 m). It should be noted that the existing 25th Side Road crossing culverts should be replaced with the recommended culverts in **Table 2-2** to have enough capacity for the 25-year storm events. The proposed crossing culverts should be placed in such a way to direct excess runoff from the proposed bioswales to the existing downstream watercourses.

The proposed bioswales within Catchments 2010 to 2012 will have perforated pipes due to the relatively low infiltration rate of the native soil. Please refer to Post-Development Conditions **Figure 3-1** to **Figure 3-5** for the location of Catchments 2010 to 2012. The proposed bioswales were sized to provide water balance, quality control and runoff reduction for the roadway drainage areas. To meet quality control targets, bioswales were sized to provide 80% TSS removal for the roadway runoff prior to being discharged into the existing 25th Side Road crossing culverts.

The existing 25th Side Road has roadside ditches on both sides of the road. Under post-development conditions, the existing roadside ditch's culverts will be shifted to the location of the proposed bioswales to convey runoff from the adjacent neighbouring areas (west side of the road) towards the 25th Side Road crossing culverts (see Post-Development Conditions Figures for the location of the proposed bioswales within Context 1). Since the ratios of impervious drainage areas to bioswale footprint areas were considered to be 15:1, in addition to roadway drainage areas, the proposed bioswales can retain runoff from small portions of the adjacent neighbouring drainage areas, therefore providing retrofitted stormwater management benefits.

Context 2: The design includes a 3.0 m multi-use pathway on the east side of the roadway and bioswales on both side of the roads. A 3.5 m drive lane is proposed in each direction. **Image 3-4** shows the Cross-Section for Context 2.

The proposed 25th Side Road will be graded at detail design in such a way to have a slope from the center of the road towards the proposed bioswale on both sides of the road. In addition, sheet flows from the 3 m multi-use pathway on the east side of the roadway and the adjacent neighbouring drainage areas on the west side will be directed into the proposed bioswales. Small trenches filled with pea gravel are proposed between the edge of the pavement and the bioswale facilities to provide pre-treatment. The runoff will then be infiltrated into the underlying native soil of the bioswales. Since the infiltration rate of the native soil is lower than 15 mm/hr, the proposed bioswale within Context 2 will have 200 mm diameter perforated pipes. As the upstream bioswale planter fills up with runoff, it overflows and enters to the next downstream planter.

Check dams are proposed within Context 2 bioswales alignments and will provide a maximum 0.2 m ponding depth. The location and number of the required check dams will be determined at the detailed design stage.

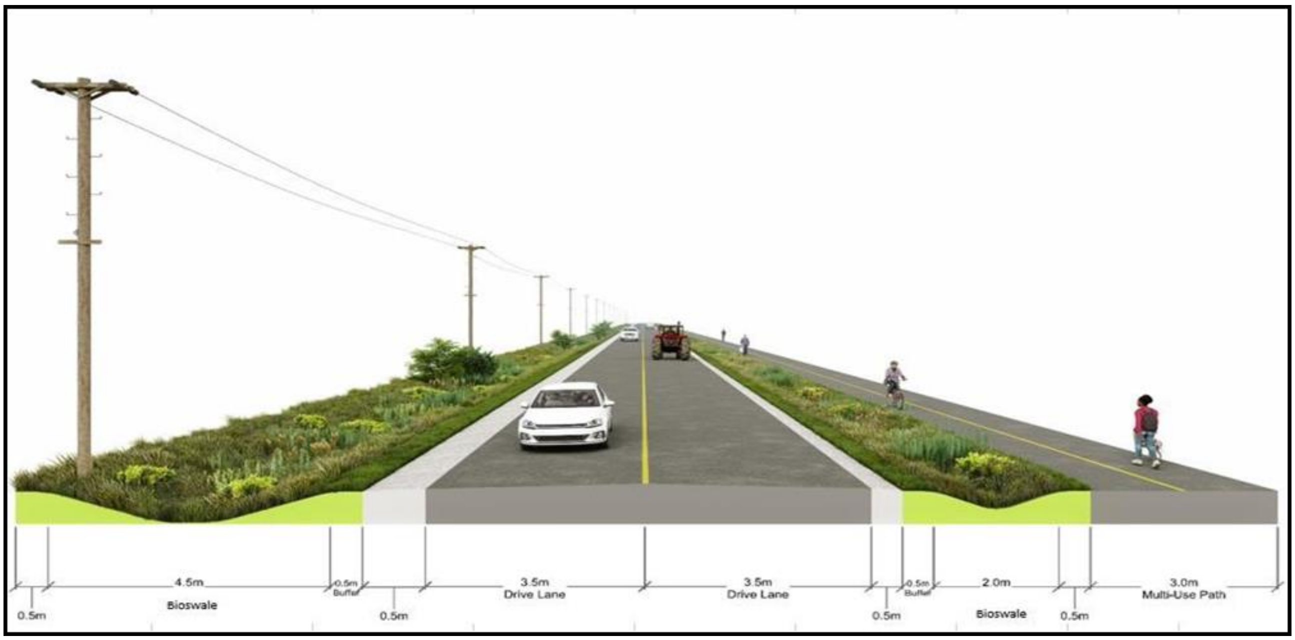


Image 3-4: Context 2 Cross-Section Sketch

Overflow pipes are proposed within the bioswales to direct the excess runoff towards the existing 25th Side Road crossing culverts in the event that the runoff from a storm exceeds the capacity of the bioswales. The inlet of the proposed overflow pipes should be placed above the allowable bioswales ponding depth of 0.2 m. As mentioned previously, the existing 25th Side Road crossing culverts should be replaced with the recommended culverts in **Table 2-2** to have enough capacity for the 25-year storm events. The proposed crossing culverts should be placed in such a way to direct excess runoff from the proposed bioswales to the existing downstream watercourses.

The proposed bioswales were sized to provide water balance, quality control (80% TSS removal) and runoff reduction for the roadway drainage areas prior to being discharged into the existing 25th Side Road crossing culverts.

As mentioned in Context 1, the existing 25th Side Road has roadside ditches on both sides of the road. Under post-development conditions, the existing roadside ditch culverts will be shifted to the location of the proposed bioswales to convey runoff from the adjacent neighbouring areas (west side of the road) towards the 25th Side Road crossing culverts (see Post-Development Conditions Figures for the location of the proposed bioswales within Context 2). Since the ratios of impervious drainage areas to bioswale footprint areas were considered to be 15:1, in addition to roadway drainage areas, the proposed bioswales can retain runoff from small portions of the adjacent neighbouring drainage areas therefore providing stormwater management retrofits.

Context 3: The design includes 2 m of sidewalks and 1.5 m of unidirectional cycle tracks, 0.6 m buffers, and 0.3 m detectable buffer strips on both sides of the road. A 3.2 m drive lane is proposed in each direction. In addition, a 2.4 m parking lane is proposed within the east side of the road. **Image 3-5** shows Context 3 Cross-Section.

Image 3-5: Context 3 Cross-Section Sketch

Opportunities exist to implement underground chamber systems within the overall roadway cross-section.

The proposed 25th Side Road will be graded at detail design to ensure slope from the center of the road and from sidewalks on both sides drain towards the proposed catchbasins. In addition, sheet flow from the adjacent neighbouring areas (west side) will be directed into the proposed catchbasins. The proposed catchbsins will have outlets directed towards the proposed storm pipes and underground chamber systems.

The proposed catchbasin outlets will be placed at different elevations. The first bottom outlet will convey runoff towards the underground chamber systems while the second outlet will convey runoff towards the proposed underground storm pipes. The underground chamber systems flow will then be infiltrated into the underlying native soil at the bottom of the systems.

The proposed underground chamber systems within the subject site were sized to provide water balance, quality control (80% TSS removal) and runoff reduction for the roadway runoff. The underground chamber systems will have perforated pipes and underdrain pipes. In the event that runoff exceeds the capacity of the systems, perforated pipes and underdrain pipes will convey the excess runoff towards proposed storm pipes.

As noted previously the existing 25th Side Road crossing culverts should be replaced with the recommended culverts in **Table 2-2** to have enough capacity for the 25-year storm events. The proposed crossing culverts should be placed in such a way to direct excess runoff from the proposed underground chamber systems and underground storm pipes to the existing downstream Creeks.

Please refer to Post-Development Conditions Figures for the location of the proposed underground chamber systems within Context 3.

Proposed Roundabout

The Town requested WSP to complete a preliminary roundabout design at the 9th Line and 25th Side Road intersection. Supplementary survey and geotechnical works were completed as part of the preliminary roundabout design (Section 1.5.2).

Under existing conditions, runoff generated from 9th Line Road is conveyed by roadside ditches on both sides of the 9th Line Road towards the 25th Side Road existing crossing culvert (see **Figure 2.5** for the existing 800 mm diameter crossing culvert location). In addition, runoff generated from the existing Catchment 104 is discharged into the existing roadside ditches on both sides of 9th Line Road prior to being discharged into the existing 800 mm diameter crossing culvert on the west side of 25th Side Road. Under post-development conditions, no major changes are made for the existing 800 mm diameter crossing culvert tributary drainage areas (Catchment 104 existing and Catchments, Catchments 2004 L & R). As such, the provided culvert capacity analysis in **Section 2.1.1** would be applicable under the proposed development of the roundabout at the intersection of 9th Line Road. To provide culvert capacity analysis for the existing 9th Line Road crossing culverts, Catchment 104 was delineated into three catchments (Catchment 1040, 1041, and 1042). Based on the topography survey plan for the study area, at the intersection of 9th Line and Wallace Avenue, runoff from the east side of 9th Line Road is conveyed to the west side of 9th Line Road via an existing 500 mm diameter crossing culvert prior to being discharged into an existing 900 mm diameter culvert within the west side of the 9th Line Road ditch (See Figure 3-5). To estimate runoff rates towards the existing 500 mm and 900 mm diameters crossing culverts, a Visual OTTHYMO (VO6.1) model was simulated for the 10-year 4-hour Chicago and 12-hour SCS Type II design storms for Catchments 1041 and 1042. The modelling results are provided in **Table 3-2**.

Based on the modelling results, the existing 500 mm diameter crossing culvert has sufficient capacity to convey the 10-year design flow. However, it is recommended to replace the existing 900 mm diameter roadside ditch culvert on the west side of 9th Line Road with a 1050 mm diameter pipe. Please refer to **Figure 3-5** for the location of Catchments 1040, 1041 and 1042 and the proposed 1050 mm diameter culvert pipe.

Table 3-2: Full Capacity of the Existing Culverts (9th Line Road)

<table>
<tr><th rowspan="2">Catchment Name</th><th rowspan="2">Watercourse Name</th><th colspan="2">Ex. Culvert</th><th rowspan="2">25- year 12 hr SCS II (m^3/s)</th><th rowspan="2">100- year 12 hr SCS II (m^3/s)</th><th rowspan="2">25- year 4- hr Chicago (m^3/s)</th><th rowspan="2">100- year 4- hr Chicago (m^3/s)</th><th rowspan="2">Culvert Capacity (m^3/s)</th><th rowspan="2">Required Culvert size to pass 25-year flow (m)</th></tr>
<tr><th>Span /d (m)</th><th>Height /d (m)</th></tr>
<tr><td>104</td><td></td><td colspan="2">0.8</td><td>2.47</td><td>3.63</td><td>1.83</td><td>2.68</td><td>0.66</td><td>2.4 x 1.50</td></tr>
<tr><td></td><td rowspan="3">Leonard’s Creek</td><td colspan="2"></td><td colspan="2">10- year 12 hr SCS II (m^3/s)</td><td colspan="2">10- year 4 hr Chicago Storm (m^3/s)</td><td>Culvert Capacity (m^3/s)</td><td>Required Culvert size to pass 10-year flow (m)</td></tr>
<tr><td>1041</td><td colspan="2">0.5</td><td colspan="2">0.096</td><td colspan="2">0.07</td><td>0.53</td><td>0.5</td></tr>
<tr><td>1042</td><td colspan="2">0.9</td><td colspan="2">1.63</td><td colspan="2">1.19</td><td>1.39</td><td>1.05</td></tr>
</table>

Under post-development conditions the proposed LID facilities within Catchments 2004 and 2004 R will provide quality, quantity and water balance control for Catchment 2004 drainage area. As mentioned in **Section 2.1.1** (**Table 2-2**) the existing 800 mm diameter 25th Side Road crossing culvert should be replaced with a 2.4 m x 1.5 m box culvert.

3.1.3 Post-Development Conditions Hydrologic Model

A Visual OTTHYMO (VO6.1) model was simulated to estimate the post-development peak flow rates for Catchments 2001 to 2012. Peak flow rates for the 4-hour Chicago and 12-hour SCS Type II design storms were determined for the 2-year to 100-year return periods. The post-development hydrologic model uses the same catchment delineation as the existing conditions model. The catchment parameters have been altered to reflect proposed conditions of the site. The details of the Visual OTTHYMO modelling results are provided in **Appendix C**.

3.2 Volume Control

As mentioned in **Section 1.3.1.1**, LSRCA criteria require linear redevelopment projects on sites without restrictions that create 0.5 or greater hectares of new and/or fully reconstructed impervious surfaces, shall capture and retain / treat on site, the larger of the following:

1 The runoff from a 12.5 mm event from the fully reconstructed impervious surface and newly constructed impervious area.

2 The runoff from a 25 mm event from the net increase in impervious area on the site.

Table 3-3: Volume to be Retained on Site

Criteria	Proposed Road Drainage Area (ha)	Imp (%)	Fully Reconstructed Impervious Areas (ha)	Net Increase in Impervious Area (ha)	Required Volume (m^3)
12.5 mm from the fully reconstructed area	15.29	82	12.54	-	1,567.5
25 mm from net increase in impervious area	15.29	63	-	2.17	542.5

From the above table, the volume control criteria is based on 12.5 mm of runoff from the fully reconstructed area. The 12.5 mm rainfall depth retention on site will be achieved by implementing the proposed bioswales and underground infiltration chambers within the roadway drainage areas. **Table 3-4** shows the LID units required storge volumes and total provided storage volumes to meet LSRCA Volume Control criterion for the study area. It should be noted that the depth of the proposed catchbasins is not included within Context 3 LID units' depth.

Table 3-4: Storage Requirements for Volume Control

Catchment Name	LID Footprint Area (ha)	Total Depth of LID Units (m)	Required Storage Volume to Retain 12.5 mm Rainfall Depth (m^3)	Total LID Units Provided Storage Volume (m^3)
Catchment 2001-1 L Context 3	0.006	*1.2	11.2	27.7
Catchment 2001-1 R Context 3	0.011	*0.7	9.8	31
Catchment 2001-2 L Context 1	0.01	1.9	13.1	39
Catchment 2001-2 R Context 1	0.01	1.2	15.6	30.9
Catchment 2002 L Context 1	0.04	1.2	82.0	254.6

Catchment Name	LID Footprint Area (ha)	Total Depth of LID Units (m)	Required Storage Volume to Retain 12.5 mm Rainfall Depth (m^3)	Total LID Units Provided Storage Volume (m^3)
Catchment 2002 R Context 1	0.04	1.2	94.5	268.9
Catchment 2003 L Context 1	0.02	2.3	48.2	166
Catchment 2003 R Context 1	0.04	1.2	50.9	228
Catchment 2004 L Context 1	0.015	1.6	38.9	111
Catchment 2004 R Context 1	0.05	1.2	38.4	269
Catchment 2005 L Context 1	0.008	1.5	31.4	64
Catchment 2005 R Context 1	0.03	1.2	28.3	185
Catchment 2006 L Context 1	0.05	1.2	71.2	291
Catchment 2006 R Context 1	0.03	1.9	72.9	240
Catchment 2007 L Context 1	0.06	1.2	61.7	358
Catchment 2007 R Context 1	0.64	1.2	66.8	400
Catchment 2008-1 L Context 1	0.01	1.6	7.1	45
Catchment 2008-2 L Context 3	0.04	*1.0	33.3	173
Catchment 20081 R Context 1	0.006	1.3	7.6	36
Catchment 20082 R Context 3	0.04	*1.0	28.3	172
Catchment 2009 L Context 3	0.032	*0.50	38.4	63
Catchment 2009 R Context 3	0.037	*0.50	37.4	67
Catchment 20101 L Context 3	0.022	*0.50	25.6	43

Catchment Name	LID Footprint Area (ha)	Total Depth of LID Units (m)	Required Storage Volume to Retain 12.5 mm Rainfall Depth (m^3)	Total LID Units Provided Storage Volume (m^3)
Catchment 20102 L Context 1	0.033	1.2	43.8	191
Catchment 20101 R Context 3	0.011	1.3	25.6	140
Catchment 20102 R Context 1	0.024	1.5	76.1	152
Catchment 2011 L Contexts 3&,2	0.053	1.2	93.3	258
Catchment 2011 R Contexts 2 & 3	0.056	1.2	95.2	268
Catchment 2012 L Context 2	0.0693	1.2	77.5	314
Catchment 2012 R Context 2	0.077	1.3	129.1	388
Total				**5,285.0**

3.3 Quality Control

Section 1.3.1.1 identified the required suspended solids removal treatment as Enhanced Protection Level (Level 1) which corresponds to a long-term average removal of 80% of suspended solids.

Table 3-5 shows the required storage volumes within the proposed LID units to remove the 80% of suspended solids from the roadway drainage areas.

The MOE (now MECP) SWM Manual (Table 3.2) was used to estimate water quality storage volume requirements for roadway drainage areas.

Table 3-5: Required Storage Volume to meet the 80% TTS Removal

Catchment Name	Area (ha)	Imp (%)	Required Infiltration Volume		TSS Removal (%)
			(m^3)	(m^3/ha)	
Catchment 2001-1 L Context 3	0.10	90	**5.37**	53.67	80.00
Catchment 2001-1 R Context 3	0.10	79	**3.78**	38.15	80.00
Catchment 2001-2 L Context 1	0.11	95	**7.67**	69.73	80.00
Catchment 2001-2 R Context 1	0.13	96	**1.25**	72.31	80.00
Catchment 2002 L Context 1	0.70	94	**46.39**	66.27	80.00
Catchment 2002 R Context 1	0.80	95	**54.83**	68.54	80.00
Catchment 2003 L Context 1	0.43	90	**23.08**	53.67	80.00
Catchment 2003 R Context 1	0.47	87	**21.07**	44.84	80.00
Catchment 2004 L Context 1	0.35	89	**18.06**	51.60	80.00
Catchment 2004 R Context 1	0.36	85	**14.85**	41.26	80.00
Catchment 2005 L Context 1	0.28	90	**15.03**	53.67	80.00
Catchment 2005 R Context 1	0.29	78	**10.93**	37.69	80.00
Catchment 2006 L Context 1	0.65	88	**31.11**	47.86	80.00
Catchment 2006 R Context 1	0.73	80	**27.95**	38.28	80.00
Catchment 2007 L Context 1	0.58	85	**23.40**	40.35	80.00
Catchment 2007 R Context 1	0.64	84	**22.81**	35.64	80.00
Catchment 2008-1 L Context 1	0.07	84	**2.54**	37.87	80.00
Catchment 2008-2 L Context 3	0.38	70	**13.34**	34.84	80.00

Catchment Name	Area (ha)	Imp (%)	Required Infiltration Volume		TSS Removal (%)
			(m^3)	(m^3/ha)	
Catchment 2008-1 R Context 1	0.07	83	**2.55**	34.86	80.00
Catchment 2008-2 R Context 3	0.39	59	**12.13**	31.33	80.00
Catchment 2009 L Context 3	0.40	77	**14.92**	37.29	80.00
Catchment 2009 R Context 3	0.39	77	**14.53**	37.26	80.00
Catchment 2010-1 L Context 3	0.25	82	**9.75**	39.00	80.00
Catchment 2010-2 L Context 1	0.47	74	**17.15**	36.49	80.00
Catchment2010-1 R Context 3	0.25	82	**9.75**	39.00	80.00
Catchment 2010-2 R Context 1	0.47	86	**18.93**	40.28	80.00
Catchment 2011 L Context 2 & 3	0.87	86	**29.58**	34.00	80.00
Catchment 2011R Context 2 & 3	0.90	85	**35.89**	39.88	80.00
Catchment 2012 L Context 2	1.11	56	**33.67**	30.33	80.00
Catchment 2012 R Context 2	1.11	93	**47.37**	42.68	80.00
Total			**589.7**		

As shown in **Table 3-5**, a total storage volume of 589.7 m^3 is required within LID units to provide 80% TSS removal for the roadway drainage areas. **Section 3.2** identified the LID systems having a total storage volume of 5,285 m^3, of which 1,568 m^3 is required to meet the LSRCA Volume Control criterion. Please refer to **Table 3-4** for the required storage volume to retain the 12.5 mm of rainfall depth on site. Based on the results, the proposed LID will have sufficient storage volumes to satisfy quality control requirements.

Section 1.3.1.1 noted that LSRCA initiated the Lake Simcoe Phosphorus Offsetting Policy (LSPOP) in 2017, which requires that all new development must control 100% of the phosphorus from leaving their property. This is referred to as the Zero Export

Target. Under this policy, any remaining phosphorus load that cannot be controlled would trigger the need for an offset to achieve a net zero target. As per Section 4.4.3 of the (LSPOP), in situations where the phosphorus load cannot be met a cash-in-lieu amount payable to the LSRCA shall be used in the retrofit if existing stormwater discharges elsewhere in a subwatershed or in adjacent subwatersheds.

Therefore, WSP conducted a phosphorus loading analysis for the subject site using the MECP Lake Simcoe Phosphorus Loading Development Tool. Detailed loading calculations can be found in **Appendix A**.

Pre-Development Phosphorus Loads

Pre-development conditions were simulated by applying land use types:

- ‘Hay-Pasture’ for the pervious portions of the road drainage areas
- ‘Low Residential Development’ for the remaining impervious areas of the road

The results determined the pre-development annual phosphorus loading of 14.10 kg/year for the subject site.

Post-Development Phosphorus Loads – No LID Features

Post-development conditions were simulated by applying a land use types:

- ‘High Residential Intensity Development’ for the pervious portions of the road drainage areas
- ‘Hay-Pasture’ for the pervious portions of the road drainage areas

The post-development annual phosphorus loading results were estimated to be 16.55 kg/year.

Post-Development Phosphorus Loads – LID Features

As mentioned previously, the proposed development with mitigation measures includes two low impact development facilities:

- Bioretention, which provides an overall phosphorus removal rate of 100%
- Infiltration Trench, which provides an overall phosphorus removal rate of 80%

With the proposed BMPs, the post-development phosphorus load results for the subject site are estimated to be 2.78 kg/year.

Therefore, a cash-in-lieu fee for the subject site is estimated to be $248,256 as the Zero Export Target is not achieved. Using the offsetting ratio of 2.5, the offsetting cost of $35,000/kg/year and an additional 15% administration fee outlined in Section 4.4.3 of the LSPOP.

3.4 Water Balance

The site is required to demonstrate that the pre-development infiltration volume will be maintained under post-development conditions.

The Thornthwaite and Mather methodology has been used for the pre- and post-development water balance analysis. The 1981 to 2010 Climate Normals data has been used to estimate the average annual precipitation of 932.9 mm/year for the subject site. The potential evaporation rate and water surplus have been estimated to be 598.2 mm/year and 334.7 mm/year respectively. Based on the preliminary water balance analysis, pre and post-development yearly infiltration volumes of 18,936 m^3 and 11,315 m^3 have been estimated for the subject site, respectively. Therefore, under un-mitigated post-development conditions, a yearly reduction in infiltration volume of 7,621 m^3 is expected.

As mentioned in **Section 3.1**, two Low-Impact Development measures are proposed for the subject site to address the water balance of the proposed site exceeding the pre-development water balance characteristics.

Based on the results of the research study in the Low Impact Development Stormwater Management Planning and Design Guide, a 70% runoff reduction will occur by installing the bioswale units without underdrains. In addition, a 60% runoff reduction will occur by implementing underground infiltration chamber systems (see **Appendix B** for more details). Thus, a yearly infiltration rate of 49,808 m^3 was estimated for the subject site which will mitigate the previously identified increase in runoff and address the water balance requirements.

Table 3-6: Comparison of Water Balance Under Pre, Post and Post-Development with Mitigation Measures

Hydrologic Cycle Components	Pre-Development Condition Volumes (m^3)	Post-Development Condition Volumes (m^3)	Post-Development Conditions Volumes with Mitigation Measures (m^3)
Infiltration	18,936	11,315	49,808
Evapotranspiration	28,451	24,176	48,625
Runoff	95,253	107,149	44,198
Precipitation	142,640	142,640	142,640

3.5 Quality Control

The post-development peak flow rates should be controlled to the corresponding pre-development peak flow rates for 2 to 100-year storm events. a Visual OTTHYMO Model (VO6.1) was used to estimate the minimum required storage volumes to meet quantity control targets for the roadway drainage areas.

The LID units within the study area are proposed to provide the required storage volumes for the LSRCA Volume Control criterion, quantity control and quality control requirements. **Table 3-4** (**Section 3.2**) shows the total provided storage volume within the LID units.

The required storage volumes to meet the LSRCA Volume Control criterion and quality control targets have been provided in **Table 3-3** (**Section 3.2**) and **Table 3-4** (**Section 3.3**) respectively. As shown in **Table 3-3** and **Table 3-4**, the LID units will have available storage volume for quantity control requirements as well. As such, the Visual OTTHYMO modeling results were used to confirm the available storage volumes within the proposed LID units will satisfy the minimum quantity control storage volume requirements for the roadway drainage areas. Control flow devices will be sized at the detailed design stage. The results are summarized in **Table 3-7** and **Table 3-8**. Please refer to **Appendix C** for more details.

Table 3-7: Quantity Control Required Storage Volumes (12-hr SCS II)

Catchment Name	Pre-development Flow 12-hr SCS II (m^3/s)	Post-development Flow 12- hr SCS II (m^3/s)	Required Storage Volume (m^3)	Available Storage Volume for Quantity Control (m^3)
Catchment 2001 L Contexts 1 & 3	0.083	0.085	25	29.2
Catchment 2001 R Contexts 1&3	0.091	0.092	27	31.5
Catchment 2002 L Context 1	0.282	0.285	40	126.1
Catchment 2002 R Context 1	0.324	0.321	N/A	119.5
Catchment 2003 L Context 1	0.142	0.175	94	94.5
Catchment 2003 R Context 1	0.154	0.191	102	156.5

Catchment Name	Pre-development Flow 12-hr SCS II (m^3/s)	Post-development Flow 12- hr SCS II (m^3/s)	Required Storage Volume (m^3)	Available Storage Volume for Quantity Control (m^3)
Catchment 2004 L Context 1	0.135	0.142	51	54.1
Catchment 2004 R Context 1	0.148	0.146	N/A	215.7
Catchment 2005 L Context 1	0.138	0.114	N/A	17.5
Catchment 2005 R Context 1	0.133	0.115	N/A	146.2
Catchment 2006 L Context 1	0.241	0.263	99	188.6
Catchment 2006 R Context 1	0.243	0.289	135	139.2
Catchment 2007 L Context 1	0.263	0.234	N/A	272.9
Catchment 2007 R Context 1	0.285	0.256	N/A	310.0
Catchment 2008 L Contexts 1&3	0.075	0.175	162	162.3
Catchment 2008 R Contexts 1&3	0.085	0.171	141	157.6
Catchment 2009 L Context 1	0.195	0.157	N/A	9.6
Catchment 2009 R Context 1	0.25	0.25	N/A	15.4
Catchment 2010 L Contexts 1&3	0.326	0.284	N/A	138.6
Catchment 2010 R Contexts 1&3	0.34	0.38	159	161.8
Catchment 2011 L Contexts 2&3	0.385	0.331	N/A	134.8
Catchment 2011 R Contexts 2&3	0.382	0.356	N/A	136.7
Catchment 2012 L Context 2	0.461	0.398	N/A	202.4
Catchment 2012 R Context 2	0.466	0.44	N/A	212.0

Catchment Name	Pre-development Flow 12-hr SCS II (m^3/s)	Post-development Flow 12- hr SCS II (m^3/s)	Required Storage Volume (m^3)	Available Storage Volume for Quantity Control (m^3)
Catchment 2010-1 R Context 3	0.34	0.38	159	161.8
Catchment 2010-2 R Context 1	0.385	0.331	N/A	134.8
Catchment 2011 L Context 2 & 3	0.382	0.356	N/A	136.7
Catchment 2011R Context 2 & 3	0.461	0.398	N/A	202.4
Catchment 2012 L Context 2	0.466	0.44	N/A	212.0
Catchment 2012 R Context 2	0.34	0.38	159	161.8

Table 3-8: Quantity Control Required Storage Volumes (4-hr Chicago Storm)

Catchment Name	Pre-development Flow 12-hr SCS II (m^3/s)	Post-development Flow 12- hr SCS II (m^3/s)	Required Storage Volume (m^3)	Available Storage Volume for Quantity Control (m^3)
Catchment 2001 L Contexts 1 & 3	0.098	0.102	25	29.2
Catchment 2001 R Contexts 1&3	0.107	0.109	24	31.5
Catchment 2002 L Context 1	0.314	0.339	83	126.1
Catchment 2002 R Context 1	0.366	0.381	84	119.5
Catchment 2003 L Context 1	0.159	0.209	80	94.5
Catchment 2003 R Context 1	0.182	0.226	79	156.5
Catchment 2004 L Context 1	0.149	0.17	51	54.1
Catchment 2004 R Context 1	0.167	0.172	38	215.7
Catchment 2005 L Context 1	0.155	0.136	N/A	17.5

Catchment Name	Pre-development Flow 12-hr SCS II (m^3/s)	Post-development Flow 12- hr SCS II (m^3/s)	Required Storage Volume (m^3)	Available Storage Volume for Quantity Control (m^3)
Catchment 2005 R Context 1	0.142	0.135	91	146.2
Catchment 2006 L Context 1	0.269	0.31	91	188.6
Catchment 2006 R Context 1	0.26	0.332	114	139.2
Catchment 2007 L Context 1	0.28	0.277	50	272.9
Catchment 2007 R Context 1	0.319	0.304	N/A	310.0
Catchment 2008 L Contexts 1 & 3	0.078	0.197	122	162.3
Catchment 2008 R Contexts 1 & 3	0.101	0.184	90	157.6
Catchment 2009 L Context 1	0.22	0.179	N/A	9.6
Catchment 2009 R Context 1	0.296	0.296	N/A	15.4
Catchment 2010 L Contexts 1 & 3	0.34	0.325	N/A	138.6
Catchment 2010 R Contexts 1 & 3	0.38	0.449	140	161.8
Catchment 2011 L Contexts 2 & 3	0.407	0.364	N/A	134.8
Catchment 2011 R Contexts 2 & 3	0.435	0.109	N/A	136.7
Catchment 2012 L Context 2	0.508	0.417	N/A	202.4
Catchment 2012 R Context 2	0.516	0.506	N/A	212.0

4 CONCLUSION

A stormwater management plan has been prepared to support the proposed 25th Side Road reconstruction project in The Town of Innisfil. The key points are summarized below.

Bioswale and underground infiltration chamber systems are proposed to provide LSRCA Volume Control requirements, water quantity, water quality and water balance storage volume requirements for the road drainage areas. The depths of the LID units within the subject site were estimated based on the required storage volumes for stormwater management control, infiltration rate of the native soil, porosity (void space ratio) of the gravel storage layer media and the targeted time period to achieve complete drainage between storm events. The geotechnical report provided by WSP dated April 2022 indicated groundwater was not encountered during the investigation, and all of the boreholes remained open and dry upon completion. Thus, the proposed LID systems will have a 1 m separation from seasonal groundwater levels.

- **Culvert Capacity Analysis**

  The capacity of the existing culverts along 25th Side Road are significantly lower than the peak flows from the 25-year and 100-year design storm events. The existing culverts should be replaced under proposed conditions.

- **Volume Control**

  Runoff from a 12.5 mm event from the fully reconstructed road impervious surface will be retained on site by utilizing LID units.

- **Quality Control**

  The site is required to target a long-term removal of 80% total suspended solids (TSS) on an annual loading basis. LID units were sized to satisfy the required 80% TSS removal based on the MOE (now MECP) SWM Manual (Table 3.2) water quality storage volume requirements.

  The pre- and post-development annual phosphorus loading of 14.10 kg/year and 16.55 kg/year were estimated for the subject site. Under post-development conditions with mitigation measures, an annual phosphorus loading of 2.78 kg/year was estimated. Thus, a required cash-in-lieu fee for the subject site is estimated to be $248,256.

- **Water Balance**

  The site is required to demonstrate that the pre-development infiltration volume will be maintained under post-development conditions. The results of the preliminary water balance analysis reveal pre- and post-development yearly infiltration rates of 18,936 m^3 and 11,315 m^3 which is equal to a yearly reduction of 7,621 m^3 under post-development conditions. Under post-development conditions with mitigation measures, an infiltration rate of 49,808 m3 is estimated. Therefore, the water balance control target will be met by applying the LID units within the subject site.

- **Quantity Control**

  The post-development peak flow rates should be controlled to the corresponding pre-development peak flow rates for 2 to 100-year storm events. a Visual OTTHYMO Model (VO6.1) was used to estimate the minimum required storage volumes within the LID units to meet quantity control targets for the roadway drainage areas. Based on the modeling results the provided storage volumes within the LID units will satisfy the quantity control targets for the study area.

- **Utility Constrains**

  One of the typical constraints of implementing a Green Infrastructure Project is the presence of underground utilities and particularly, the provision of adequate access to utility lines for maintenance. Although adequate space between the edge of the proposed LID units and the alignment of the existing utilities (i.e., Bell Canada, gas line, sanitary, water main, storm pipes, etc.) has been provided for the subject site (1 m space), a Subsurface Utility Engineering (SUE) process should be completed to find the depth and exact location of the existing utilities. There is a known utility constraint within Catchment 2007. To restrict the movement of water into the existing underlying sanitary pipes, utility protection measures should be performed.

  Protection measures may include soil or engineer fill with impermeable liner or an insulating wrap.

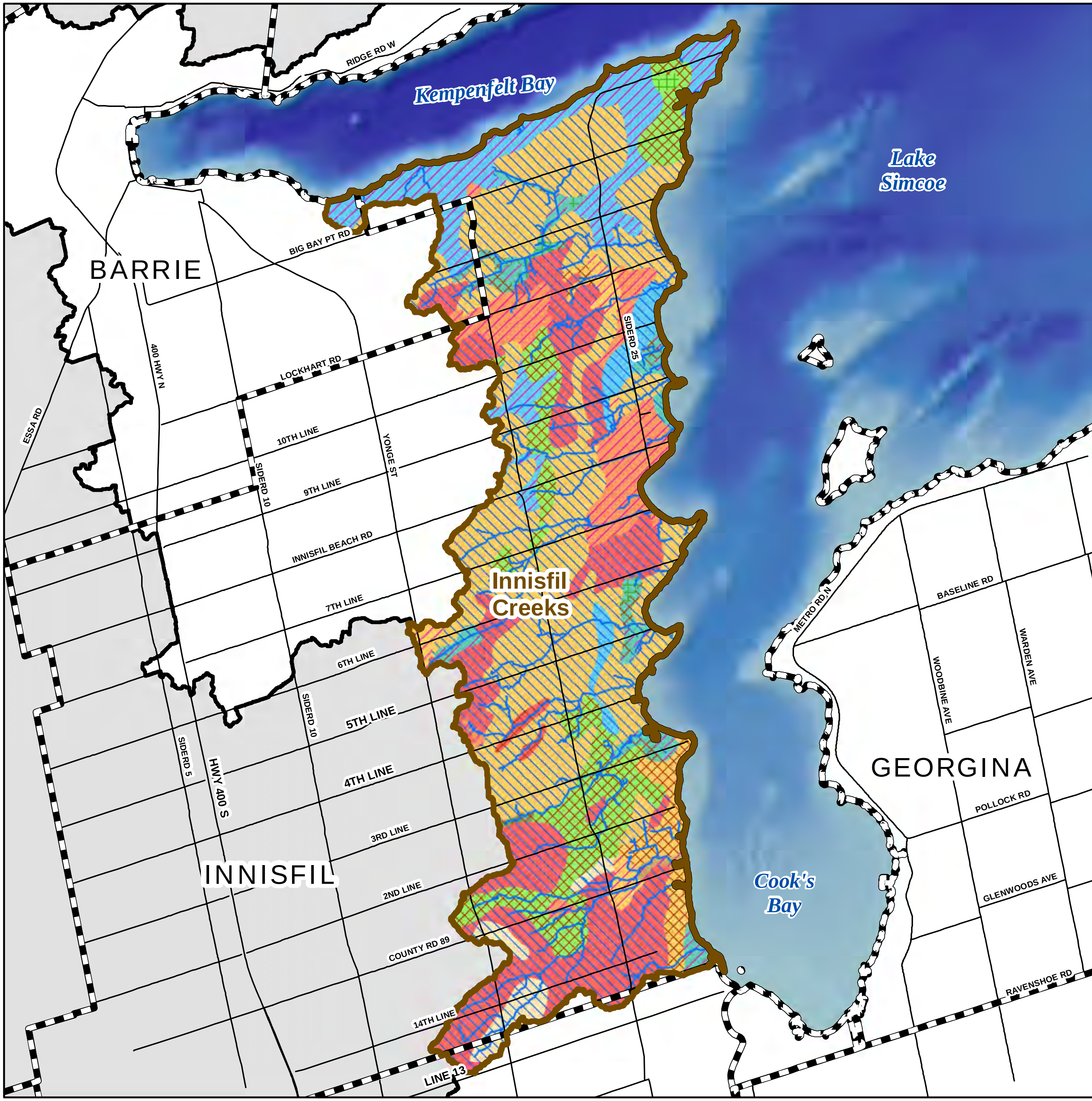
This report has demonstrated that the proposed strategy will address stormwater management related impacts from the project and meet the intent of the Town of Innisfil and Lake Simcoe Region Conservation Authority.

APPENDIX

A Background Information

Soils in the Innisfil Creeks subwatershed

Figure 2-18



Legend

Road

Municipal Boundary

Watercourse

Soil Hydro Class

A - high infiltration rates

B - moderate infiltration rates

C - slow infiltration rates

D - very slow infiltration rates

Soil Texture Class

GRAVELLY SANDY LOAM

SAND

SANDY LOAM

FINE SANDY LOAM

LOAM

LOAMY SAND

SILTY LOAM

SILTY CLAY LOAM

ORGANIC

Lake Simcoe Region conservation authority

0 0.5 1 2 3 4 5

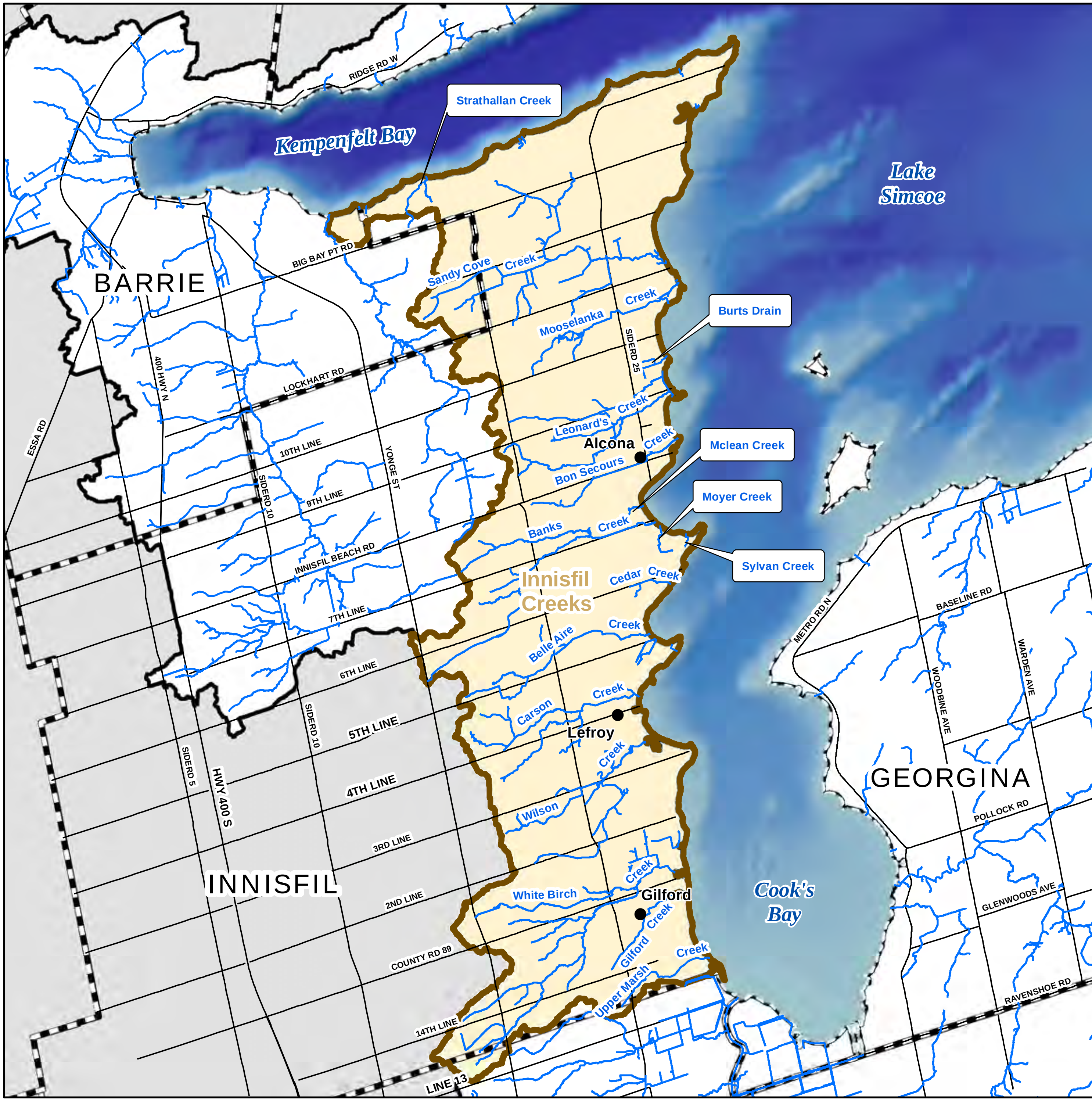
Kilometres

N

This product was produced by the Lake Simcoe Region Conservation Authority and some information depicted on this map may have been compiled from various sources. While every effort has been made to accurately depict the information, data / mapping errors may exist.
This map has been produced for illustrative purposes only.
LSRCA GIS Services DRAFT created July 2010.

The Innisfil Creeks subwatershed

Figure 2-1



Legend

- Road
- Municipal Boundary
- Watercourse
- Innisfil Creeks Subwatershed

Lake Simcoe Region Conservation Authority

0 0.5 1 2 3 4 5 Kilometres

N

This product was produced by the Lake Simcoe Region Conservation Authority and some information depicted on this map may have been compiled from various sources. While every effort has been made to accurately depict the information, data / mapping errors may exist.
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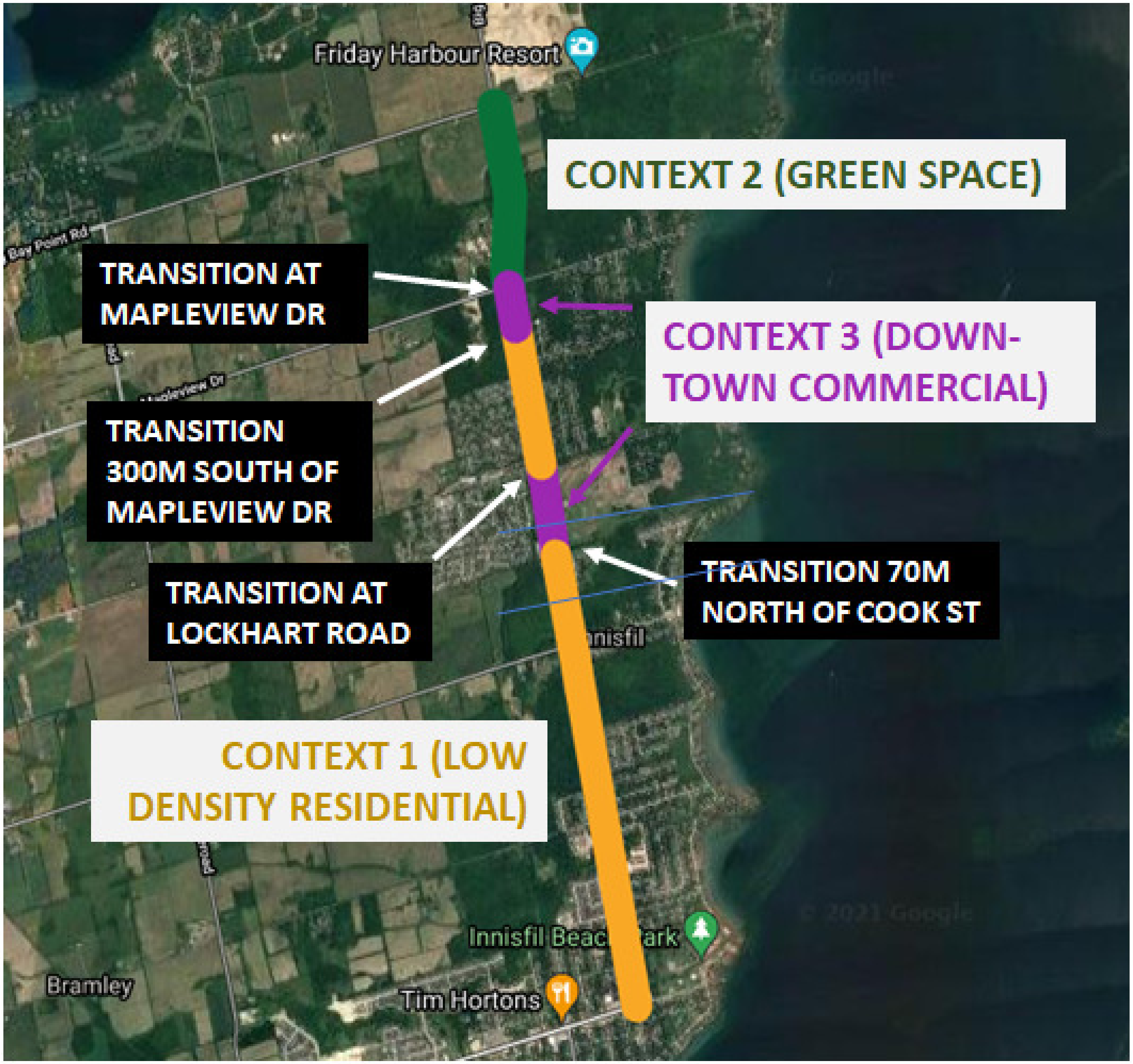
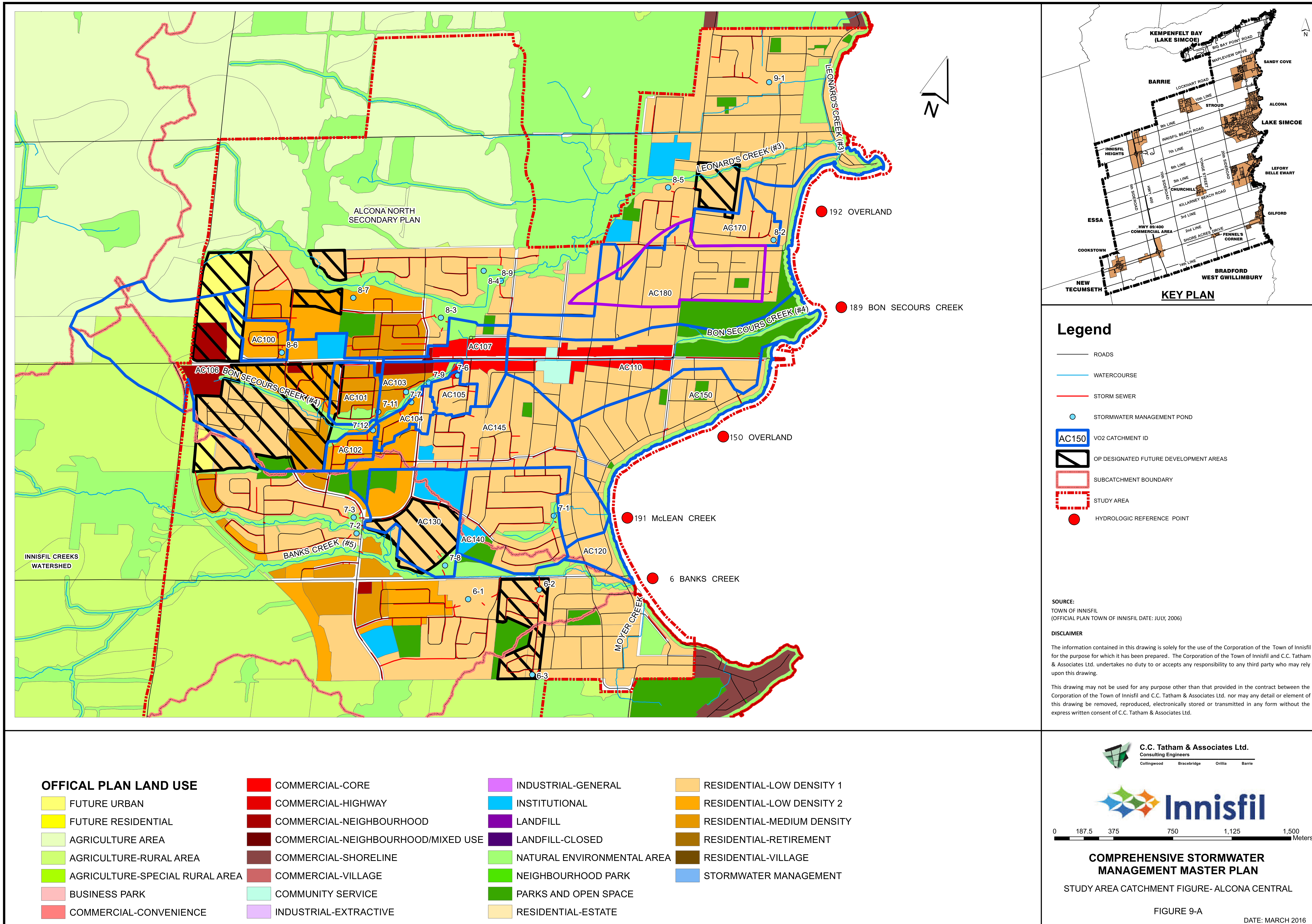


Friday Harbour Resort
CONTEXT 2 (GREEN SPACE)
TRANSITION AT MAPLEVIEW DR
CONTEXT 3 (DOWN-TOWN COMMERCIAL)
TRANSITION 300M SOUTH OF MAPLEVIEW DR
TRANSITION AT LOCKHART ROAD
TRANSITION 70M NORTH OF COOK ST
CONTEXT 1 (LOW DENSITY RESIDENTIAL)
Innisfil Beach Park
Tim Hortons
Bramley


ALCONA NORTH SECONDARY PLAN
INNISFIL CREEKS WATERSHED
LEONARD'S CREEK (#3)
BON SECOURS CREEK (#4)
BANKS CREEK (#5)
MOYER CREEK
AC100
AC101
AC102
AC103
AC104
AC105
AC106
AC107
AC110
AC120
AC130
AC140
AC145
AC150
AC170
AC180
9-1
8-2
8-3
8-4
8-5
8-6
8-7
8-9
7-1
7-2
7-3
7-6
7-7
7-8
7-9
7-11
7-12
6-1
6-2
6-3
192 OVERLAND
189 BON SECOURS CREEK
150 OVERLAND
191 McLEAN CREEK
6 BANKS CREEK
N
KEMPENFELT BAY (LAKE SIMCOE)
BARRIE
SANDY COVE
ALCONA
LAKE SIMCOE
INNISFIL HEIGHTS
LEFROY BELLE EWART
CHURCHILL
GILFORD
ESSA
HWY 89/400 COMMERCIAL AREA
FENNEL'S CORNER
COOKSTOWN
BRADFORD WEST GWILLIMBURY
NEW TECUMSETH
STROUD
KEY PLAN
Legend
ROADS
WATERCOURSE
STORM SEWER
STORMWATER MANAGEMENT POND
AC150 VO2 CATCHMENT ID
OP DESIGNATED FUTURE DEVELOPMENT AREAS
SUBCATCHMENT BOUNDARY
STUDY AREA
HYDROLOGIC REFERENCE POINT
SOURCE:
TOWN OF INNISFIL
(OFFICIAL PLAN TOWN OF INNISFIL DATE: JULY, 2006)
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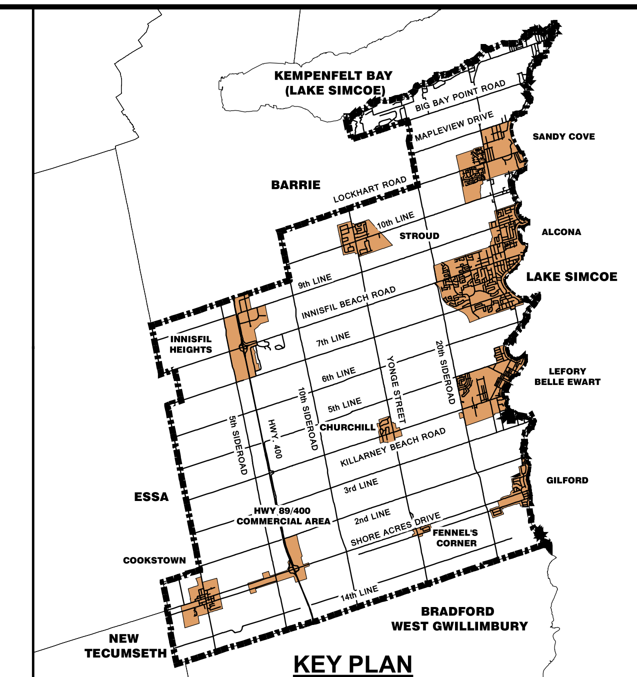
OFFICAL PLAN LAND USE
FUTURE URBAN
FUTURE RESIDENTIAL
AGRICULTURE AREA
AGRICULTURE-RURAL AREA
AGRICULTURE-SPECIAL RURAL AREA
BUSINESS PARK
COMMERCIAL-CONVENIENCE
COMMERCIAL-CORE
COMMERCIAL-HIGHWAY
COMMERCIAL-NEIGHBOURHOOD
COMMERCIAL-NEIGHBOURHOOD/MIXED USE
COMMERCIAL-SHORELINE
COMMERCIAL-VILLAGE
COMMUNITY SERVICE
INDUSTRIAL-EXTRACTIVE
INDUSTRIAL-GENERAL
INSTITUTIONAL
LANDFILL
LANDFILL-CLOSED
NATURAL ENVIRONMENTAL AREA
NEIGHBOURHOOD PARK
PARKS AND OPEN SPACE
RESIDENTIAL-ESTATE
RESIDENTIAL-LOW DENSITY 1
RESIDENTIAL-LOW DENSITY 2
RESIDENTIAL-MEDIUM DENSITY
RESIDENTIAL-RETIREMENT
RESIDENTIAL-VILLAGE
STORMWATER MANAGEMENT
C.C. Tatham & Associates Ltd.
Consulting Engineers
Collingwood Bracebridge Orillia Barrie
Innisfil
0 187.5 375 750 1,125 1,500 Meters
COMPREHENSIVE STORMWATER MANAGEMENT MASTER PLAN
STUDY AREA CATCHMENT FIGURE- ALCONA CENTRAL
FIGURE 9-A
DATE: MARCH 2016



Legend

- ROADS
- WATERCOURSE
- STORM SEWER
- STORMWATER MANAGEMENT POND
- 320 V02 CATCHMENT BOUNDARY
- OP DESIGNATED FUTURE DEVELOPMENT AREAS
- SUBCATCHMENT BOUNDARY
- STUDY AREA
- HYDROLOGIC REFERENCE POINT

SOURCE:
TOWN OF INNISFIL
(OFFICIAL PLAN TOWN OF INNISFIL DATE: JULY, 2006)

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OFFICAL PLAN LAND USE

- FUTURE URBAN
- FUTURE RESIDENTIAL
- AGRICULTURE AREA
- AGRICULTURE-RURAL AREA
- AGRICULTURE-SPECIAL RURAL AREA
- BUSINESS PARK
- COMMERCIAL-CONVENIENCE
- COMMERCIAL-CORE
- COMMERCIAL-HIGHWAY
- COMMERCIAL-NEIGHBOURHOOD
- COMMERCIAL-NEIGHBOURHOOD/MIXED USE
- COMMERCIAL-SHORELINE
- COMMERCIAL-VILLAGE
- COMMUNITY SERVICE
- INDUSTRIAL-EXTRACTIVE
- INDUSTRIAL-GENERAL
- INSTITUTIONAL
- LANDFILL
- LANDFILL-CLOSED
- NATURAL ENVIRONMENTAL AREA
- NEIGHBOURHOOD PARK
- PARKS AND OPEN SPACE
- RESIDENTIAL-ESTATE
- RESIDENTIAL-LOW DENSITY 1
- RESIDENTIAL-LOW DENSITY 2
- RESIDENTIAL-MEDIUM DENSITY
- RESIDENTIAL-RETIREMENT
- RESIDENTIAL-VILLAGE
- STORMWATER MANAGEMENT

C.C. Tatham & Associates Ltd.
Consulting Engineers
Collingwood Bracebridge Orillia Barrie

Innisfil

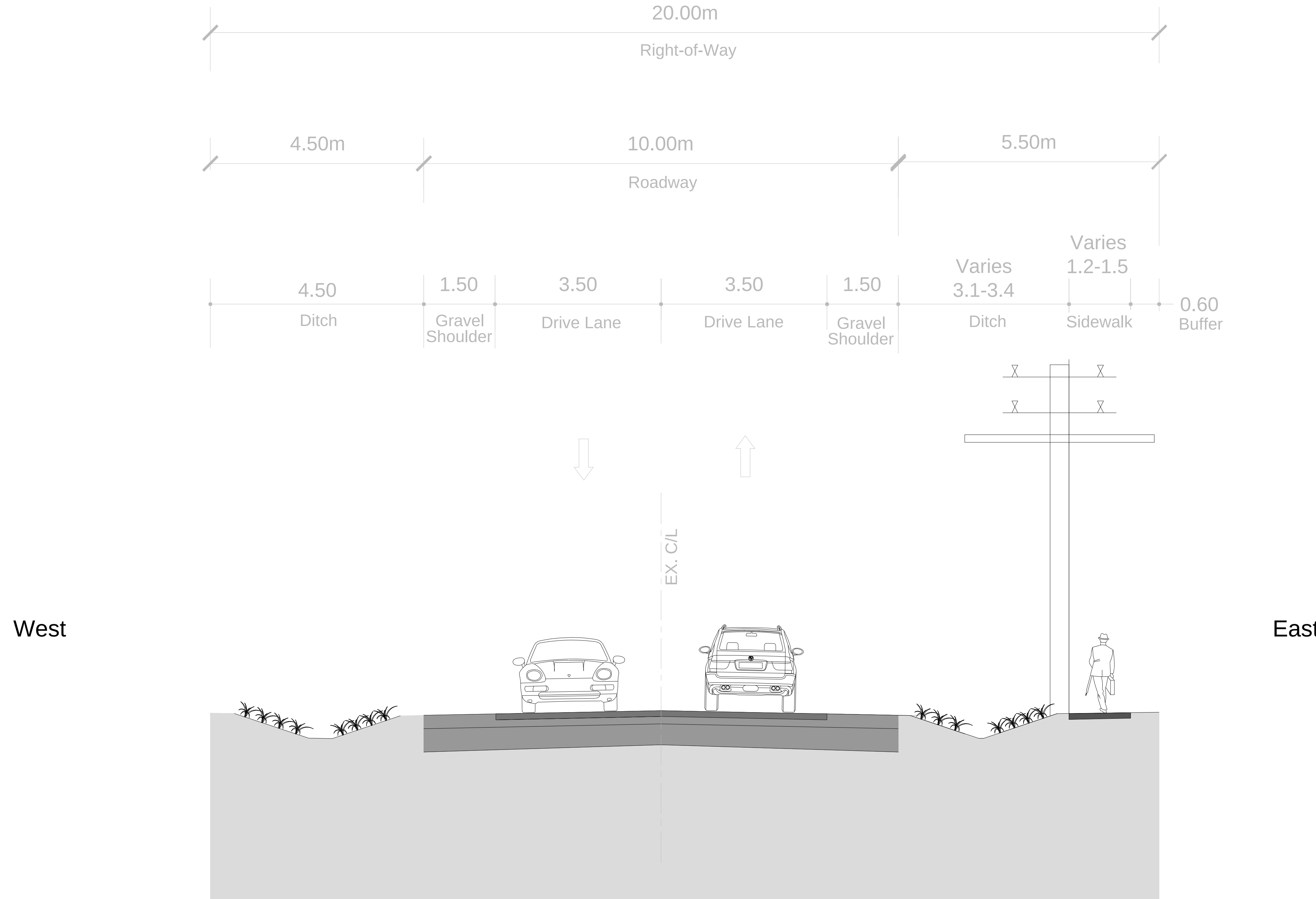
0 185 370 740 1,110 1,480 Meters

COMPREHENSIVE STORMWATER MANAGEMENT MASTER PLAN

STUDY AREA CATCHMENT FIGURE SANDY COVE

FIGURE 9-F

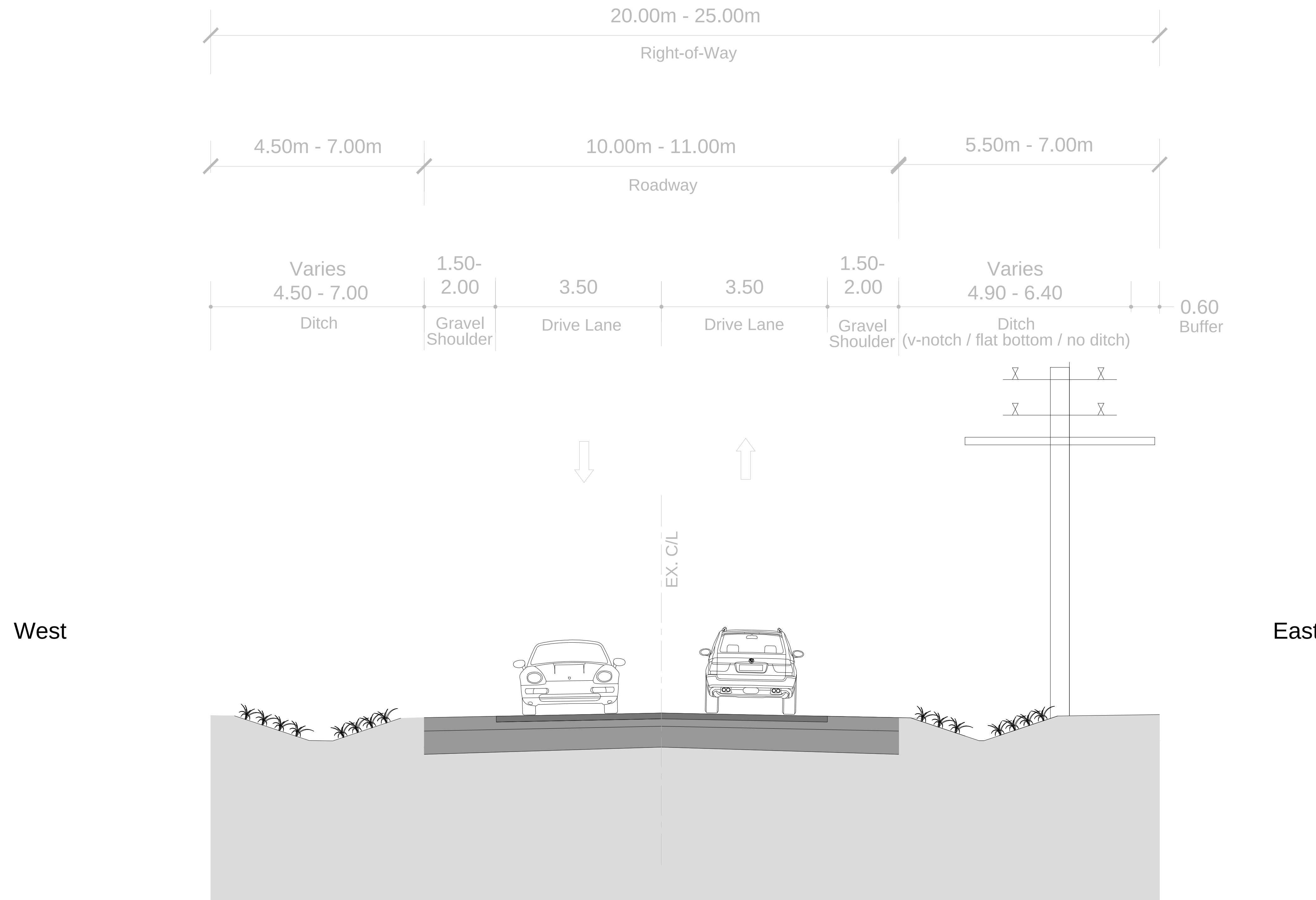
DATE: MARCH 2016



C:\Users\Vivian.Mak\WSP O365\211-06027-00 Innisfil 25th Sideroad - 14 Tech_Prof Services\14.07 Municipal_Roads\2021.07.21 - Typical Sections

DRAFT - for discussion

Figure 1A
25th Side Road - Low Density Residential - Existing Condition (south of Rose Lane)
Innisfil 25th Side Road



DRAFT - for discussion

Figure 1B
25th Side Road - Low Density Residential - Existing Condition (north of Rose Lane)
Innisfil 25th Side Road

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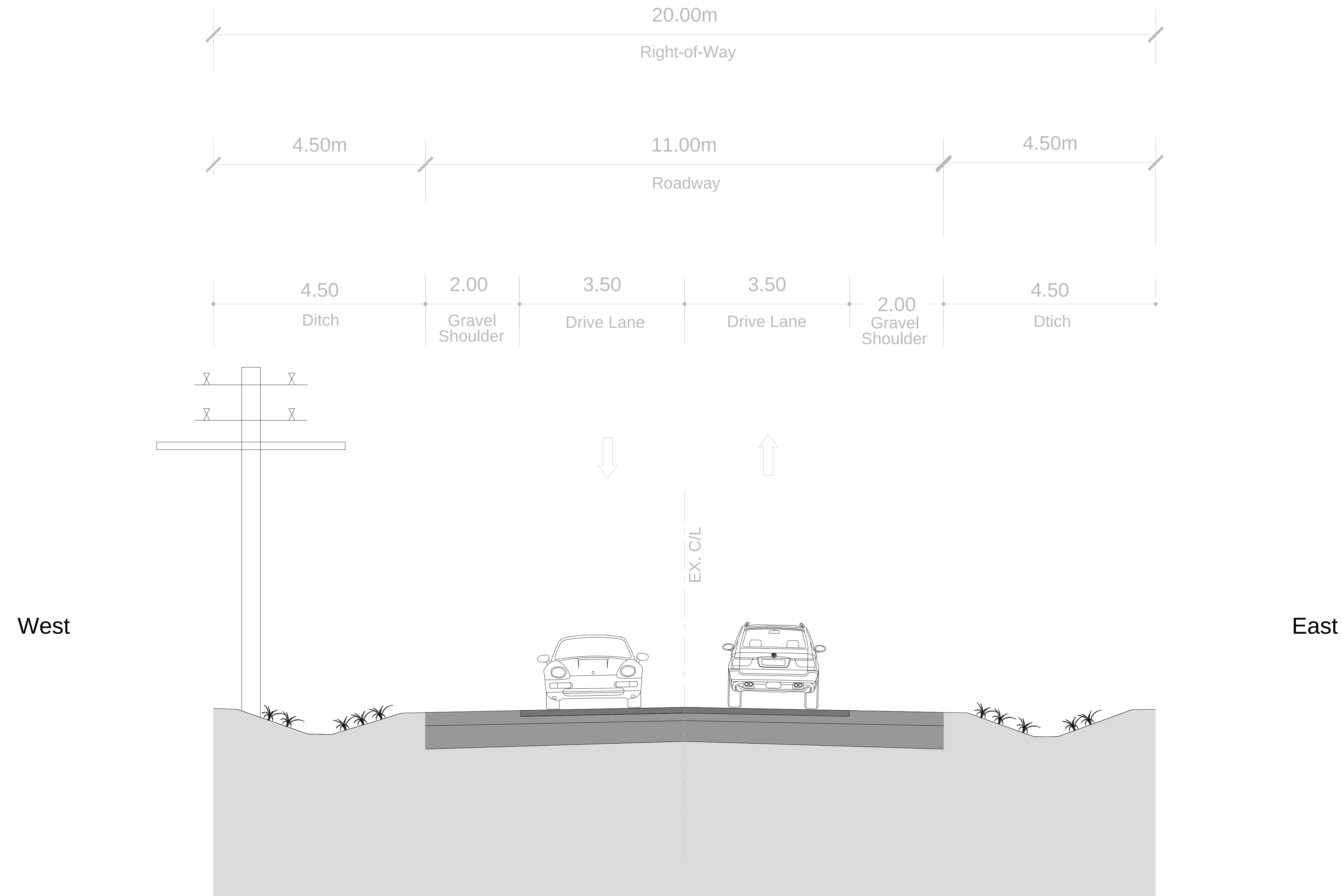

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Figure 5
25th Side Road - Green Space - Existing Condition
Innisfil 25th Side Road

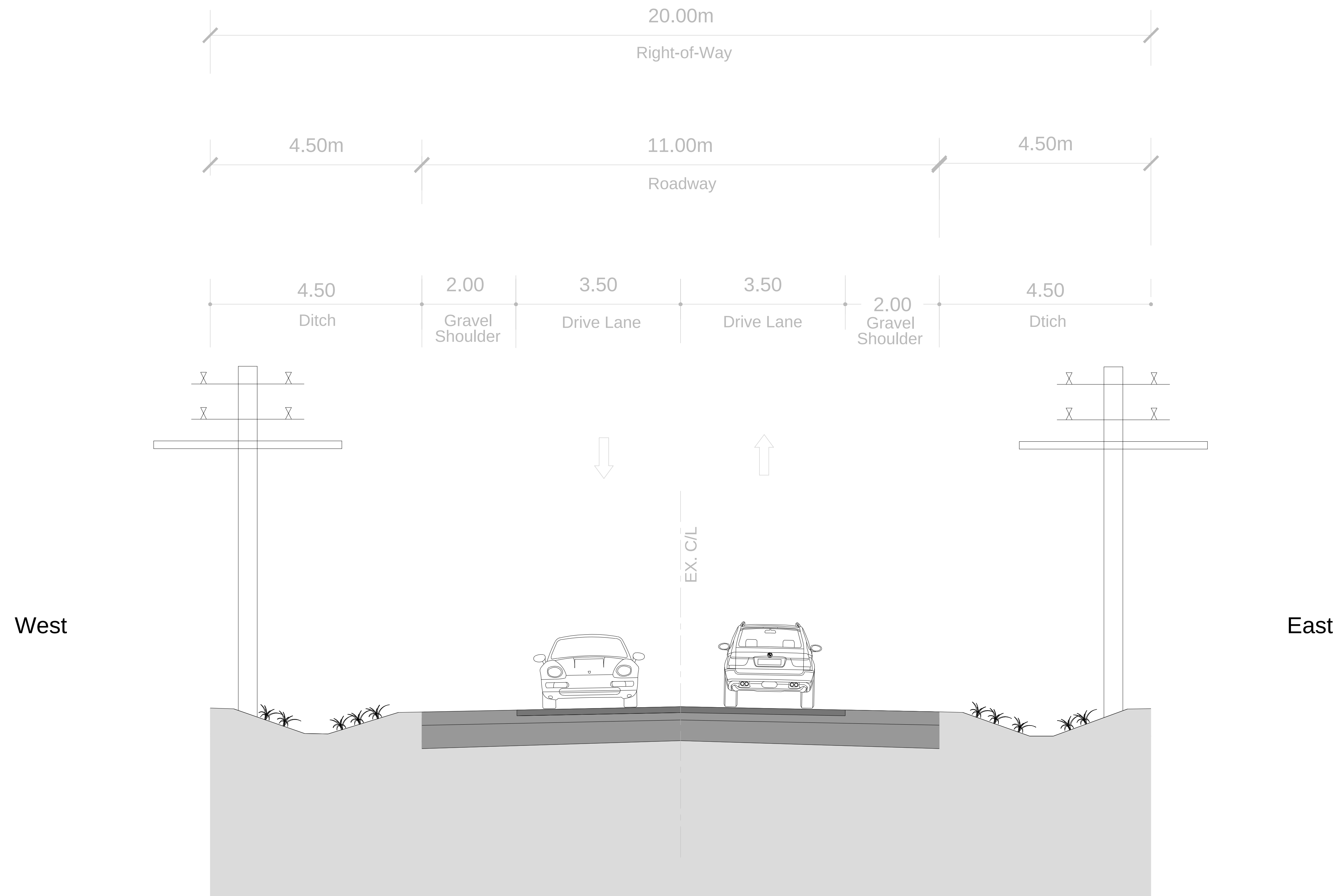

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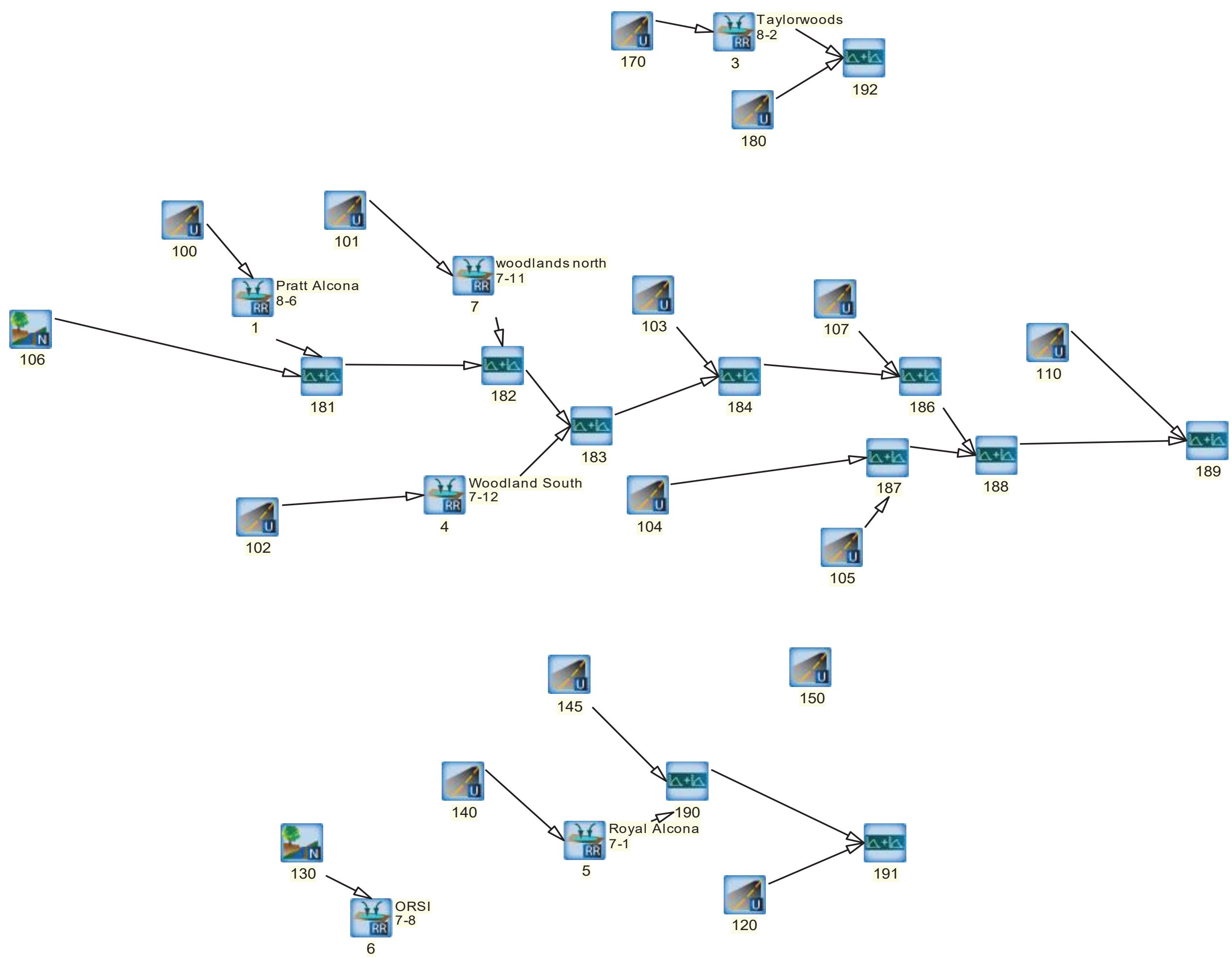
Figure 9
25th Side Road - Downtown Commercial - Existing Condition
Innisfil 25th Side Road

wsp

INNISFIL COMPREHENSIVE STORMWATER MANAGEMENT MASTERPLAN
EXISTING CONDITIONS
ALCONA

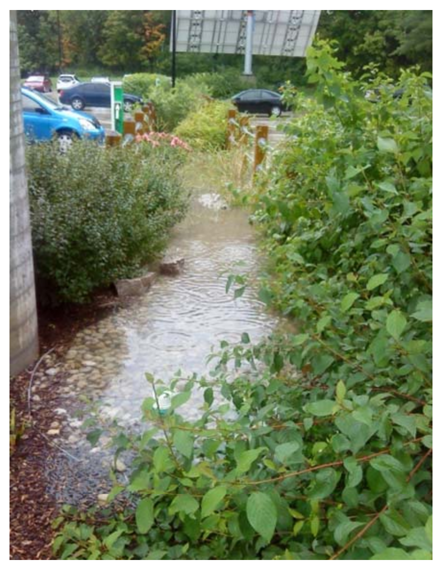


Nashyd	Route Pipe	Duhyd
Standhyd	Route Channel	Diverthyd
Addhyd	Route Reservoir	

C.C. TATHAM & ASSOCIATES LTD.
Consulting Engineers

Project:	Innisfil SWM Master Plan
File No.:	413448
Subject:	Otthymo Flow Schematic
Date:	Jun-14 **Figure:** 1

Assessment of Life Cycle Costs for Low Impact Development Stormwater Management Practices



Prepared by: Toronto and Region Conservation
University of Toronto

Final Report 2013

ASSESSMENT OF LIFE CYCLE COSTS FOR LOW IMPACT DEVELOPMENT STORMWATER MANAGEMENT PRACTICES

Final Report

Prepared by:

Toronto and Region Conservation
Project Leads:
Tim Van Seters, Christy Graham, Lisa Rocha

and

University of Toronto, Department of Civil Engineering
Project Leads:
Mariko Uda, Chris Kennedy

under the

Sustainable Technologies Evaluation Program

April 2013

NOTICE

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PUBLICATION INFORMATION

This research was undertaken collaboratively between the Toronto and Region Conservation Authority's (TRCA) Sustainable Technologies Evaluation Program (project leads: Tim Van Seters, Lisa Rocha, Christy Graham) and the University of Toronto, Civil Engineering Department (project leads: Mariko Uda and Chris Kennedy).

Citation: Uda, M., Van Seters, T., Graham, C., Rocha, L., 2013. *Evaluation of Life Cycle Costs for Low Impact Development Stormwater Management Practices*. Sustainable Technologies Evaluation Program, Toronto and Region Conservation Authority.

Comments on this document, or requests for other studies conducted under STEP should be directed to:

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THE SUSTAINABLE TECHNOLOGIES EVALUATION PROGRAM

The Sustainable Technologies Evaluation Program (STEP) is a multi-agency program, led by the Toronto and Region Conservation Authority (TRCA). The program helps to provide the data and analytical tools necessary to support broader implementation of sustainable technologies and practices within a Canadian context. The main program objectives are to:

- monitor and evaluate clean water, air and energy technologies;
- assess barriers and opportunities for implementing technologies;
- develop supporting tools, guidelines and policies; and
- promote broader use of effective technologies through research, education and advocacy.

Technologies evaluated under STEP are not limited to physical products or devices; they may also include preventative measures, alternative urban site designs, and other innovative practices that help create more sustainable and liveable communities.

ACKNOWLEDGEMENTS

Funding support for this project was generously provided by:

- Government of Canada's Great Lakes Sustainability Fund
- City of Toronto
- Regional Municipality of York
- Regional Municipality of Peel
- National Science and Research Council Industrial Postgraduate Scholarship

EXECUTIVE SUMMARY

This project evaluates the capital and life cycle costs of Low Impact Development (LID) practices over a 50 year time horizon based on a detailed assessment of local input costs, maintenance requirements, rehabilitation costs and design scenarios relevant to Canadian climates. The LID practices evaluated include bioretention cells, permeable pavement, infiltration trenches and chambers, enhanced swales, rainwater harvesting and green roofs. Dry swales and perforated pipe systems were considered to be similar to bioretention and infiltration trenches, respectively, and therefore were not evaluated as separate practices. The savings from LID approaches associated with improved aesthetics, air quality, community livability and other public benefits were not assessed, as these savings are best evaluated in relation to specific case study examples.

A robust and replicable methodology was used to compile capital and life cycle costs for the LID practices evaluated in this project. Model designs were developed for up to 3 typical variations of each LID practice assuming a 2000 m^2 paved and/or roof drainage area. An RSMeans database, widely used for construction and maintenance cost estimation, was used as the basis for most of the costing. Where RSMeans cost data were not available, costs were derived from other sources (e.g. supplier quotes, experienced construction managers). Maintenance and rehabilitation schedules for each practice were assessed based on local guidance manuals and literature sources.

Model LID practice design costs evaluated in this study indicated that bioretention, infiltration chambers, infiltration trenches and enhanced swales are some of the least expensive practices to implement when only the practice cost itself is considered. The practice of rainwater harvesting provides additional savings by reducing the cost of potable water supplies. Permeable pavements are comparably more expensive than most other practices, but in many instances these costs would be offset to some extent by a reduction in the need to pave the drainage area, since the pavements serve both as a parking surface and stormwater treatment practice. The practice also does not require as much land as some other practices, making it particularly well suited to retrofit contexts. Green roofs are the most expensive practice as they are installed in less accessible locations and need to be carefully engineered to protect the integrity of the building envelope. This practice is often selected because of its aesthetic, biodiversity and energy saving benefits, as well as its overall contribution to green building rating schemes, the value of which were not considered in the cost assessment provided in this study.

An analysis of different treatment scenarios for an asphalt parking lot revealed that LID practices had comparable life cycle costs to conventional treatment using an oil grit separator (OGS). Incorporating the stormwater treatment benefits of the practices into the analysis showed that LID practice life cycle costs were between 35 and 77% less than conventional OGS treatment.

A spreadsheet decision support tool based on the cost calculations gathered during this study was developed to assist industry professionals calculate the initial capital and life cycle costs of site specific LID practice designs. The tool provides users with a more comprehensive understanding of all relevant costs, facilitates cost comparisons, and allows users to optimize proposed designs based on both performance and cost. The tool is available free of charge on the Toronto and Region Conservation's Sustainable Technologies Evaluation Program website.

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1.0 INTRODUCTION

1.1 Background

Over the past several years, the practice of stormwater management in Ontario has shifted from an approach focused narrowly on centralized water quality treatment and peak flow control towards a broader, more decentralized approach oriented towards maintaining or re-establishing the pre-development hydrologic regime. This new approach utilizes a series of decentralized micro controls at or near the source of drainage networks to supplement conventional detention facilities. Alterations to the pre-development urban water cycle are minimized through site planning techniques and measures aimed at infiltrating, filtering, evaporating and detaining runoff, as well as preventing pollution. In Ontario and some parts of the United States, this approach is commonly referred to as Low Impact Development (LID), and includes measures such as green roofs, permeable pavement, bioretention, infiltration trenches, swales and alternative site design strategies.

Within the Greater Toronto Area, the results of several years of watershed monitoring and modeling, published in documents such as the Toronto and Region Conservation's (TRCA) Watershed Plans for the Rouge (2007), Humber (2008) and Don (2009) Rivers have concluded that this shift towards Low Impact Development is essential to protect watershed health and improve the resilience of watercourses to the hydrologic impacts associated with climate change. In July 2010 TRCA and Credit Valley Conservation (CVC) released the *Low Impact Development Stormwater Management Planning and Design Guide* (hereafter referred to as *LID Guide*) to assist local developers, consultants, municipalities and landowners to better understand, plan and implement LID stormwater management practices. The *LID Guide* provides a wealth of information on the planning, selection, and design of LID, and helps to streamline the design and review process to encourage widespread adoption of these technologies. Uncertainties remain, however, about the capital and long terms costs associated with these technologies relative to conventional end-of-pipe approaches.

While there are software tools and literature that provide detailed cost data for LID practices, particularly with respect to the capital costs of materials and labour, many of these resources (e.g. WERF, 2009; Olson et al, 2010) are based on markets in the U.S. or other countries, and are therefore not directly applicable to local conditions. These resources also often use designs that are either no longer considered best practice, or are not in accordance with cold climate design adaptations commonly used in Ontario. Life cycle costs provided in this report are directly applicable to Ontario because they are derived, to the extent possible, from local sources and based on design specifications provided in the *LID Guide,* which incorporates design modifications and maintenance considerations relevant to local geologic and climatic conditions.

In addition to research on the capital and long term operation and maintenance costs of LID, there are also several studies that attempt to quantify the value of LID based on the full range of costs and benefits to the individual site owner, the community and broader public. One such study, conducted by the USEPA in 2007 reported lower total costs for 11 of 12 green infrastructure projects relative to conventional grey infrastructure. Savings were often realized due to reduced costs for site grading and preparation, stormwater drainage infrastructure, curbs and gutters, site paving and downstream stormwater treatment. Other studies have attempted to monetize the broader public benefits of the practices (e.g. Odefey et al, 2012; Buckley et al, 2012a, 2012b; Marbek, 2010). These include avoided costs associated with reduced runoff and water quality (e.g. reduced frequency of combined sewer overflows, lower stream erosion rates) as well as benefits related to energy, air quality, climate change, urban heat island, habitat improvements and aesthetics. These studies have shown that LID approaches can lead to significant long term fiscal savings for local governments.

1.2 Project Objectives

The purpose of this project is to evaluate the capital and life cycle costs of LID practices over a 50 year time horizon based on a detailed assessment of local input costs, maintenance requirements and specific design scenarios presented in the *LID Guide*. The following practices are evaluated:

- Bioretention cells
- Permeable Interlocking Concrete Pavement
- Infiltration trenches
- Infiltration chambers
- Enhanced swales
- Rainwater harvesting, and
- Green roofs

Dry swales and perforated pipe systems were considered to be similar to bioretention and infiltration trenches, respectively, and therefore were not costed out as separate practices. The savings from LID approaches associated with improved aesthetics, air quality, community livability and other public benefits were not assessed, as these are best evaluated in relation to specific case study examples.

A spreadsheet decision support tool based on the cost calculations gathered during this study was developed to assist industry professionals calculate the initial capital and life cycle costs of site specific LID practice designs. The tool provides users with a more comprehensive understanding of all relevant costs, facilitates cost comparisons, and allows users to optimize proposed designs based on both performance and cost. The tool is available free of charge on the Toronto and Region Conservation's Sustainable Technologies Evaluation Program website.

2.0 LIFE CYCLE COSTING METHODOLOGY

2.1 Costing Methodology

The following steps were followed to develop detailed costs of all the LID measures.

2.1.1 Preparation of Model Designs

Model designs were developed for up to 3 typical variations of each LID practice assuming a 2000 m^2 paved and/or roof drainage area. The conceptual designs were developed for costing purposes based on design guidelines provided in the *LID Guide* (TRCA and CVC, 2010). This information was supplemented with other guidelines, literature references and professional advice when additional information was needed. Several conceptual designs were based on existing applications of the practices within the GTA.

The process and steps involved in construction of the practices were obtained from the *LID guide*, a review of regulatory requirements, and other references as needed. This step in the costing process describes the construction sequence, construction methods, and details of additional tasks required prior to undertaking construction (*e.g.* soil testing).

2.1.2 Construction Costing

All material, delivery, labour, equipment (rental, operating, operator), hauling and disposal costs were included in the cost spreadsheet. The RSMeans database (Toronto, 2010) was used as the basis for most of the costing. This standard database used widely for construction cost estimation provides detailed unit material (including delivery), labour and equipment costs. The costs in RSMeans marked “O&P” were used, which are the installing contractor’s price including their overhead and profit. It was assumed there would be no general contractor for the construction project.[1] Standard Union labour costs were used, which are about 18%[2] higher than Open Shop labour costs. Note that the RSMeans costs do not include sales tax.

Where data were not available in RSMeans, costs were solicited from other sources (*e.g.* suppliers, experienced construction managers). These costs were often Open Shop labour rates and did not include sales tax. For rainwater harvesting, costs were obtained from an existing tool developed in 2010 through a partnership between University of Guelph, TRCA and Connect the Drops (STEP, 2011). The costs in the tool were also based on RSMeans 2010, and were cross

[1] If a general contractor were used, there would be an average 10% markup as well as general contractor main office overhead & profit (RSMeans)

[2] Standard union costs are 16% more than open shop costs for a light truck driver, and 19% more for a light equipment operator as well as for a common building labourer (RSMeans, 2010 US average). Therefore on average 18% higher.

checked and supplemented as needed to ensure consistency with the methodology used in this study.

In compiling the cost data it was assumed that the practice was being constructed as part of a larger new development, and therefore mobilization/demobilization costs were not included unless a particular piece of equipment (*e.g.* crane for green roof) would not normally have been present on the site. Also, it was assumed that excavated soil could be dumped elsewhere on site.

Costs that would have been incurred whether or not the LID was being constructed were normally not included (*e.g.,* for rainwater harvesting, the pipes collecting runoff from the roof were not included because they would be required regardless). One exception is for green roofs, where the cost of the roof with and without the roof membrane was assessed.

For all LIDs, the following overhead costs were assumed:

- Construction management (4.5%),
- Design (2.5%), small tools (0.5%),
- Clean up (0.3%).

These are at the low end of the cost range suggested by RSMeans. Also, no contingency costs were included.

In rare instances, suitable costing data could not be found, in which case costs were estimated based on other data or costs from similar equipment or task. All assumptions and sources of data were documented.

2.1.3 Establishing Maintenance and Rehabilitation Requirements and Costs

Maintenance tasks and frequencies were determined based on the *LID guide* and other references where necessary. Assessment of the life span of the practices was based on literature where available, but in cases where there was conflicting information, a judgment was made based on a 'weight of evidence' approach. Assumptions on practice life spans are provided in each case to provide readers with a basis for interpretation of results.

The costs of maintenance and rehabilitation were determined using the same approach as for the construction costing. One difference, however, was that (de)mobilization of equipment was included as equipment would not already be on site. Design costs were not included in the rehabilitation or replacement costs as it was assumed that the original LID practice design would be used to inform this work.

2.1.4 Life Cycle Cost Calculation

Once all capital, maintenance and rehabilitation costs were determined, the lifecycle cost for each model design was calculated based on an evaluation period of 50 years, which is typical of the time span over which infrastructure decisions are made. The approach used was similar to that in the *Best Management Practice and Low Impact Development Whole Life Cost Models* developed by the Water Environment Research Foundation (2009). WERF's analysis includes any rehabilitation required within the 50 year period. At the end of 50 years, the LID is considered to have no salvage value, and no extra value is attributed to the additional lifespan expected for the LID beyond the 50 year mark.

The present value of the cost of each LID model design was calculated as follows:

PV = design and construction cost + PV of maintenance + PV of rehabilitation

The following present value formula was used to obtain the present value of the future cost:

$$PV = FC/(1 + r)^n$$

where,

PV = present value in $

FC = future cost in $

r = discount rate

n = year of future cost

Discount rates of 0, 3, and 5% were considered. Inflation was assumed to be 0%.

In addition to the 50-year analysis, a 25-year analysis was conducted. This was done to eliminate the impact on cost of any major rehabilitation that occurs in later years. Note that for the 50-year analysis, major maintenance activities that would normally be done at the 50 year mark were not included as the LID was assumed to retire after 50 years. For the 25-year analysis, however, these major maintenance activities were included at year 25 as it was expected that the LID would continue to be used.

In addition to the Net Present Values, the *annual average maintenance cost* and the *rehabilitation cost* were determined. The *annual average maintenance cost* does not include rehabilitation and as such represents an average of regular maintenance activities over the 50 year time period. The *rehabilitation cost* includes not only the cost of the actual rehabilitation but also of the consequent changes in maintenance activities. Thus the cost of the actual rehabilitation (not including maintenance activities) were added and maintenance tasks were removed[3], added[4] or

[3] When a rehab occurs, some maintenance activities are no longer needed in that year (e.g., no need to repair small leak in green roof membrane).

[4] When a rehab occurs, some additional maintenance activities are required (e.g. watering green roof).

shifted[5] in time as a result of the rehabilitation. The total cost of maintenance plus rehabilitation over 50 years was then summed. The difference between this sum and the total maintenance cost over 50 years in the scenario where no rehabilitation was required was calculated. This difference was the *rehabilitation cost*.

2.1.5 Comparison to Literature

A literature review was conducted for each LID to compare the construction and maintenance costs established in this study to other sources. The literature review was not meant to be comprehensive, as there are limited cost data available on LID practices, and those that are available are not necessarily applicable to local conditions. Thus the literature reviews consisted of comparisons to only a few references. Since different studies included different design assumptions, not all of which were clearly described, a straightforward comparison to our results was difficult to achieve.

[5] When a rehab occurs, some maintenance activities may be shifted to later years (e.g. do not have to repair small leak in green roof membrane for next 10 years).

3.0 CAPITAL AND LIFE CYCLE COSTS

3.1 Bioretention

Bioretention uses the natural properties of soils, plants and associated microbial activity to infiltrate water and remove pollutants from stormwater runoff. It can be designed in various ways but the most common form consists of a shallow, excavated depression with layers of stone, prepared soil mix, mulch and specially selected native vegetation that is tolerant to road salt and periodic inundation. They remove pollutants from runoff through filtration by soil media and uptake by plant roots, and reduce runoff volume through evapotranspiration. The practice provides aesthetic benefits and can easily be modified to fit a wide variety of space and drainage contexts, making it one of the more common LID practices for reducing runoff volumes and achieving groundwater recharge targets on development sites.

Bioretention can be designed with full, partial or no infiltration depending on the underlying soil permeability and objectives of the project. Partial infiltration systems with underdrains are recommended where the underlying native soil has a permeability of less than 15 mm/h. In areas with contaminated native soils, or high groundwater tables, the practice may be designed with no infiltration, in which case it would contribute to lower runoff volumes entirely through temporary storage and evapotranspiration.

3.1.1 Model Scenarios and Designs

<u>Full infiltration</u>

Bioretention areas designed for full infiltration do not have underdrains, and are installed where the native soils are relatively permeable (>15 mm/h). In the simple design used for costing (see Figure 3.1), runoff from a 2000 m^2 parking lot drains into a 130 m^2 system through curb inlets spaced 6 m apart with splash pads to dissipate the energy of the flowing water. The drainage area is roughly 15 times greater than the footprint of the facility, which is the maximum allowed in the *LID Guide*. Pre-treatment is provided through the splash pads and 75 mm mulch layer, which captures fine sediment and debris, and helps maintain the integrity of the filter media by preventing fines from migrating into the filter media. An overflow is provided to convey runoff from storms large enough to fill the system, which in this case would be equivalent to a 37 mm rain event. Two monitoring wells were added to facilitate inspection and eventual maintenance of the system.

<u>Partial infiltration</u>

The partial infiltration system shown in Figure 3.2 is similar to the full infiltration system, but includes a raised underdrain and granular storage reservoir, which increases the depth of the system from 1.28 in the full infiltration example, to just over 2 m. The depth of granular material below the underdrain was sized to store and infiltrate runoff from a 25 mm event over the drainage area, not including moisture retention in the overlying soils. The additional granular material, underdrain and clean out pipes all add to the cost of this scenario relative to full infiltration.

<u>No infiltration</u>

The no infiltration design is the least common, and is implemented only where there are constraints to infiltration. The granular reservoir in the no infiltration model design is 40 cm shallower than the partial infiltration model design, and it includes an impermeable liner (Figure 3.3). It functions largely as a filtration system for water quality improvement, with some reduction of runoff through evapotranspiration by plants.

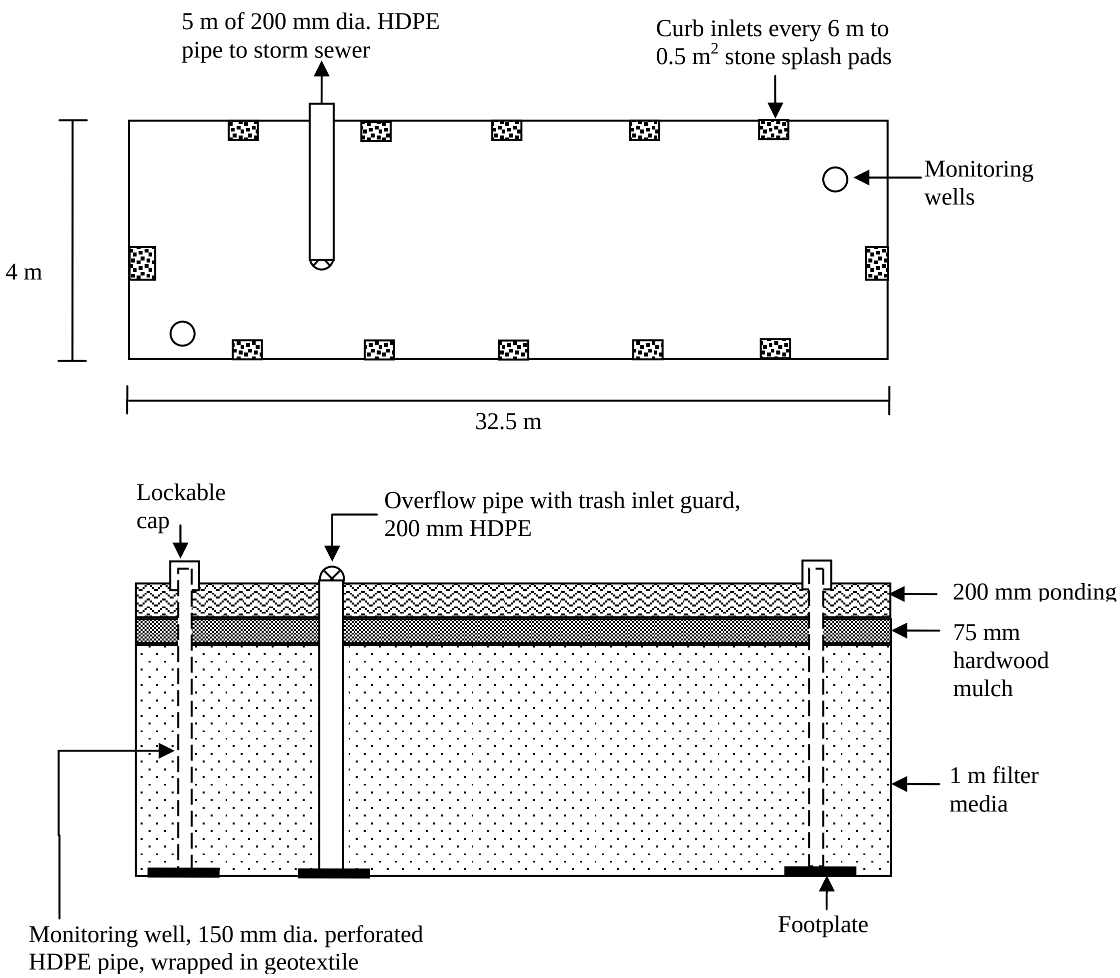
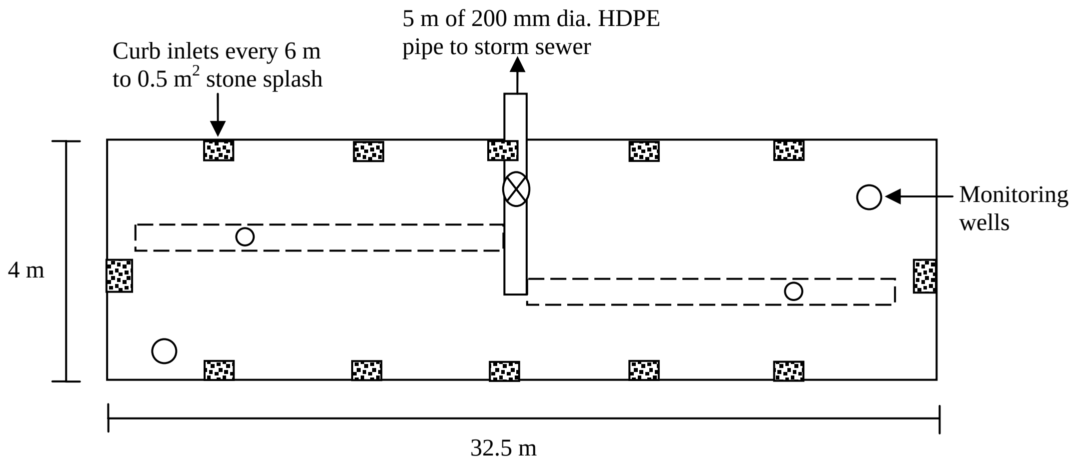


Figure 3.1: Bioretention full infiltration design. Plan view (top) and cross section (bottom)



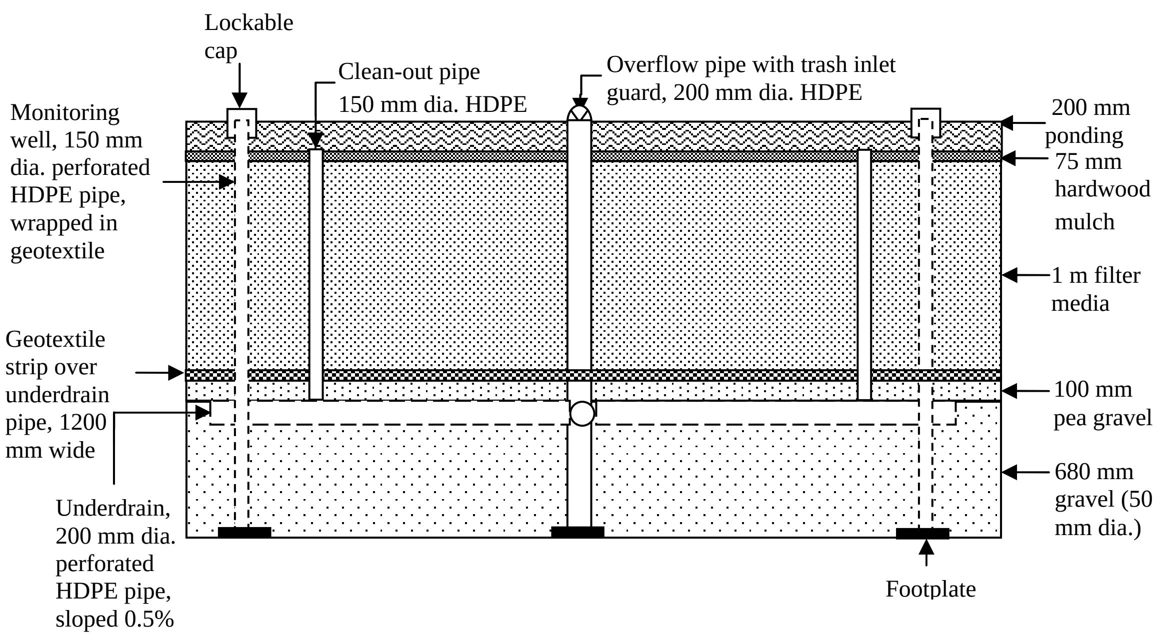


Figure 3.2: Bioretention partial infiltration design. Plan view (top); cross section (bottom)

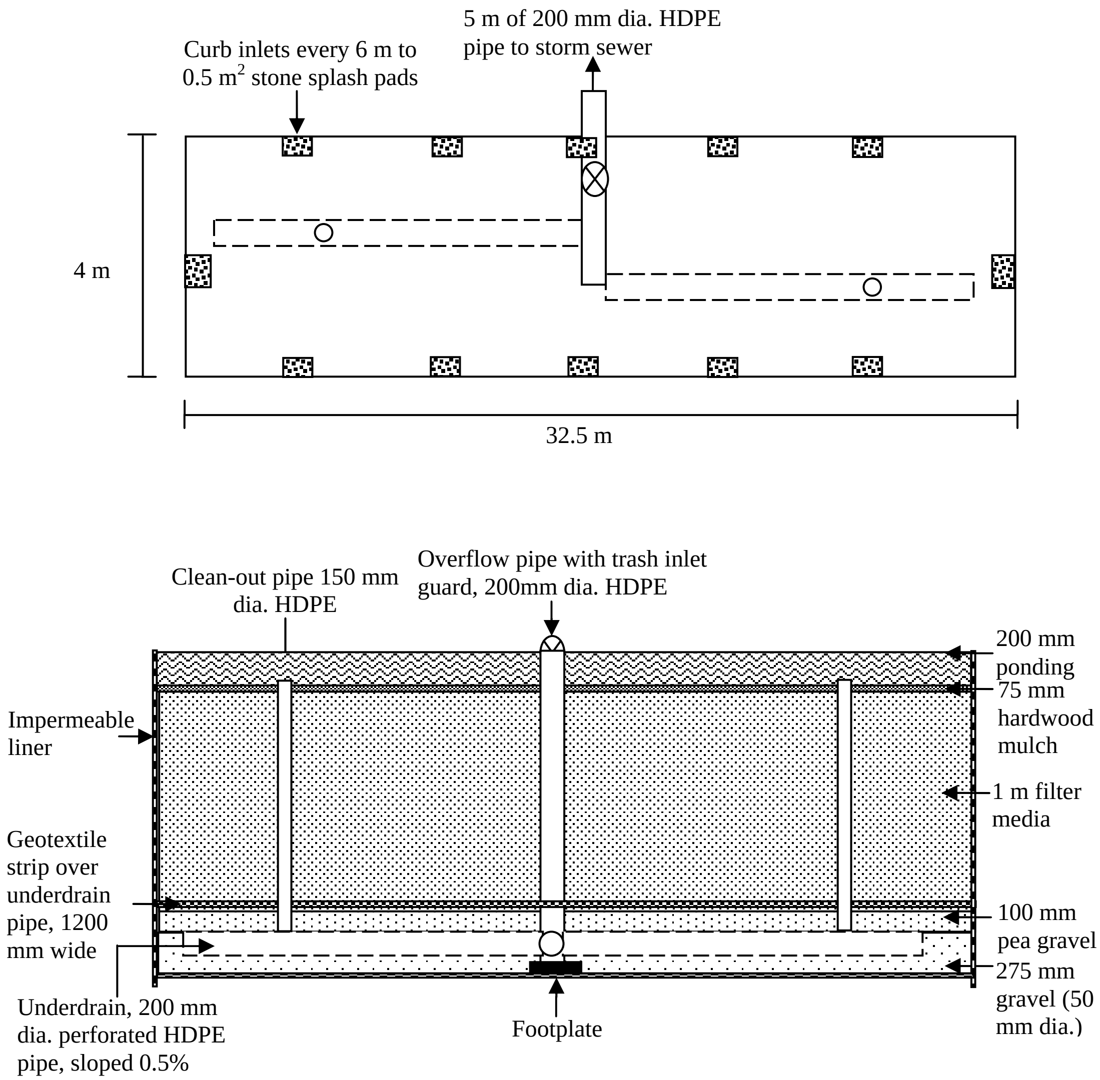


Figure 3.3: Bioretention no infiltration design. Plan view (top); cross section (bottom)

3.1.2 Capital Costs

The major capital cost categories for bioretention are shown in Table 3.1. A detailed breakdown of costs is provided in Appendix A. Full infiltration bioretention systems are considerably cheaper than partial or no infiltration designs because they do not require underdrains or granular storage reservoirs, and are shallower and therefore cheaper to excavate and construct. The no infiltration system has the highest material and installation costs because of the impermeable liner, but planning and site preparation is less expensive because there is no requirement for digging soil pits and infiltration testing which, when conducted according to specifications in the *LID Guide*, can account for over 8% of total costs in the other scenarios. In practice, soil infiltration capacity is often estimated more cheaply using soil texture and/or a more limited number of infiltration tests.

Table 3.1: Bioretention capital costs (130 m^2)

Input Parameters	Full Infiltration	Partial Infiltration	No Infiltration
Planning & Site Preparation	$6,652	$7,955	$4,048
Excavation	$2,087	$3,160	$2,551
Materials & Installation	$23,234	$30,361	$32,429
Total	$31,973	$41,476	$39,028

3.1.3 Life Cycle Costs

As mentioned in the previous chapter, life cycle costs were calculated based on three different discount rates. Net present values based on a discount rate of 5% are shown in Table 3.2. There are few data on the operation and maintenance of bioretention areas because only recently have they started to become more widely implemented. However, it was assumed that if the bioretention area was routinely maintained, it would need major rehabilitation only once in 25 years, at a cost of roughly $6345. This rehabilitation cost includes replacement of the filter media, re-mulching and replanting. Average costs of regular maintenance and landscaping are similar over the entire 50 year time period ($945 to $952). The exceptions are higher costs for watering and inspection in the early phases of plant establishment initially and after rehabilitation, and cleaning of underdrain pipes once every 10 years. Variation in present values is largely explained by differences in capital costs, as the maintenance and rehabilitation of the different scenarios was similar.

Table 3.2: Bioretention life cycle costs (130 m^2)

	Full Infiltration	Partial Infiltration	No Infiltration
Input Parameters			
Life span	25 years	25 years	25 years
Capital cost	$31,973	$41,476	$39,028
Rehabilitation cost at 25 years	$7,504	$7,504	$7,504
Annual maintenance	$945	$952	$952
Present Value including capital, maintenance and rehabilitation costs			
NPV at 50 years			
if i = 0 %	$86,716	$96,604	$94,156
if i = 3 %	$60,471	$70,146	$67,698
if i = 5 %	$52,183	$61,798	$59,350
NPV at 25 years			
if i = 0 %	$56,266	$65,923	$63,475
if i = 3 %	$49,228	$58,831	$56,383
if i = 5 %	$46,129	$55,709	$53,261

Note: i = discount rate

3.2 Permeable Pavement

Permeable pavements allow water to permeate through the surface or paver joints into a granular reservoir where water either infiltrates into the native soil and/or is released to a surface water body through a perforated underdrain. Various types of permeable pavements are available, including porous asphalt, pervious concrete, plastic grid pavers, and interlocking concrete permeable pavements (PICP). The PICP product was selected for costing in this project because it is currently the most common type used in Ontario, and the maintenance costs are well understood. As with bioretention, these pavements can be designed for full, partial or no infiltration and have been used to treat stormwater draining from an impervious pavement. In the scenarios described below, it is assumed that a 60 m x 16.7 m impermeable asphalt drains onto an equal sized area of permeable pavers. A concrete curb extending to the native soil separates the two types of pavements.

3.2.1 Model Scenarios and Designs

Full infiltration

The pavement can be designed for full infiltration if the underlying subsoil has a permeability of 15 mm/h or greater (after compaction). The base granular reservoir without underdrains is 350 mm deep, and is capable of storing runoff from a 61 mm rain event over the catchment area (Figure 3.4). Plastic edge restraints are used to prevent slumping of pavers along the edges and a monitoring well is included for inspection purposes.

Partial infiltration

A partial infiltration system is used where the post compaction permeability of the native subsoil is less than 15 mm/h. The system has the same depth as the full infiltration system, but an underdrain is included to ensure full drainage between rain events (Figure 3.5). The perforated pipe in this case is raised roughly 50 mm above the native subsoil to allow for some infiltration. Since the depth below the underdrain is only capable of storing runoff from a 9 mm event, a flow restrictor is sometimes included to retain water in the base above the perforated underdrain, and thereby promote greater infiltration. Since these restrictors are optional and relatively inexpensive, the cost of this feature has not been included.

No infiltration

No infiltration systems are applied when infiltration is not desirable. In this case, the pavement structure would help to filter contaminants but runoff would not be reduced. The primary additional feature is the impermeable liner that surrounds the pavement base and sides (Figure 3.6)

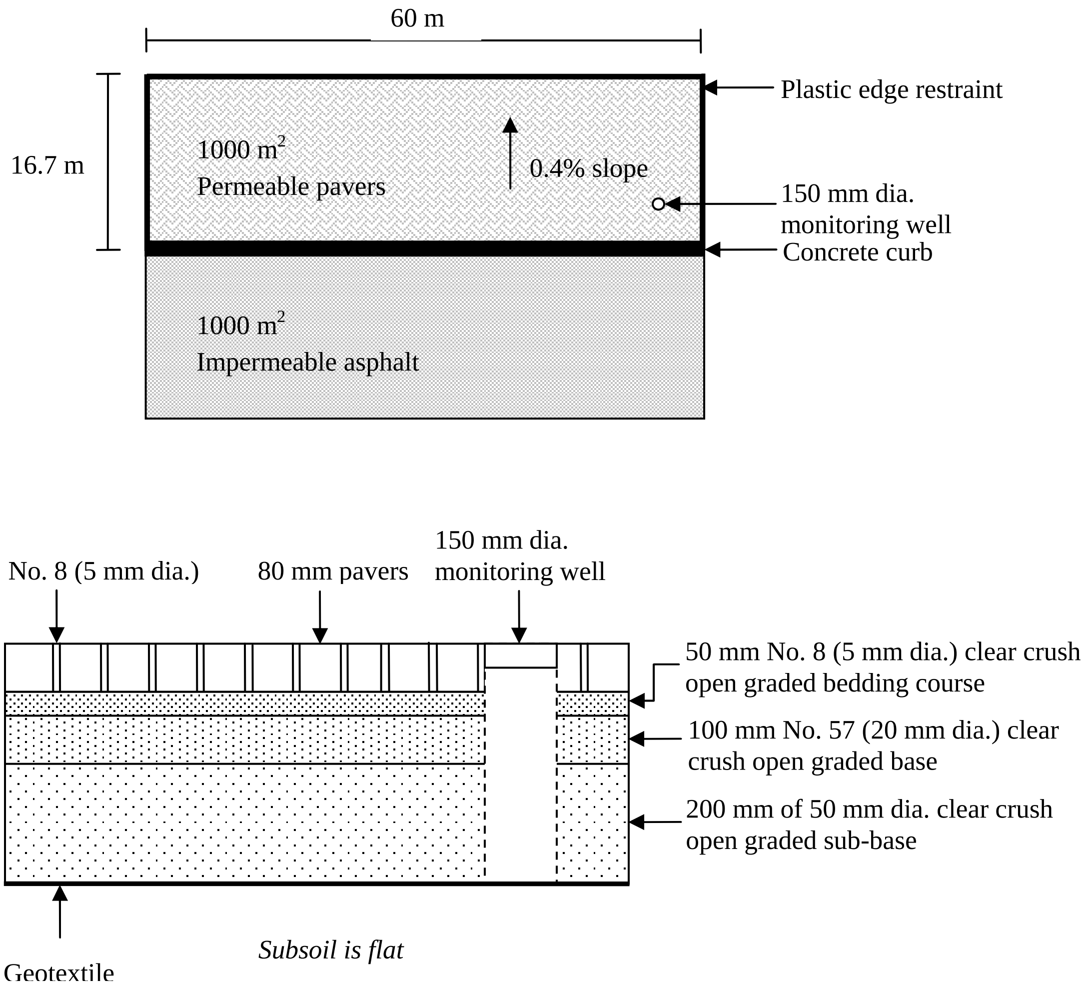


Figure 3.4: Permeable pavement full infiltration design. Plan view (top); cross section (bottom)

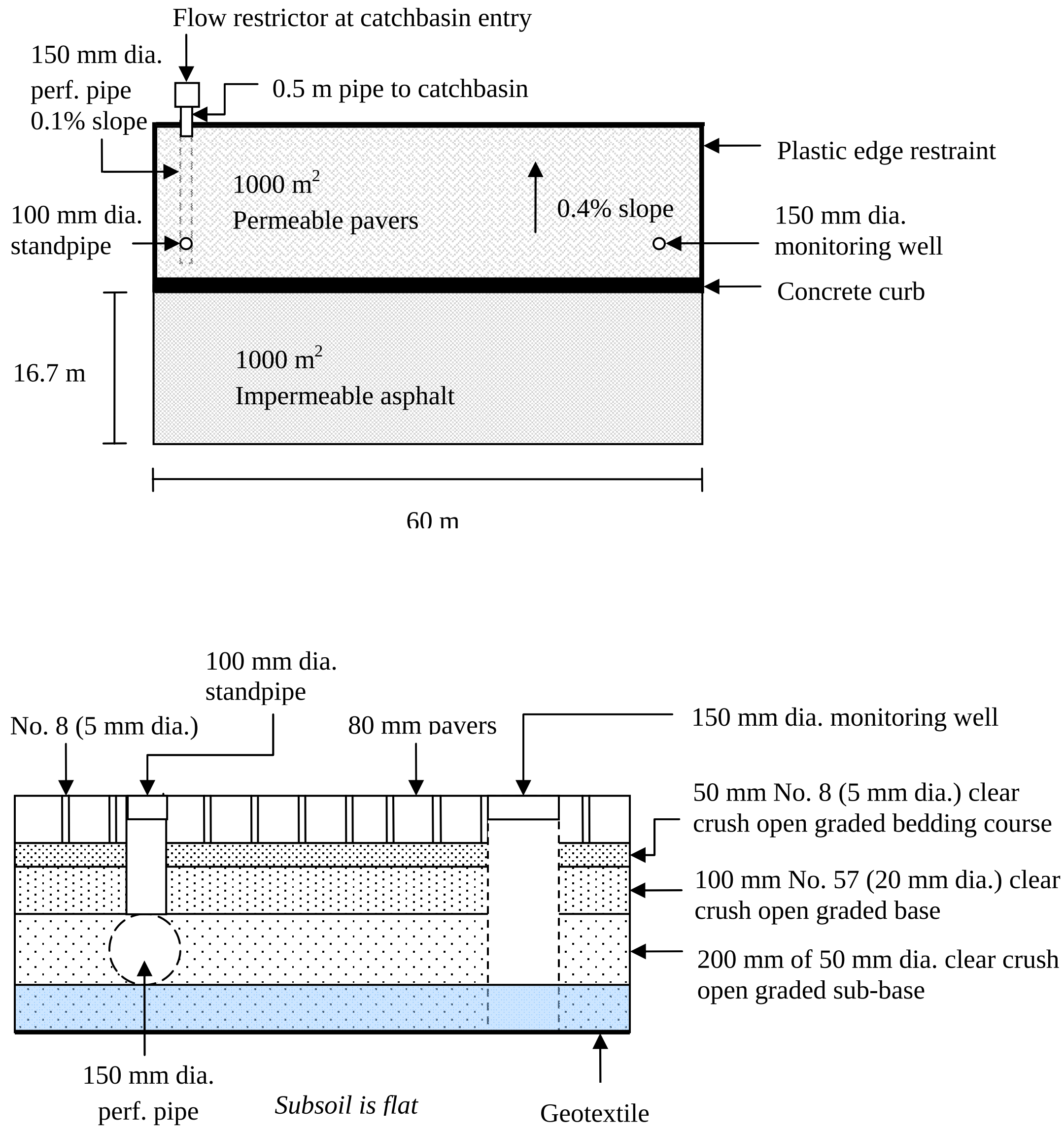


Figure 3.5: Permeable pavement partial infiltration design. Plan view (top); cross section (bottom)

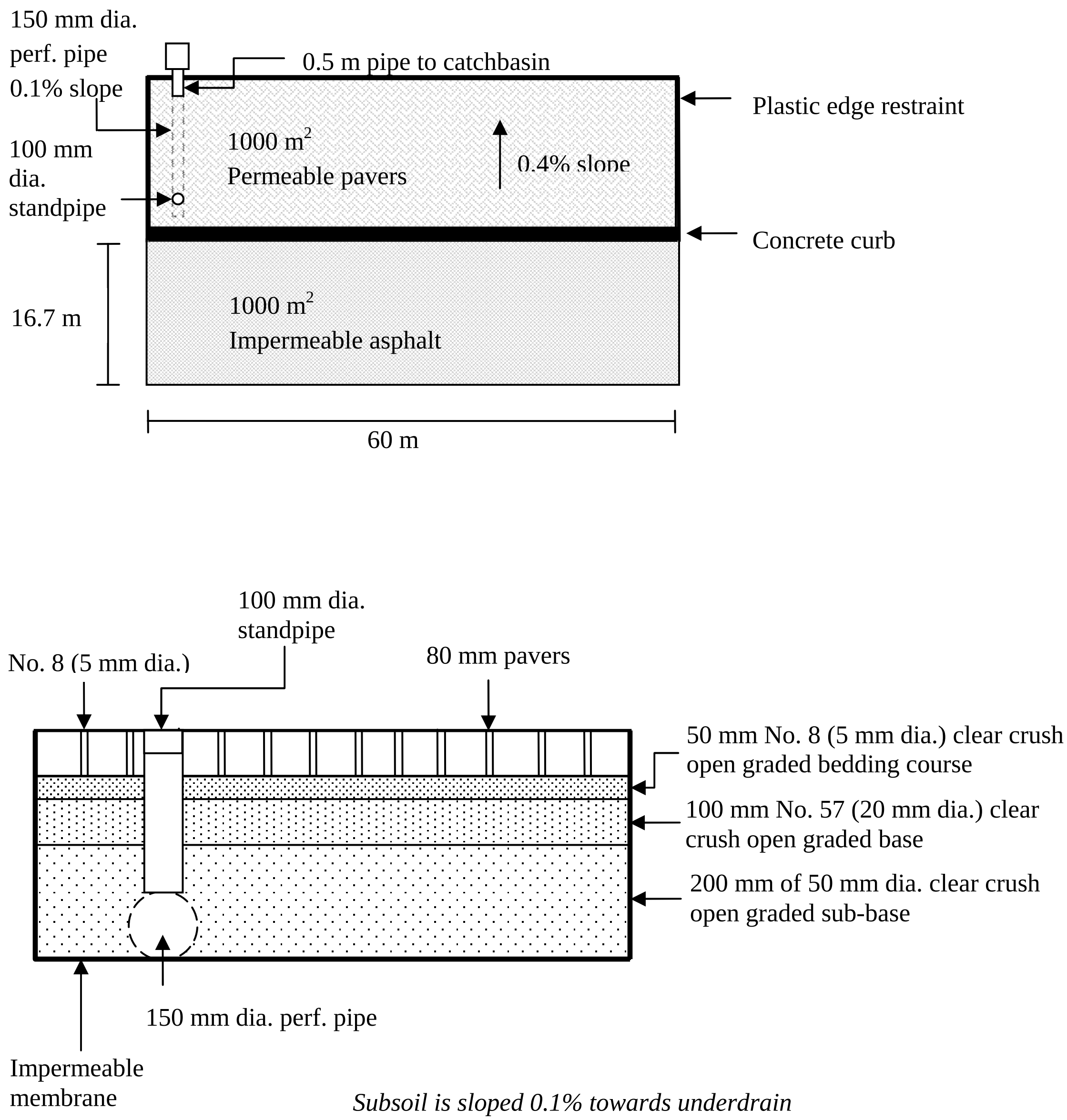


Figure 3.6: Permeable pavement no infiltration design. Plan view (top); cross section (bottom)

3.2.2 Capital Costs

General cost categories and totals for the three permeable pavement designs and a conventional asphalt (for comparison) are presented in Table 3.3. Detailed costs are provided in Appendix A. The presence of an underdrain made little difference in the overall cost. However, the addition of the impermeable liner in the 'no infiltration' scenario increased the cost considerably, even though test pits and infiltration measurements were not required (Table 3.3).

Table 3.3: Permeable pavement and conventional asphalt capital costs (1000 m^2)

Input Parameters	Permeable Interlocking Concrete Pavements			Asphalt
	Full Infiltration	Partial Infiltration	No Infiltration	
Planning & Site Preparation	$12,537	$12,659	$10,514	$4,714
Excavation	$5,584	$5,584	$5,584	$4,870
Materials & Installation	$80,192	$81,409	$94,055	$36,769
Total	$98,313	$99,652	$110,153	$46,353

The asphalt was assumed to be 50 mm thick and constructed over a 300 mm crusher run granular base. The total cost of asphalt was just less than half the price of permeable pavement for an equivalent area.

At this cost, the entire parking lot with 1000 m^2 of asphalt draining onto 1000 m^2 of a partial infiltration permeable pavement would be roughly $146,000. By comparison, the cost of a parking lot with a partial infiltration bioretention system and an asphalt drainage area would be $134,182 (2000 m^2 of asphalt + 130 m^2 bioretention). Although the capital cost of the bioretention stormwater control system is lower, the system requires 130 m^2 of additional space.

3.2.3 Life Cycle Costs

The life cycle costs for permeable pavements and asphalt are presented in Table 3.4. The paver costs are based on the assumption that the pavers would need to be replaced in 30 years, and that annual inspections, replacement of selected pavers, and periodic cleaning would cost on average $433 to $436. The cost of replacement is less than the initial installation cost because the base granular materials can be largely re-used, and there are no excavation costs. The asphalt costs assume a 25 year life cycle assuming it is well maintained, with annual patching and crack sealing costs of $1000 and seal coating every three years at a cost of $3580. Asphalt pavements that are not maintained in this fashion would have a shorter life.

At the 25 year period of evaluation, neither the permeable pavement nor asphalt would have been replaced. Higher permeable pavement present value costs over this time period largely reflect the higher initial capital costs. The present value cost differences narrow considerably over the 50 year evaluation period as the higher asphalt maintenance costs accumulate, particularly at low discount rates.

Table 3.4: Permeable pavement and conventional asphalt life cycle costs (1000 m^2)

Input Parameters	Permeable Interlocking Concrete Pavements			Asphalt
	Full Infiltration	Partial Infiltration	No Infiltration	
Life span	30 years	30 years	30 years	25 years
Capital cost	$98,313	$99,652	$110,153	$46,353
Replacement cost at 30 years (25 years for asphalt)	$72,990	$7,990	$72,990	$26,951
Annual maintenance	$433	$436	$436	$2,146
Present Value including capital, maintenance and rehabilitation costs				
NPV at 50 years				
if i = 0 %	$192,970	$194,462	$204,963	$180,584
if i = 3 %	$139,552	$140,968	$151,469	$113,887
if i = 5 %	$123,081	$124,472	$134,973	$92,812
NPV at 25 years				
if i = 0 %	$109,146	$110,562	$121,063	$99,993
if i = 3 %	$105,796	$107,185	$117,686	$83,382
if i = 5 %	$104,325	$105,703	$116,204	$76,117

Note: i = discount rate

3.3 Infiltration Trenches

Infiltration trenches consist of rectangular excavations filled with clean stone granular material. Runoff from the road or roof enters the system through a perforated pipe that conveys water to the trench where it can infiltrate into the subsoil. Pretreatment is required for road runoff. Unlike permeable pavement and bioretention, infiltration trenches and chambers are typically located under paved or landscaped areas. These practices are often used in tight spaces where surface areas are either not available or are designated for other uses.

3.3.1 Model Scenarios and Designs

Infiltration trenches are often designed similarly on low and high permeability soils because runoff is controlled at the entry point to the system, typically via a weir in a manhole or concrete chamber, allowing water to bypass the system when the trench or chamber system is full. Thus, the scenarios in this case do not include partial, full and no infiltration, but are instead divided according to the type of runoff received. Relatively clean runoff from roofs require considerably less pretreatment than runoff from roads. The addition of pre-treatment devices for road drainage can add considerably to the cost of the system.

Roof Runoff

In this scenario, runoff drains into a 2 x 51 m trench via a control manhole from a 2000 m^2 industrial or commercial roof (Figure 3.7). The footprint of the facility is approximately 1/20th the size of the roof. The system is 1.62 m deep (Figure 3.8) with the capacity to store runoff from a 29 mm rain event. Additional storage is available in the contributing storm sewer pipes. The invert of the overflow is located at 1.2 m below the surface to protect against frost. Other than a sump in the manhole, which allows for some settling of larger solids, there is no pre-treatment. Monitoring wells are provided to facilitate inspections.

Road and Roof Runoff

This scenario is identical to the previous one, but the drainage area consists of roof (500 m^2) and road runoff (1500 m^2), with pretreatment via a hydrodynamic separator for the road runoff portion (Figure 3.9 and 3.10). The roof runoff portion flows directly to the control manhole without pre-treatment. If the road and roof runoff were combined in the same sewer, the hydrodynamic separator would need to be larger.

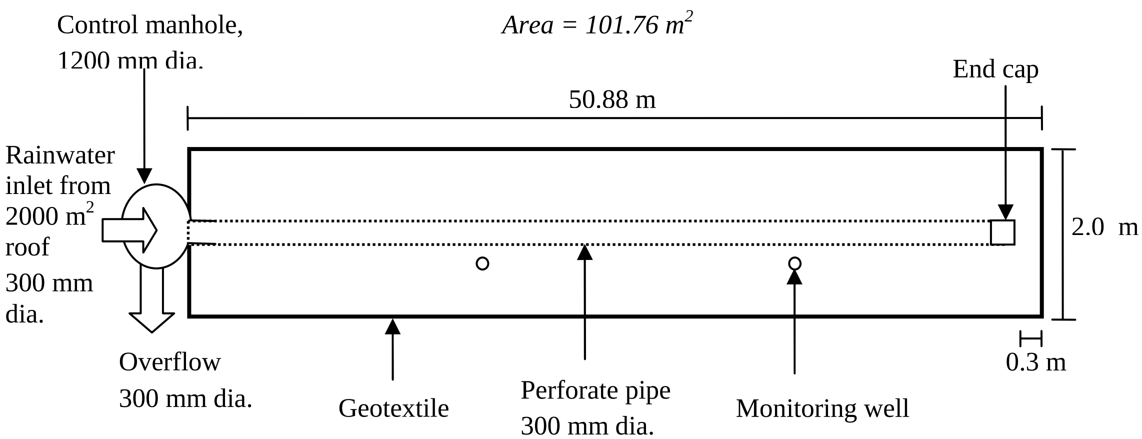


Figure 3.7: Plan view of the infiltration trench receiving roof runoff only

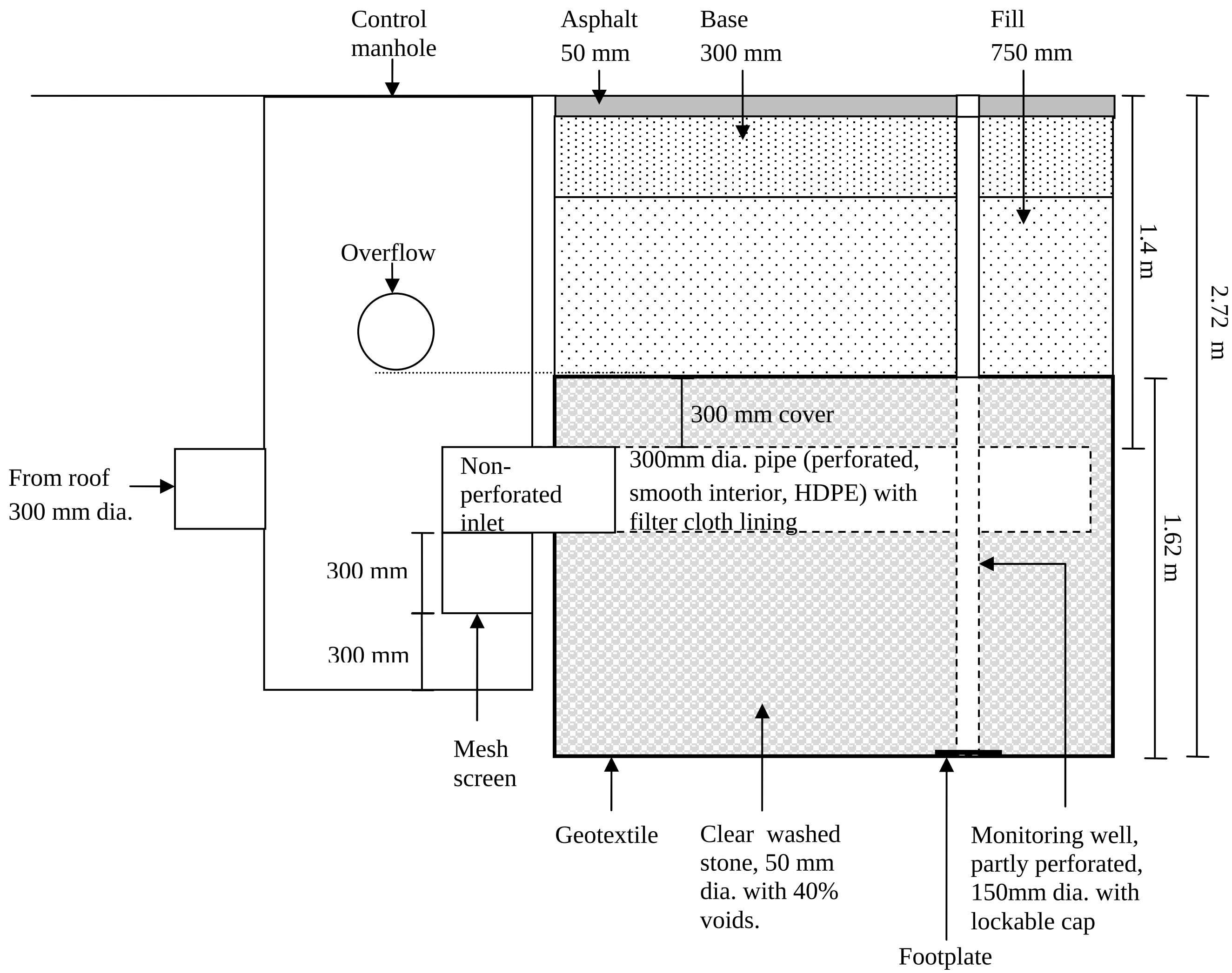


Figure 3.8: Cross section of infiltration trench receiving roof runoff only.

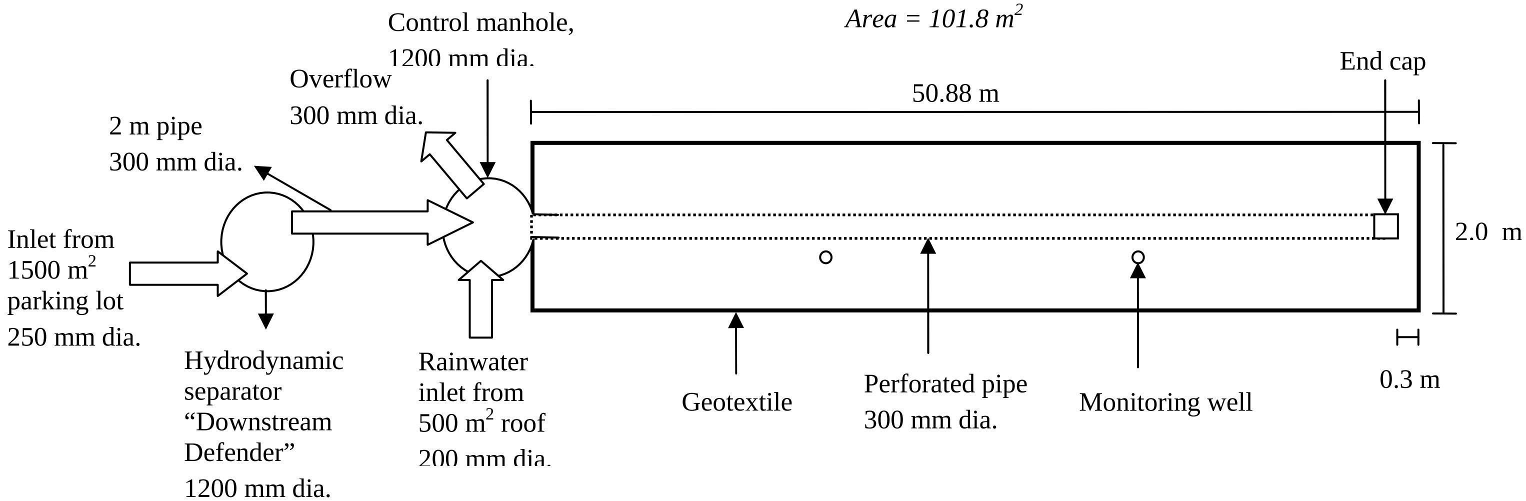


Figure 3.9: Plan view of the infiltration trench receiving road (1500 m^2) and roof runoff (500 m^2)

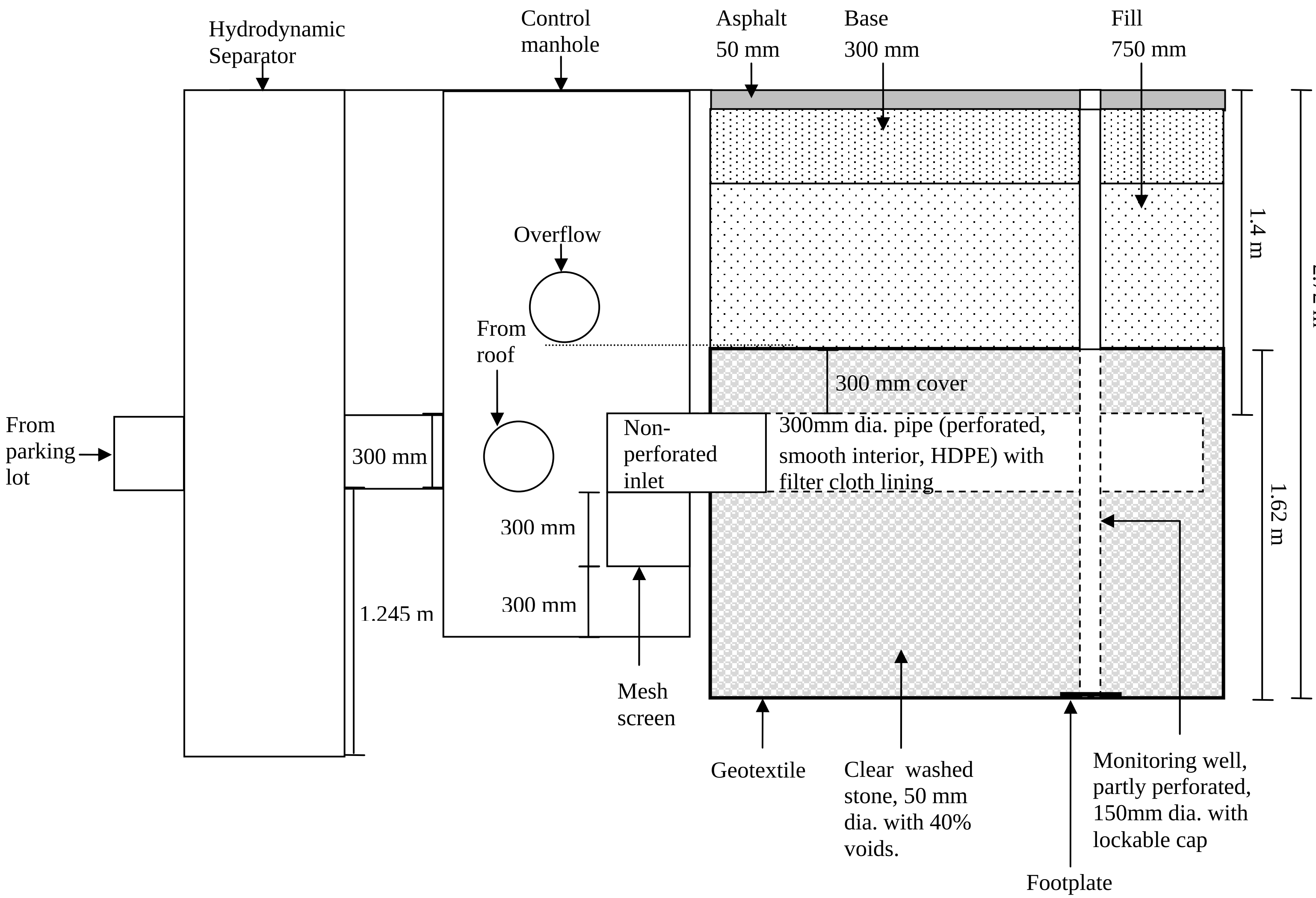


Figure 3.10: Cross section of the infiltration trench receiving road (1500 m^2) and roof runoff (500 m^2)

3.3.2 Capital Costs

The capital costs presented in Table 3.5 and Appendix A shows the road runoff scenario with pretreatment to be 63% more expensive than the roof runoff scenario due to the requirement for expensive pre-treatment via an Oil Grit Separator in the road runoff scenario. These results indicate that if only a portion of the runoff from a site is infiltrated, it is clearly cheaper to prioritize roof runoff for this purpose.

Table 3.5: Infiltration trench capital costs

Input Parameters	Roof Only	Road & Roof
Planning & Site Preparation	$7,436	$9,068
Excavation	$2,642	$2,642
Materials & Installation	$17,498	$33,824
Total	$27,575	$45,534

3.3.3 Life Cycle Costs

Studies have shown that infiltration trenches can continue to function well over long time periods (*e.g.* JF Sabourin and Associates, 2008). Hence it was assumed that, with adequate maintenance, replacement or major rehabilitation would not be required over the 50 year evaluation period. The road runoff scenario was considerably more expensive to maintain than the roof runoff scenario because the hydrodynamic separator requires regular inspections and vacuum removal of sediments. Also, the inner filter cloth held in place by expandable rings would need to be pulled out and changed every 8 years. Incorporating these higher maintenance costs increased the long term cost of the road runoff scenario to a 50 year present value equal to more than double that of the roof runoff scenario.

Table 3.6: Infiltration trench life cycle costs

	Roof Only	Road & Roof
Input Parameters		
Life span	50+ years	50+ years
Capital cost	$27,575	$45,534
Replacement cost	n/a	n/a
Annual maintenance	$74	$1,277
Present Value including capital, maintenance and rehabilitation costs		
NPV at 50 years		
if i = 0 %	$31,250	$109,384
if i = 3 %	$29,432	$77,810
if i = 5 %	$28,873	$68,090
NPV at 25 years		
if i = 0 %	$29,375	$77,134
if i = 3 %	$28,808	$67,127
if i = 5 %	$28,561	$62,760

Note: i = discount rate

3.4 Infiltration Chambers

A number of proprietary manufactured modular chambers are available as an alternative to infiltration trenches. These large open perforated structures create temporary storage of stormwater for infiltration (Figure 3.11). The chamber sections can be installed individually or in series in large trench formations. Since the chambers are empty, they are able to store more water than a stone filled trench over the same area.

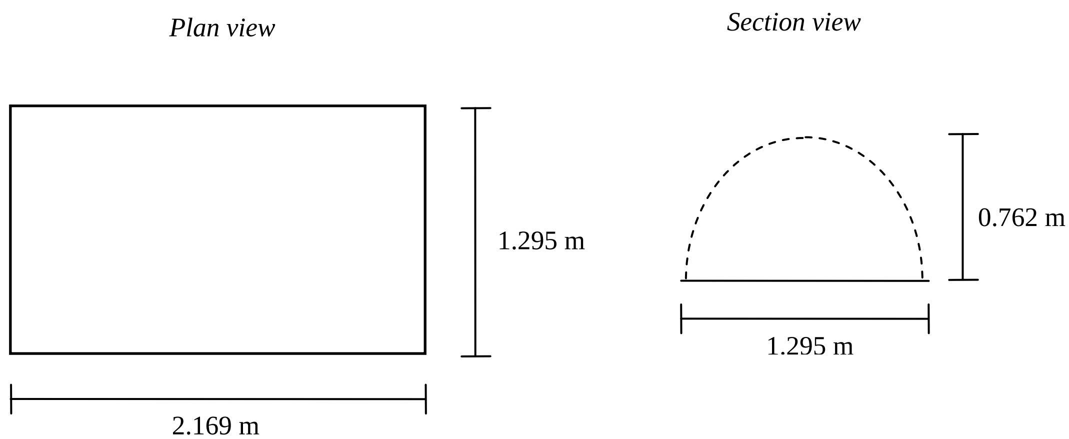


Figure 3.11: Sections of corrugated wall chambers

3.4.1 Model Scenarios and Designs

The two model scenarios are similar to those described earlier for infiltration trenches. The first scenario is for roof runoff, the second for a combination of roof and road runoff. As with trenches, the primary difference between the scenarios is the need for pretreatment in the road runoff scenario, which is accomplished by using an appropriately sized hydrodynamic separator.

Roof runoff

The footprint of the chamber is similar to the trench discussed in the previous section ($1/20^{th}$ of the drainage area), but the depth is 0.55 m shallower (Figure 3.12) because the empty chambers have the capacity to store a larger volume of water. Even with the shallower depth, however, the chambers have the capacity to store roughly one third more stormwater than the trench. The control manhole with weir is designed the same way as the trench to permit direct comparisons between the two practices.

Road and roof runoff

As with trenches, the drainage area is comprised of 25% roof and 75% road. A hydrodynamic separator is included to provide pre-treatment for the road runoff portion. Roof runoff is directed to the control manhole in the same manner as the previous scenario, since the cleaner roof water requires less pre-treatment.

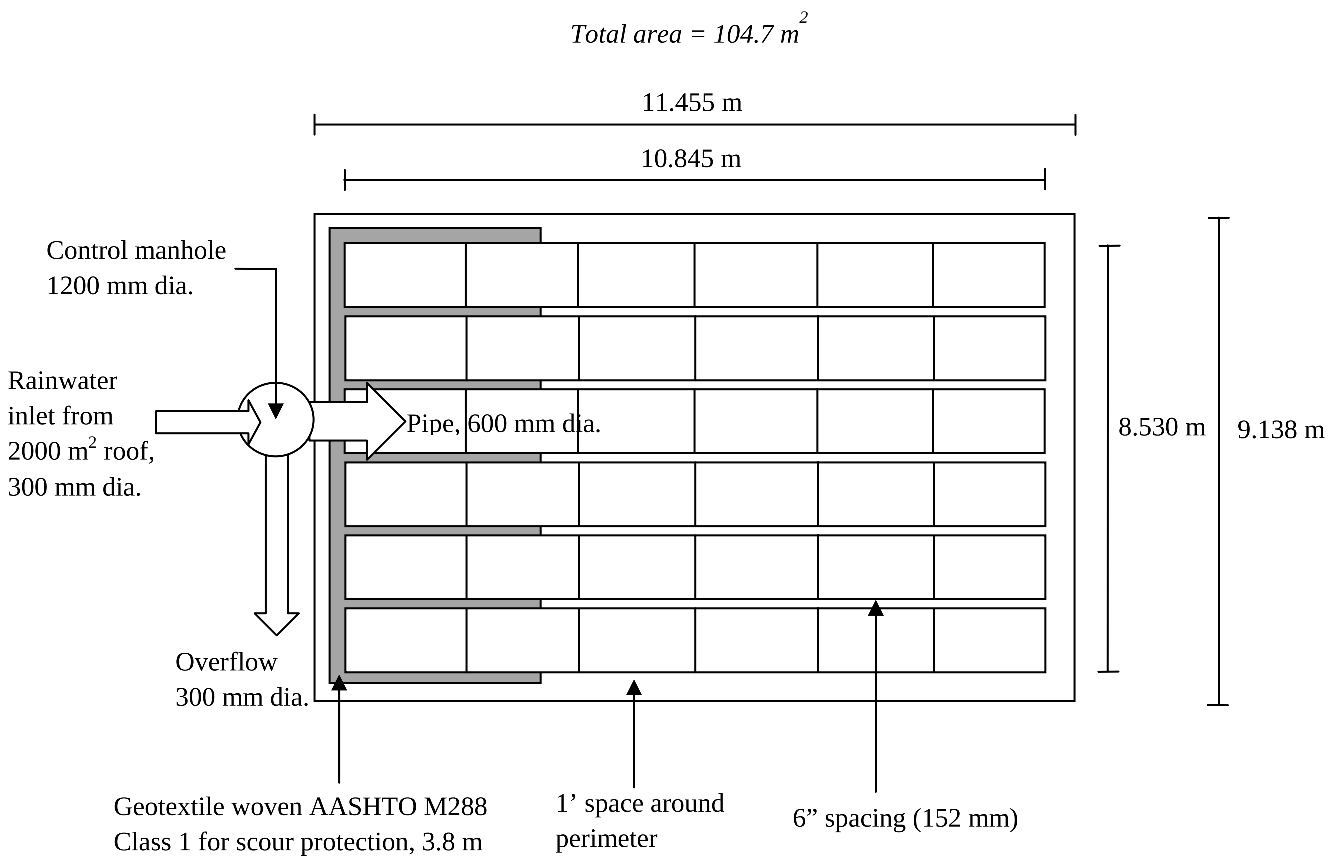


Figure 3.12: Plan view of infiltration chambers receiving roof runoff only

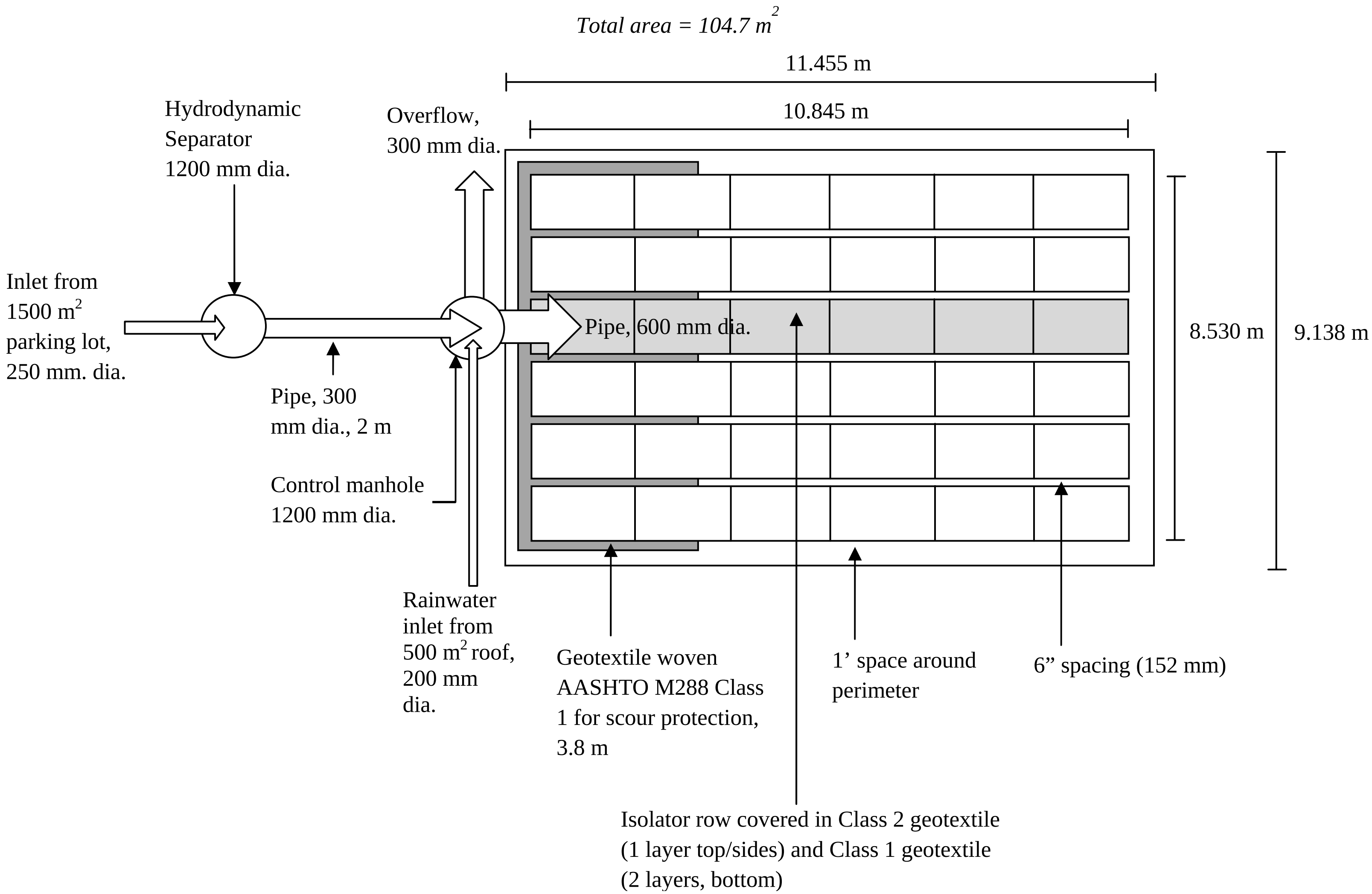


Figure 3.13: Plan view for infiltration chambers receiving road (1500 m^2) and roof runoff (500 m^2)

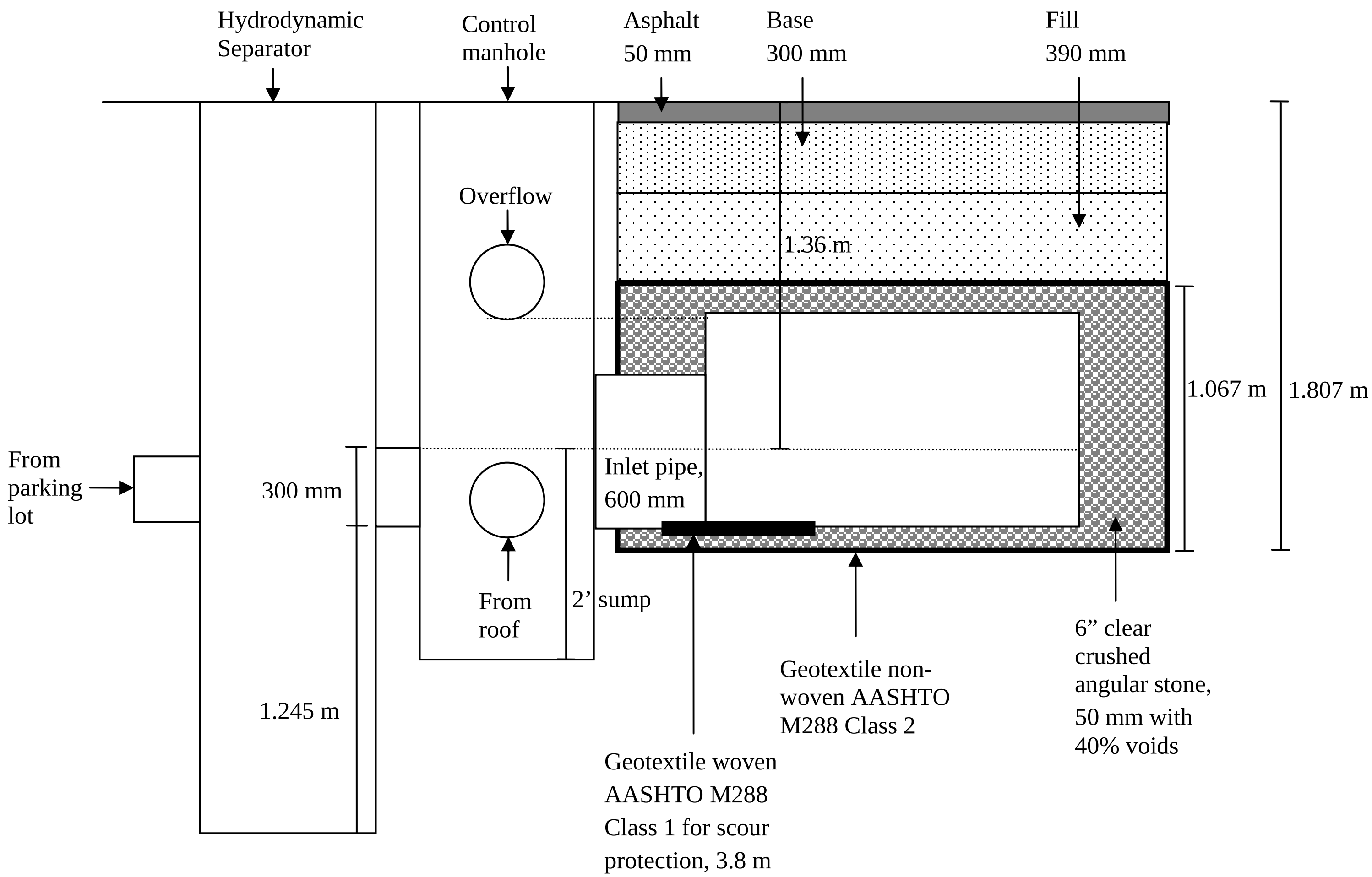


Figure 3.14: Cross section of infiltration chambers receiving road (1500 m^2) and roof runoff (500 m^2)

3.4.2 Capital Costs

The capital cost of the road/roof runoff scenario was 70% more than that of the roof runoff scenario because the former required expensive pre-treatment via a hydrodynamic separator (Figure 3.13). Chamber materials are more expensive than clear stone, but savings on perforated pipes and other installation expenses resulted in the two practices having very similar material and installation costs. Overall, the infiltration chamber costs were only slightly higher than the infiltration trench costs discussed in the previous section. The benefit of chambers, however, is that these provide considerably more storage per unit area than a simple gravel filled trench.

Table 3.7: Infiltration chambers capital costs

Input Parameters	Roof Only	Road & Roof
Planning & Site Preparation	$5,723	$7,373
Excavation	$2,141	$2,141
Materials and Installation	$17,683	$34,192
Total	$25,547	$43,706

3.4.3 Life Cycle Costs

The underground chambers were expected to last at least 50 years if they were adequately maintained, and therefore replacement costs were not applied. Costs of maintenance were very low for the roof runoff scenario because maintenance activities were limited to cleaning out the control manhole once per year. The hydrodynamic separators in the road/roof runoff scenario required inspection, cleanout and sediment disposal, which resulted in an average annual maintenance cost of $1,212. Overall net present value costs for the road/roof runoff scenario were well over double that of the roof runoff scenario. Maintenance costs for the trenches and chamber system were expected to be the same, hence NPV differences between the two practices were a result of differences in the initial capital cost alone.

Table 3.8: Infiltration chambers life cycle costs

	Roof Runoff	Road and Roof Runoff
Input Parameters		
Life span	50+ years	50+ years
Capital cost	$25,547	$43,706
Replacement cost	na	na
Annual maintenance	$74	$1,212
Present Value including capital, maintenance and rehabilitation costs		
NPV at 50 years		
if i = 0 %	$29,222	$104,306
if i = 3 %	$27,404	$74,269
if i = 5 %	$26,845	$65,038
NPV at 25 years		
if i = 0 %	$27,347	$73,406
if i = 3 %	$26,780	$64,008
if i = 5 %	$26,533	$59,909

Note: i = discount rate

3.5 Enhanced Grass Swales

Enhanced swales are designed to detain, infiltrate and convey flows to the storm sewer system or directly to the receiving water. Check dams help slow and filter water to enhance sedimentation, soil infiltration and evapotranspiration by plants and/or grasses. Unlike dry swales, they do not incorporate an engineered soil media mix and optional underdrain. Therefore, this practice does not usually provide the same runoff reduction and water quality benefits as a dry swale or bioretention system.

Swales and open channels are often used adjacent to roadways. They can also be used along the perimeter of parking lots and other impervious drainage areas. Swales can be planted with grass or other herbaceous plants, with rainwater entering either through curb cuts or as sheet flows.

3.5.1 Model Design and Scenarios

In the model scenario, runoff enters the swale as sheetflow through curb cut inlets. The swale is planted with grass and check dams are provided at 30 m intervals. Check dams can be made of different materials. The cost of three options were evaluated – concrete curbs, compost filter socks, and rocks. The swale footprint is one tenth the size of the drainage area. Culverts are used to convey water below driveways or sidewalks, and a culvert at the downstream end of the swale conveys water to the conventional sewer system.

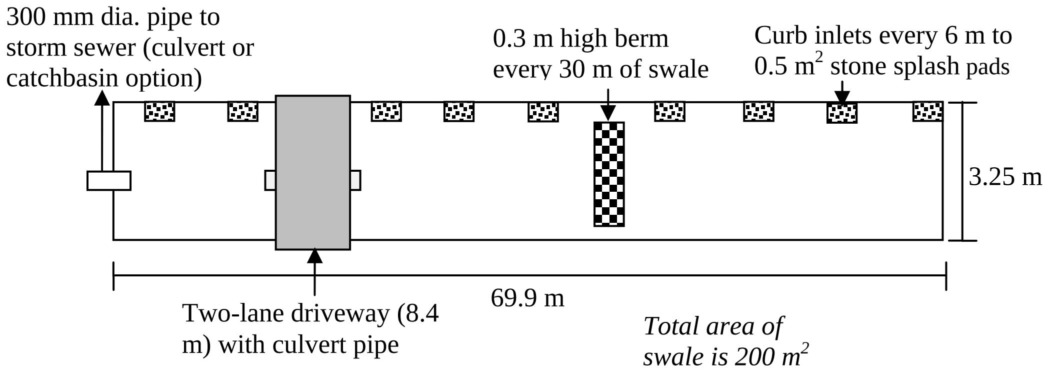


Figure 3.15: Plan view of enhanced grass swale. Drainage area is 2000 m^2

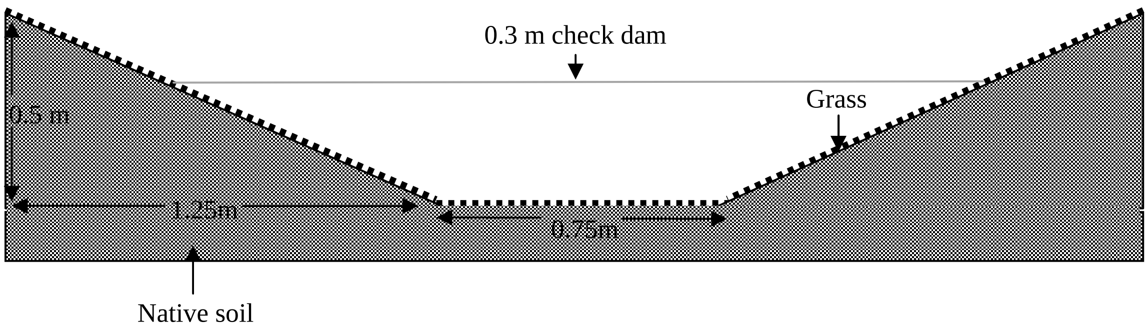


Figure 3.16: Cross section of enhanced grass swale

3.5.2 Capital Costs

Enhanced swales are one of the least expensive stormwater practices because they do not require significant excavation, and include pipes only at driveway or road crossings, and at the downstream connection to the storm sewer system. The curbs and curb cuts added significantly to the overall cost (see Appendix A). These are not necessary in swale designs where runoff enters the swale as sheet flow across its full length. Parking wheel stops or bollards can be used to prevent vehicle damage to the swale. Removal of the curbs and gutters from the model design would save approximately $5500. There was only a minor difference in cost between the different check dam options.

Table 3.9: Enhanced grass swale capital costs

Input Parameters	Curb check dam	Filter sock check dam	Rock check dam
Planning & Site Preparation	$5,726	$5,694	$5,705
Excavation	$1,455	$1,455	$1,455
Materials and Installation	$11,401	$11,084	$11,187
Total	$18,582	$18,233	$18,347

3.5.3 Life Cycle Costs

Maintenance of enhanced swales consists of regular inspections, watering, litter and sediment removal, and mowing. Grass may also need to be restored periodically. These routine costs add significantly to the overall long term costs, but the practice remains one of the least expensive LID practices evaluated in this study.

Table 3.10: Enhanced grass swale life cycle costs

	Curb check dam	Filter sock check dam	Rock check dam
Input Parameters			
Life span	50+ years	50+ years	50+ year
Capital cost	$18,582	$18,233	$18,347
Replacement cost	n/a	n/a	n/a
Annual maintenance	$500	$500	$500
Present Value including capital, maintenance and rehabilitation costs			
NPV at 50 years			
if i = 0 %	$43,567	$43,218	$43,333
if i = 3 %	$32,351	$32,003	$32,117
if i = 5 %	$28,874	$28,525	$28,639
NPV at 25 years			
if i = 0 %	$32,011	$31,662	$31,777
if i = 3 %	$28,505	$28,156	$28,270
if i = 5 %	$26,947	$26,598	$26,712

Note: i = discount rate

3.6 Rainwater Harvesting

The term *Rainwater Harvesting* (RWH) refers to the ancient practice of collecting rainwater from roofs or other impermeable surfaces for future use in satisfying daily water needs. A RWH system typically consists of three basic elements: the collection system (such as a roof), the conveyance system (infrastructure that transports the water), and the storage system (above or below ground cistern); however in larger systems or ones designed to produce potable water, a pressurized or non-pressurized water discharge system and pre/post treatment unit is usually included. In most cases, a cistern overflow draining to an infiltration basin or municipal sewer system is necessary in order to prevent system backups.

3.6.1 Model Scenarios and Designs

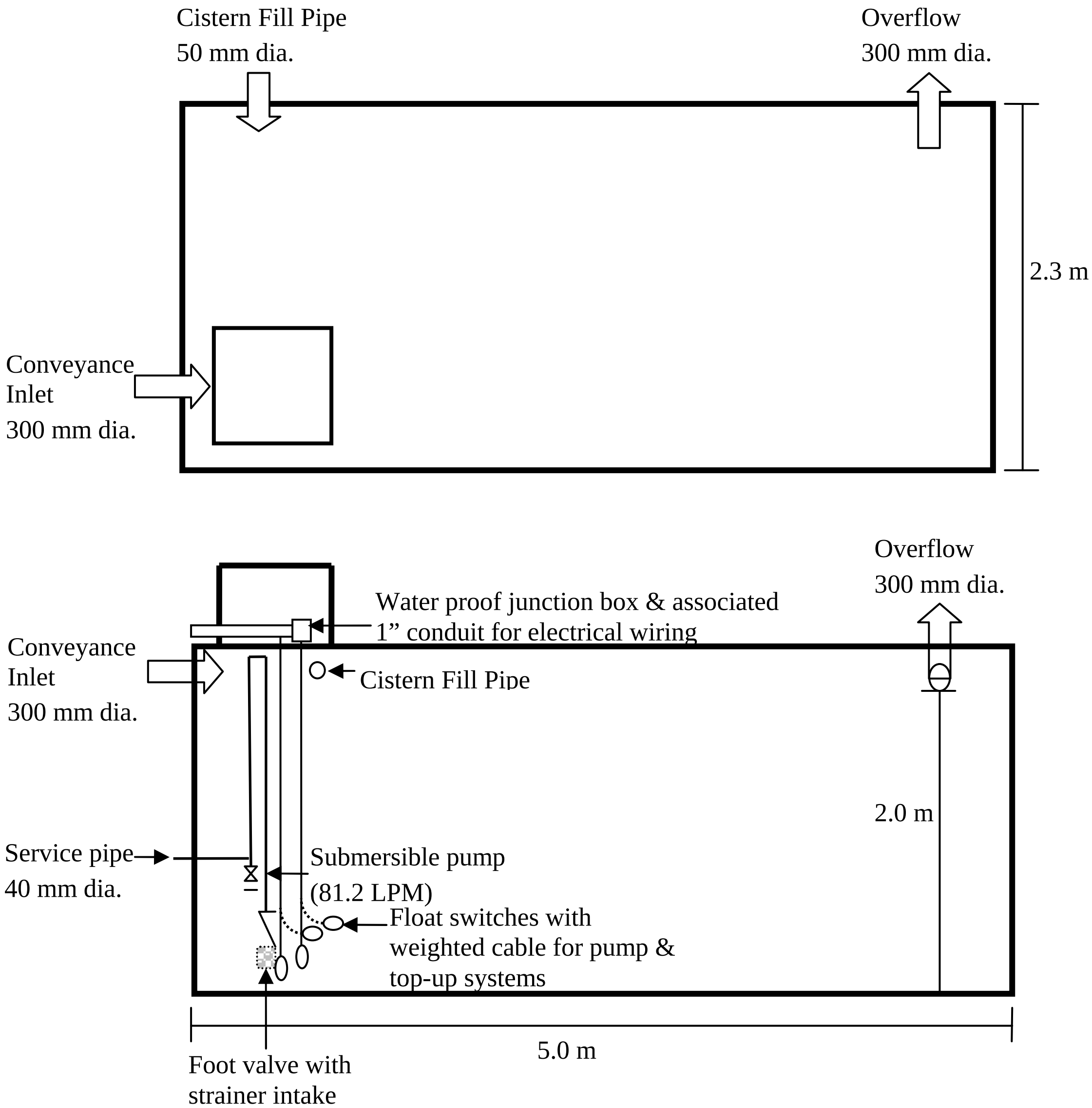
The RWH scenarios selected for detailed costing are applicable to large commercial, industrial or institutional contexts, which are currently the most common type of system installed within the Greater Toronto Area. Both scenarios were developed using a RWH sizing and costing tool developed in 2009 by the University of Guelph, Connect the Drops and TRCA to facilitate wider adoption of RWH systems in Ontario (STEP, 2011). The tool uses RS Means databases for costing and optimal cistern sizing based on local rainfall data for the GTA and recommendations provided in recent guidelines on RWH in Ontario.

Concrete cistern outside

The first scenario consists of a 23,000 L concrete cistern buried adjacent to the building with dual plumbing distribution, an 81.2 LPM submersible pump, and a 439 L expansion tank. The system also includes a float switch to prevent the pump from dry running, a top-up float switch and associated wiring, a solenoid valve, air gap to prevent backflow, as well as backflow preventer at the premise boundary, a water meter and water hammer arrestor. In the portion of the building using the rainwater cistern for toilet flushing there were 260 occupants and two hose bibs were used on average 14 minutes per day from April to September.

Plastic tank inside

The plastic tank is also 23,000 L, but is stored inside the building. It was costed out volumetrically and therefore could consist of one large unit or several smaller units, depending on space constraints. Many of the same features in the concrete cistern case would apply here as well, but since the cistern is inside, there would be no need for excavation.



Total Volume = 23,000 L

Figure 3.17: Pre-cast concrete tank design

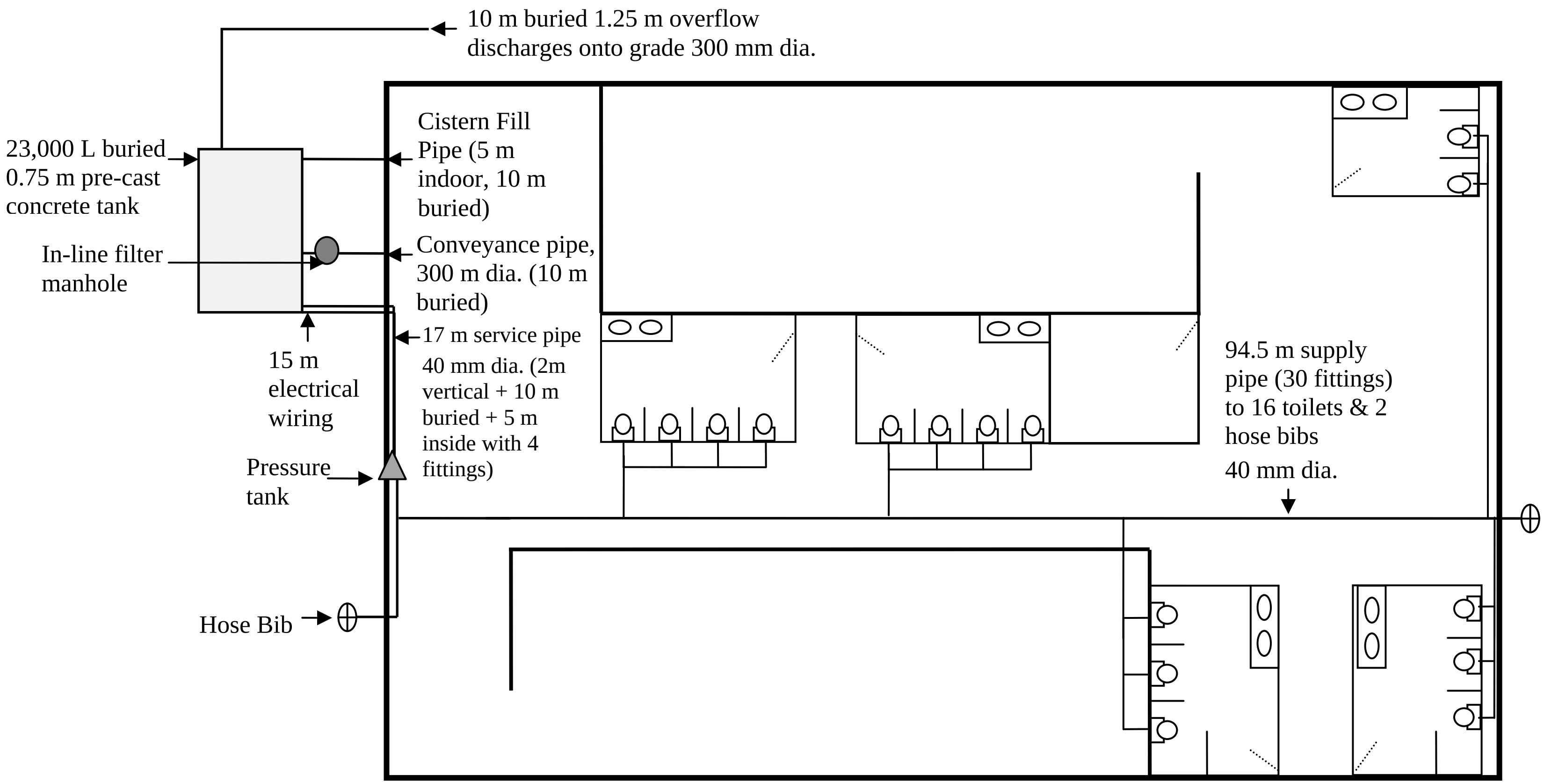


Figure 3.18: Site design for buried pre-cast concrete tank

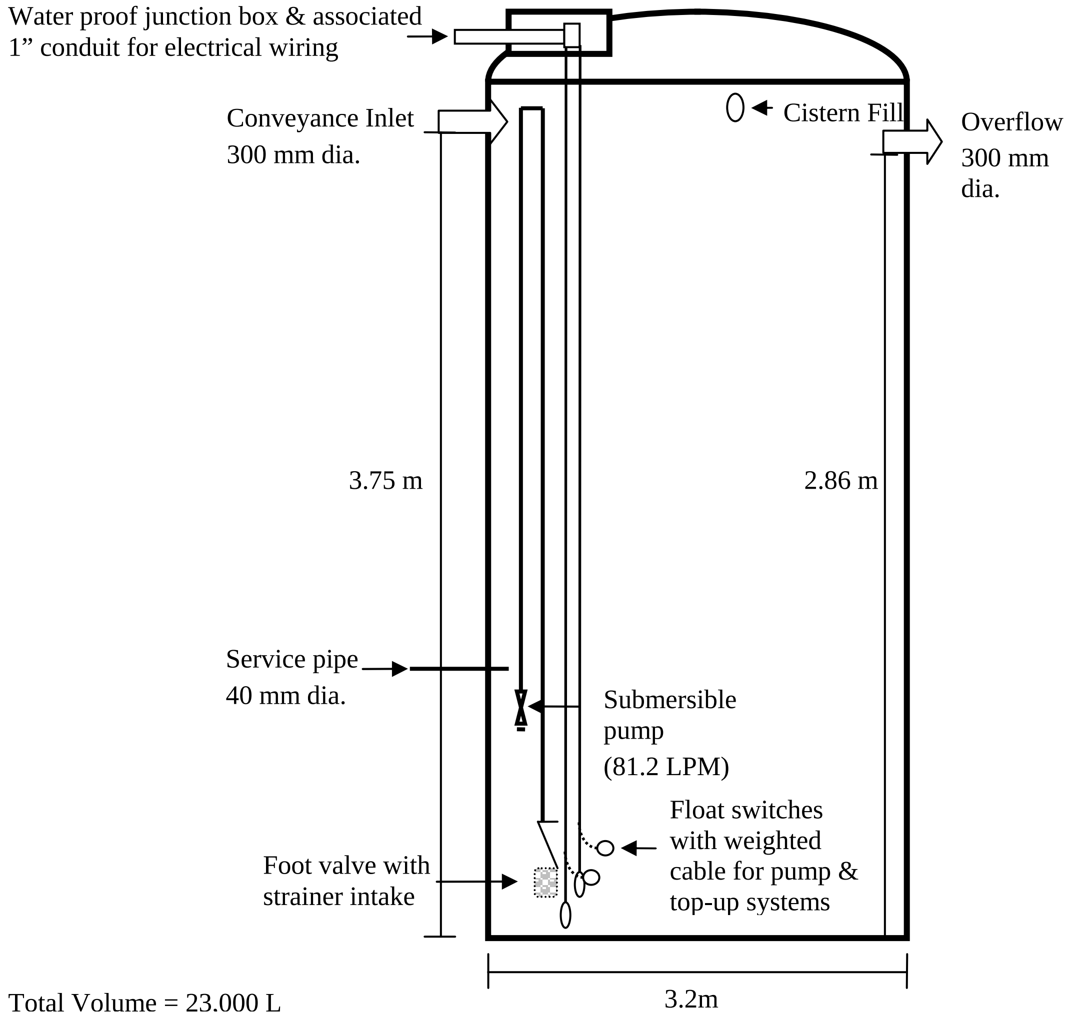


Figure 3.19: Plastic tank design

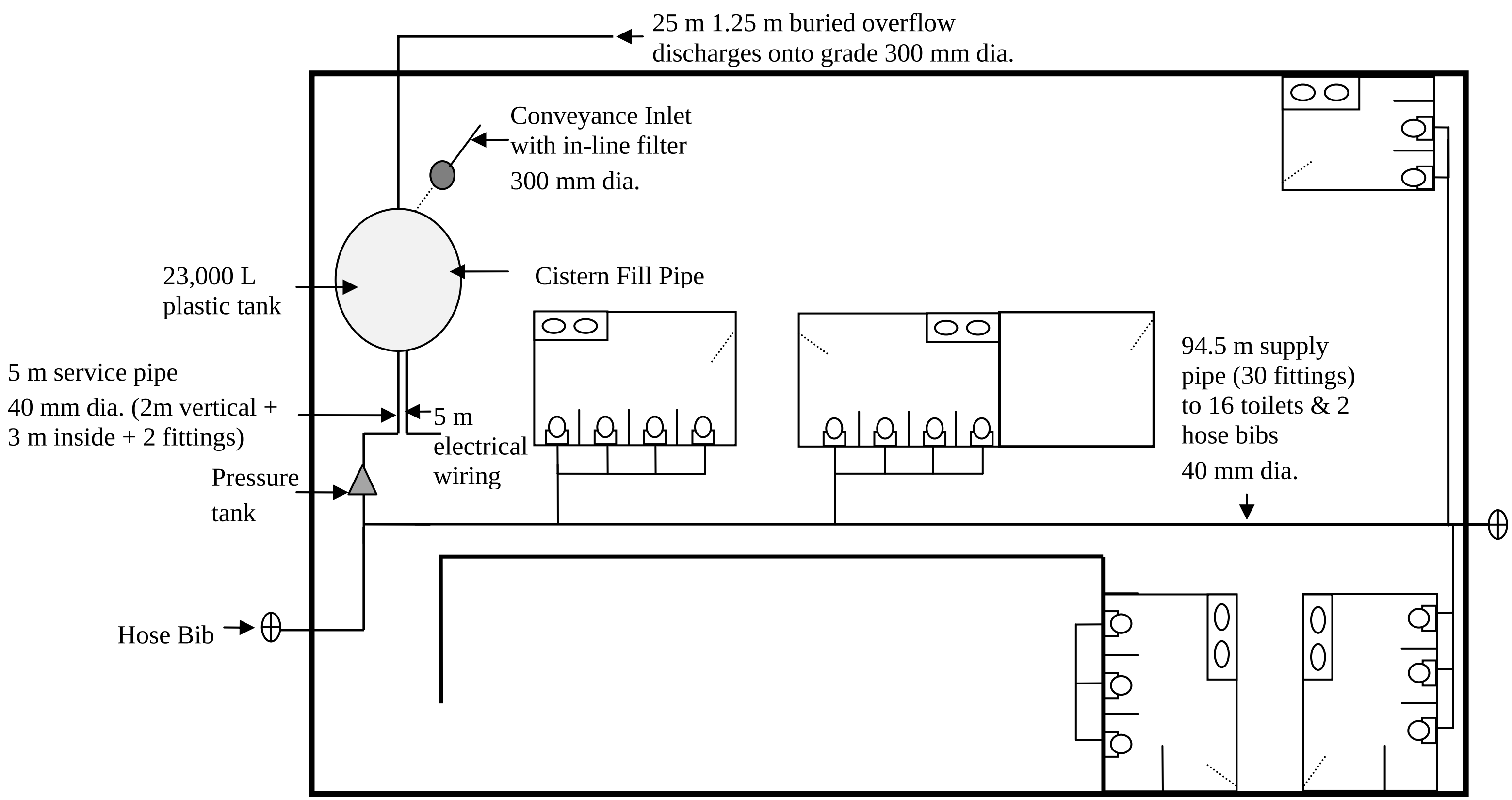


Figure 3.20: Site design for indoor plastic tank

3.6.2 Capital Costs

The concrete tank cost more than the plastic tank, primarily due to the added costs for excavation (Table 3.11). The trench and piping for the overflow cost more for the plastic tank because it was assumed that it would be further from the discharge point and therefore needed to be double the length. Most of the major costs for the tank, pump and piping were similar.

Table 3.11: Rainwater harvesting capital costs

Input Parameters	Concrete Tank Outdoor	Plastic Tank Indoor
Planning & Site Preparation	$4,794	$3,694
Excavation	$1,244	$0
Materials & Installation	$41,199	$36,943
Total	$47,237	$40,637

3.6.3 Life Cycle Costs

In the life cycle cost estimates shown in Table 3.12 the plastic tank is replaced in year 40, at a cost of $7,170, whereas the concrete cistern is assumed to last longer. Average annual maintenance costs are the same in the two scenarios at roughly $744. The requirement for replacing the plastic tank brings the net present values of the two scenarios closer together, with the plastic tank being only slightly less expensive at a 0% discount rate over the 50 year evaluation period.

Table 3.12: Rainwater harvesting life cycle costs

	Concrete Tank Outdoor	Plastic Tank Indoor
Input Parameters		
Life span	50+ years	40 years
Capital cost	$47,237	$40,637
Replacement cost at 40 years	na	$5,970
Annual maintenance	$744	$744
Present Value including capital, maintenance and rehabilitation costs		
NPV at 50 years		
if i = 0 %	$84,451	$83,821
if i = 3 %	$66,088	$61,318
if i = 5 %	$60,140	$54,388
NPV at 25 years		
if i = 0 %	$65,844	$59,244
if i = 3 %	$59,519	$52,919
if i = 5 %	$56,754	$50,154

Note: i = discount rate

3.7 Extensive Greenroof

Greenroofs are typically classified as either extensive or intensive. Extensive greenroofs support low growing plants and have substrate depths ranging from 5 to 15 cm. A greenroof with a substrate deeper than 15 cm is normally defined as intensive. Extensive roofs are much more common and were therefore selected as the basis for detailed costing in this project.

A green roof assembly usually consists of the following components above the roofing membrane: a root-resistant layer to minimize root damage to the membrane; a drainage layer to remove excess water from the drainage medium; a filter fabric to prevent fine particles in the growing medium from clogging the drainage layer; a growing medium to support healthy plant growth, and plants selected for their adaptability to local climate conditions. An irrigation system may also be needed depending on the type of plants selected.

3.7.1 Model Scenarios and Designs

The scenarios selected for model costing include inexpensive and more expensive variations of an extensive green roof. Since green roofs are usually installed on gently sloping roofs, both scenarios assume a roof slope of 2%. As with other practices, it is assumed that the green roof is installed as part of the original new building design (i.e. not a retrofit).

‘Cheap’ system

The inexpensive system involves installing a sedum cutting system with a 10 cm growing medium on a building less than 5 stories high, which makes it easier to get the plants and green roof materials onto the roof. This scenario does not include pathways, fencing or other features that help improve accessibility. The water leakage test is a simpler, less expensive test than the more sophisticated methods. A TPO waterproof membrane is used.

Expensive system

In this scenario, the building is over 5 stories tall, the waterproof membrane is more expensive and a sophisticated water leakage test is performed. It also includes a root barrier, an irrigation system, more expensive edging and a 15 cm growing medium. Plants are in the form of sedum mats, which are much more expensive than sedum plugs or cuttings. A more expensive EPDM waterproof membrane was used in this scenario.

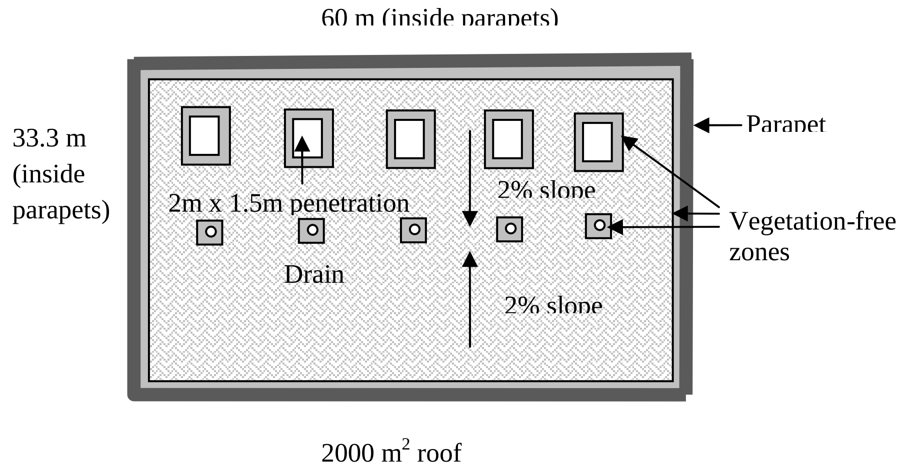


Figure 3.21: Plan view of greenroof design

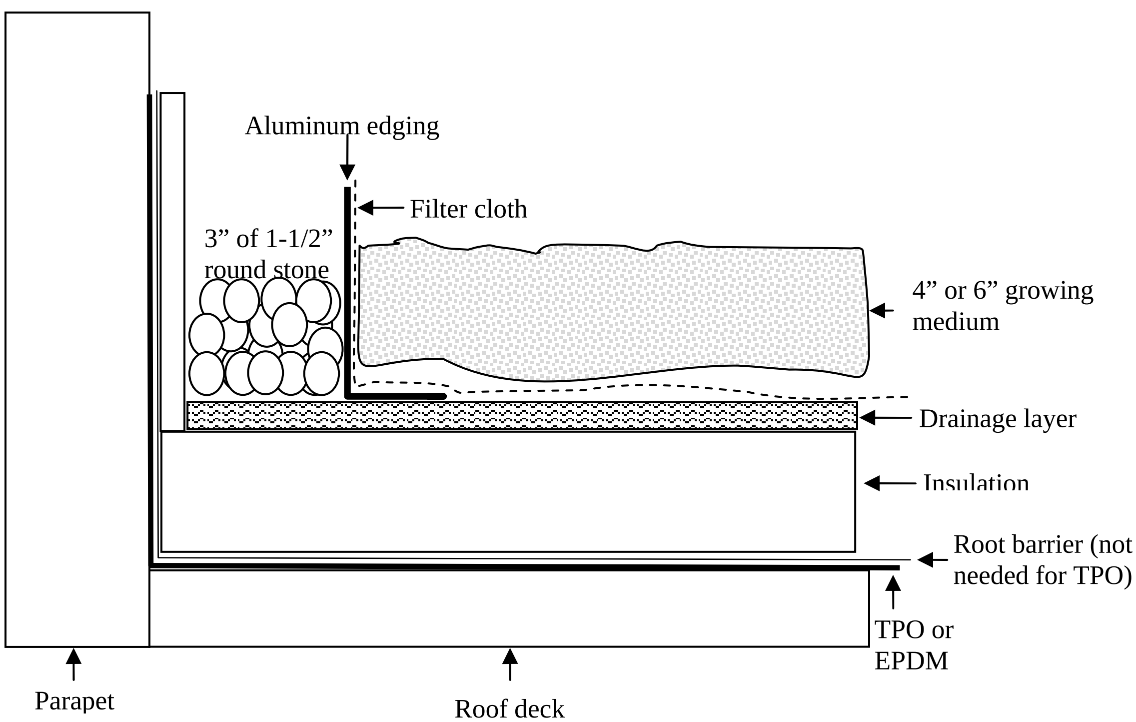


Figure 3.22: Cross section of greenroof design

3.7.2 Capital Costs

The capital cost breakdown shown in Table 3.13 and Appendix A shows how the differences between the two scenarios affect the overall price of the systems. The expensive system is more than twice the cost of the cheap system, mostly due to differences in the cost of materials. The membrane represents a significant component of the cost, but since all roofs require membranes, it should not be regarded as a cost that is unique to green roofs. Only the ‘expensive’ green roof has a specialized membrane that would be more costly than a conventional roof.

Table 3.13: Extensive greenroof capital costs

Input Parameters	Cheap		Expensive	
	With Membrane	Without Membrane	With Membrane	Without Membrane
Planning & Site Preparation	$21,341	$10,163	$44,804	$31,693
Craning	$13,897	$9,265	$56,676	$51,524
Materials & Installation	$196,040	$90,631	$371,430	$255,441
Total	$231,278	$110,060	$472,909	$338,658

Detailed costs for conventional roofs were not calculated in this project. However, these were estimated in an earlier study (STEP, 2007) that compared the life cycle cost of green roofs to conventional roofs under various scenarios. In that study, the initial capital cost of a new conventional roof of an equivalent area (2000 m^2) was estimated to be a minimum of $172,000, not including the roof deck. Accordingly, a green roof would add at least $59,278 to the initial capital cost of the roof. These extra initial costs would be recouped to some extent by the green roof’s much longer life and other energy, stormwater and biodiversity benefits.

3.7.3 Life Cycle Costs

The life span of the green roofs was estimated to be 40 years regardless of the scenario. The less expensive scenario had much lower replacement costs, but the $308 higher annual maintenance costs resulted in a similar net present value for overall maintenance and rehabilitation (assuming a 5% discount rate). The discount rate is a particularly important factor in these scenarios because the high replacement costs play a significant role in the overall Net Present Value calculations.

Table 3.14: Extensive greenroof life cycle costs

Input Parameters	Cheap		Expensive	
	With Membrane	Without Membrane	With Membrane	Without Membrane
Life span	40 years	40 years	40 years	40 years
Capital cost	$231,278	$110,060	$472,909	$338,658
Replacement cost at 40 years	$373,628	$209,187	$613,542	$436,068
Annual maintenance	$2,022	$1854	$1,714	$1546
Present Value including capital, maintenance and rehabilitation costs				
NPV at 50 years				
if i = 0 %	$706,022	$411,947	$1,172,167	$852,026
if i = 3 %	$413,506	$237,683	$705,990	$513,139
if i = 5 %	$341,174	$193,720	$592,200	$429,862
NPV at 25 years				
if i = 0 %	$301,346	$175,920	$519,577	$381,118
if i = 3 %	$288,698	$164,706	$504,838	$367,814
if i = 5 %	$282,999	$159,617	$498,524	$362,109

Note: i = discount rate

In the earlier STEP study (2007) that compared the cost of conventional roofs to green roofs, various cost and roof longevity scenarios were also evaluated. The scenario that assumed a discount rate of 3.5% and green roof longevity of 45 years showed that even moderately priced green roofs, with initial capital costs similar to this study, can cost less than conventional roofs (which were assumed to last 15 years) while providing other stormwater, biodiversity, energy and heat island mitigation benefits.

4.0 COMPARISON OF LID PRACTICE COSTS

Selecting the preferred combination of stormwater practices for a development site requires knowledge of environmental conditions, space constraints, the anticipated water balance and water quality impacts, as well as the type of practices that would help mitigate these impacts. Since different practices can achieve similar benefits, cost becomes an important criterion for selecting among available stormwater treatment options.

4.1 Capital Costs

The initial capital costs associated with planning, design and construction of the different practice scenarios and practice types are compared in Figure 4.1. The comparison shows that bioretention, rainwater harvesting and the road runoff variations of infiltration chambers and trenches fall within a similar range of costs. Permeable pavements are more expensive, mostly due to the higher cost of materials and installation. Enhanced swales are the least expensive in part because they are designed primarily for conveyance, rather than water balance control. Infiltration trenches and chambers that receive only roof runoff are also relatively cost effective because of the lower costs for pre-treatment. Green roofs are the most expensive but offer a range of benefits that are unique to this practice. They also displace the need to install a conventional roof, which none of the other practices do.

In interpreting these results, it is important to recognize that only the practice itself is assigned a cost. The savings that may be gained from implementing one practice over another are not captured. Thus, for instance, if the project involves building a new parking lot, there would be costs associated with paving the parking lot with asphalt and installing a practice that helps mitigate the water quantity and quality impacts of the runoff generated. Selecting permeable pavement would mean that only a portion of the parking lot would require paving (assuming some asphalt drains onto the pavement), resulting in cost savings over a practice such as bioretention, which cannot be used as a parking surface, and would therefore require more asphalt paving. In the case of bioretention, there may also be a cost associated with the larger area required to accommodate the practice, given that each practice has the same roof and/or paved drainage area. If instead, an underground chamber were used, the cost of asphalt above the chamber would be extra, but there would be no impact on buildable area. The specific context of the project, therefore, will play a critical role in the overall cost of the project

The cost data can also be viewed through the lens of the benefits the different practices provide with regards to stormwater treatment. Focusing specifically on volume reduction is perhaps the simplest means of accomplishing this task because reducing runoff volumes addresses multiple issues, including water quality, stream erosion, thermal impacts and groundwater recharge. The costs could then be expressed per unit volume of runoff reduced through infiltration and/or evapotranspiration. This approach works less well for building integrated practices such as green roofs and rainwater harvesting because the unique practice values associated with, for example,

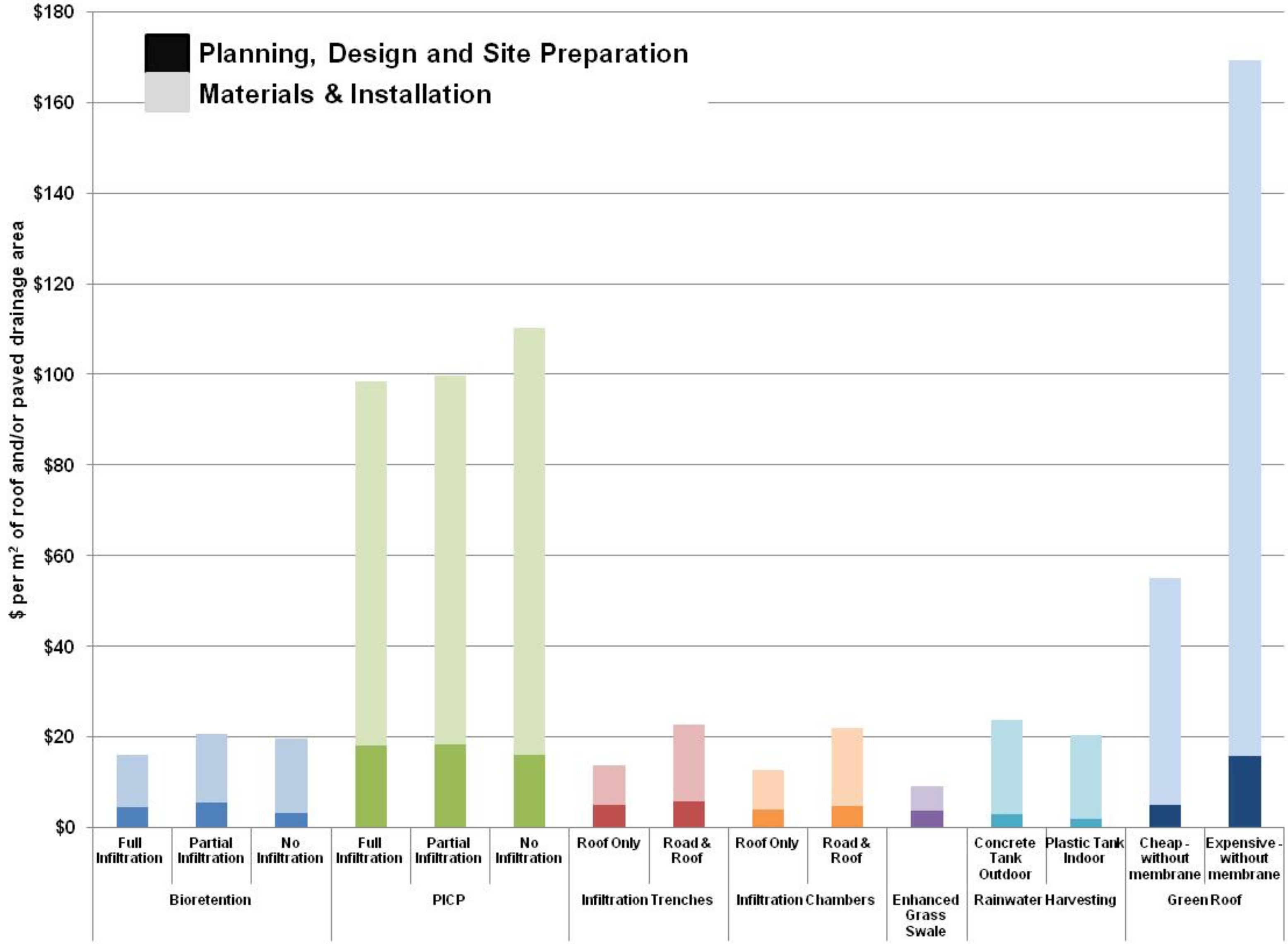


Figure 4.1: Capital costs for all practices per m^2 of roof and/or paved drainage area

energy reduction or potable water savings, are not accounted for in the overall cost/benefit. An example of costs expressed in relation to the load of suspended solids reduced for different treatment options is provided in section 4.3.

4.2 Life Cycle Costs

Table 4.1 compares LID practice costs for annual maintenance, rehabilitation and overall net present values at discount rates ranging from 0 to 5%. Figure 4.2 shows net present values for the 25 and 50 year time periods. Annual maintenance costs averaged over 50 years ranged from $74 for infiltration chambers and trenches treating roof runoff to $2,022 for green roofs. In general, maintenance costs were higher for practices requiring plant maintenance, such as bioretention and green roofs, or extensive pre-treatment, such as infiltration chambers and trenches treating road runoff. Rainwater harvesting systems require relatively little maintenance but pumps and pressure tanks need to be replaced at 10 year intervals.

All practices except rainwater harvesting (concrete cistern), underground chambers or trenches and enhanced grass swales required major rehabilitation at some point in the 50 year time period. These expensive rehabilitation costs weigh heavily in the net present value calculations, particularly at low discount rates, making the practices not requiring rehabilitation comparably less expensive over the long term.

Table 4.1: Life cycle costs for all practices

	Bioretention			Permeable Pavement			Infiltration Trenches		Infiltration Chambers		Enhanced Grass Swales	Rainwater Harvesting		Green Roofs			
														Cheap		Expensive	
	Full Infiltration	Partial Infiltration	No Infiltration	Full Infiltration	Partial Infiltration	No Infiltration	Roof Only	Road & Roof	Roof Only	Road & Roof	Rock Check Dam	Concrete Tank Outdoor	Plastic Tank Indoor	With membrane	Without membrane	With membrane	Without membrane
Construction	$31,973	$41,476	$39,028	$98,313	$99,652	$110,153	$27,575	$45,534	$25,547	$43,706	$18,347	$47,237	$40,637	$231,278	$110,060	$472,909	$338,658
50 year evaluation period																	
Ave. annual maintenance	$945	$952	$952	$433	$436	$436	$74	$1,277	$74	$1,212	$500	$744	$744	$2,022	$1,854	$1,714	$1,546
Rehabilitation	$7,504	$7,504	$7,504	$72,990	$72,990	$72,990	na	na	na	na	na	na	$5,970	$373,628	$209,187	$613,542	$436,068
Year rehabilitation required	25	25	25	30	30	30	na	na	na	na	na	na	40	40	40	40	40
Present Value of maintenance & rehabilitation only																	
if i=0%	$54,743	$55,128	$55,128	$94,657	$94,810	$94,810	$3,675	$63,850	$3,675	$60,600	$24,985	$37,214	$43,184	$474,744	$301,887	$699,258	$513,368
if i=3%	$28,498	$28,670	$28,670	$41,239	$41,316	$41,316	$1,857	$32,276	$1,857	$30,563	$13,769	$18,851	$20,681	$182,228	$127,623	$233,081	$174,481
if i=5%	$20,210	$20,322	$20,322	$24,768	$24,820	$24,820	$1,298	$22,556	$1,298	$21,332	$10,292	$12,903	$13,751	$109,896	$83,660	$119,291	$91,204
Present value of all (capital cost, maintenance & rehabilitation)																	
if i=0%	$86,716	$96,604	$94,156	$192,970	$194,462	$204,963	$31,250	$109,384	$29,222	$104,306	$43,333	$84,451	$83,821	$706,022	$411,947	$1,172,167	$852,026
if i=3%	$60,471	$70,146	$67,698	$139,552	$140,968	$151,469	$29,432	$77,810	$27,404	$74,269	$32,117	$66,088	$61,318	$413,506	$237,683	$705,990	$513,139
if i=5%	$52,183	$61,798	$59,350	$123,081	$124,472	$134,973	$28,873	$68,090	$26,845	$65,038	$28,639	$60,140	$54,388	$341,174	$193,720	$592,200	$429,862
25 year evaluation period																	
Ave. annual maintenance	$972	$978	$978	$433	$436	$436	$72	$1,264	$72	$1,188	$537	$744	$744	$2,802	$2,634	$1,867	$1,698
Rehabilitation	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Year rehabilitation required	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Present Value of maintenance & rehabilitation only																	
if i=0%	$24,293	$24,447	$24,447	$10,833	$10,910	$10,910	$1,800	$31,600	$1,800	$29,700	$13,429	$18,607	$18,607	$70,068	$65,860	$46,668	$42,460
if i=3%	$17,255	$17,355	$17,355	$7,483	$7,533	$7,533	$1,233	$21,593	$1,233	$20,302	$9,922	$12,282	$12,282	$57,420	$54,646	$31,929	$29,156
if i=5%	$14,156	$14,233	$14,233	$6,012	$6,051	$6,051	$986	$17,226	$986	$16,203	$8,365	$9,517	$9,517	$51,721	$49,557	$25,615	$23,451
Present value of all (capital cost, maintenance & rehabilitation)																	
if i=0%	$56,266	$65,923	$63,475	$109,146	$110,562	$121,063	$29,375	$77,134	$27,347	$73,406	$31,777	$65,844	$59,244	$301,346	$175,920	$519,577	$381,118
if i=3%	$49,228	$58,831	$56,383	$105,796	$107,185	$117,686	$28,808	$67,127	$26,780	$64,008	$28,270	$59,519	$52,919	$288,698	$164,706	$504,838	$367,814
if i=5%	$46,129	$55,709	$53,261	$104,325	$105,703	$116,204	$28,561	$62,760	$26,533	$59,909	$26,712	$56,754	$50,154	$282,999	$159,617	$498,524	$362,109

Note: i = discount rate

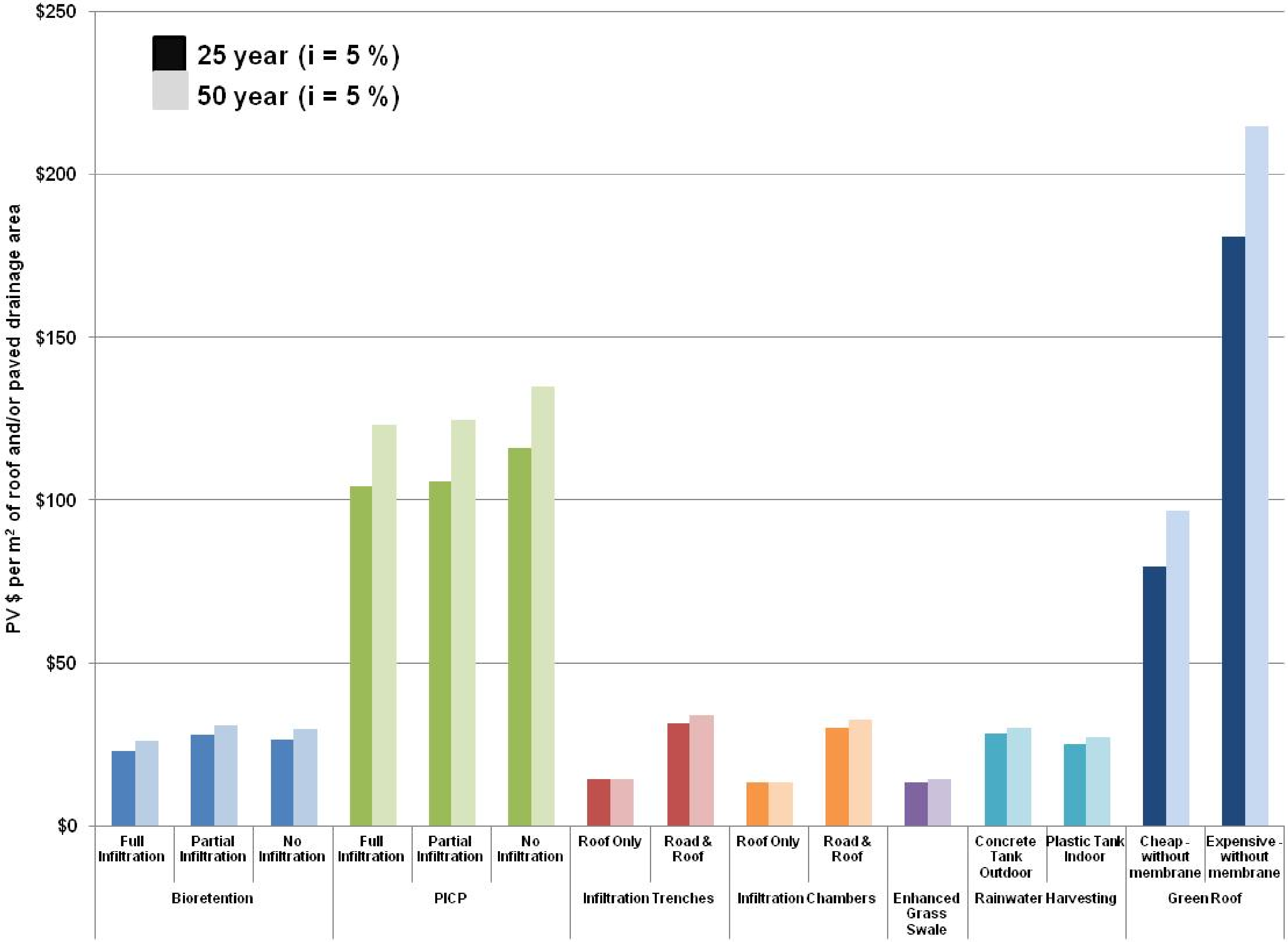


Figure 4.2: Present values for 25 year and 50 year evaluation periods for all practices per m^2 of roof and/or paved drainage area

4.3 Comparisons to Conventional Grey Infrastructure

The previous section compared the cost of LID practices to one another. In this section, the costs of selected practices are compared to conventional grey infrastructure based on the cost both of the practice and the contributing drainage area. The practice type used in the analysis is for a partial infiltration system.

The scenarios selected for comparative analysis have an asphalt drainage area of 2000 m^2 with treatment provided by different types of LID practices and a conventional oil grit separator. The scenarios were as follows:

1. Asphalt (2000 m^2) draining to a storm sewer with treatment provided by an appropriately sized **oil grit separator**
2. Asphalt (2000 m^2) draining to a 130 m^2 partial infiltration **bioretention cell** (see design and costing in section 3.1)
3. Asphalt (1000 m^2) draining to 1000 m^2 partial infiltration **permeable interlocking concrete pavement** (see design and costing in section 3.2).
4. Asphalt (2000 m^2) draining to a 100 m^2 infiltration **trench with pre-treatment provided through a 20 m^2 gravel inlet** (substituted OGS in the trench design provided in section 3.3 for a much less expensive gravel filter inlet)
5. Asphalt (2000 m^2) draining to a 100 m^2 underground **infiltration trench with pre-treatment provided by an Oil Grit Separator** (similar to model provided in section 3.3, but the OGS is larger to accommodated the larger asphalt drainage area).
6. Asphalt (2000 m^2) draining to a 200 m^2 **enhanced swale** (see design and costing in section 3.5)

It should be noted that the bioretention cell, infiltration trench with gravel filter, and enhanced swale take up 130, 20 and 200 m^2 more space than the other scenarios, respectively. The conventional scenario with OGS treatment also differs significantly from the others as it is the only practice that does not reduce runoff volumes and contaminant loads through infiltration and/or evapotranspiration. The enhanced swale would also be expected to infiltrate less runoff than the other LID practices since it is designed to convey runoff.

Figure 4.3 presents the initial capital and present value costs of the scenarios (asphalt + treatment option) over the 50 year evaluation period at a discount rate of 5%. The initial capital costs of the different treatment scenarios are relatively similar, ranging from $54 to $73 per square meter of paved drainage area. The conventional OGS treatment scenario had the second lowest initial cost, at $57 per m^2 of paved drainage. When routine maintenance and rehabilitation/replacement costs are added, and expressed as net present value, the conventional OGS treatment scenario has the third highest cost, at $114 per m^2 of paved drainage.

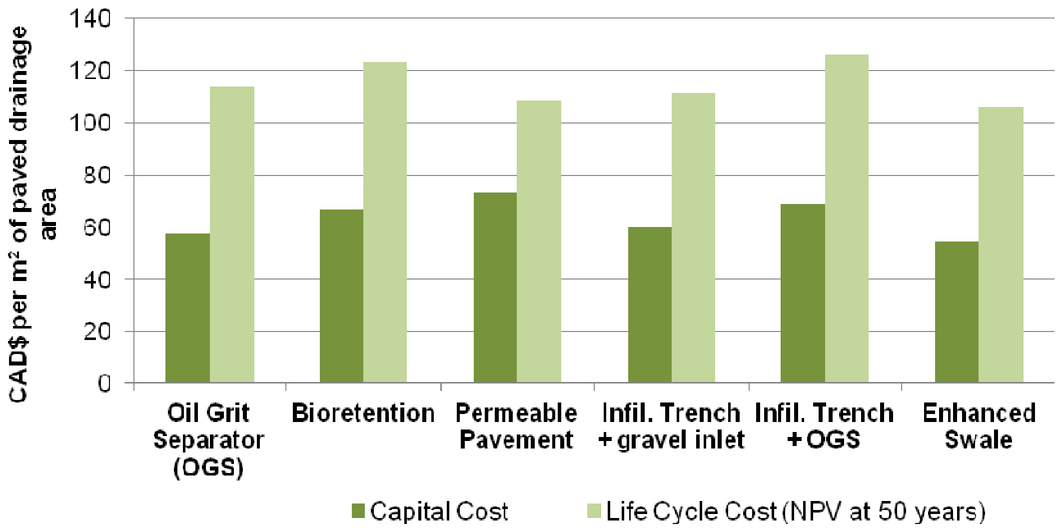


Figure 4.3: Capital and life cycle costs for different asphalt runoff treatment scenarios

The costs presented in Figure 4.3 do not consider differences in the stormwater management benefits of the practices. These differences are shown in Table 4.2 in relation to estimated reductions in runoff, total suspended solids (TSS) concentrations and TSS loads. The runoff reduction estimates are based on literature values provided in the *LID Guide*. TSS concentration reductions are based on literature reviews and local studies (*e.g.* STEP, 2008; Drake et al, 2012). To show the value of these benefits, the capital and life cycle costs of the scenarios are expressed in Figure 4.4 as dollars per kilograms of TSS reduced annually, assuming an average influent concentration of 200 mg/L, annual precipitation of 800 mm (based on climate 'normals' in Ontario) and an asphalt runoff coefficient of 0.98.

Table 4.2: Estimated reductions in runoff, TSS concentrations and loads for six asphalt treatment scenarios

Treatment Scenario	Runoff Reduction (%)	TSS Concentration Reduction (%)	Load Reduction (%)
Oil Grit Separator	0	50	50
Partial Infiltration Bioretention	45	80	89
Partial Infiltration Permeable Pavement	45	80	89
Infiltration Trench with gravel inlet	45	50	73
Infiltration Trench with Oil Grit Separator	45	50	73
Enhanced Swale	20	60	68

As expected, LID practices are less expensive than traditional OGS treatment when costs are denominated in terms of their water quality benefits. The capital cost of LID scenarios was between 24 and 44% lower than conventional OGS treatment. On a life cycle cost basis, these savings increase to between 35 and 77%. The cost differences relative to conventional OGS treatment would be even greater if the native soils were sandy, as this would significantly increase the volume of runoff reduced and the practices would be cheaper to construct because of lower material and installation costs (see full infiltration scenario models in chapter 3).

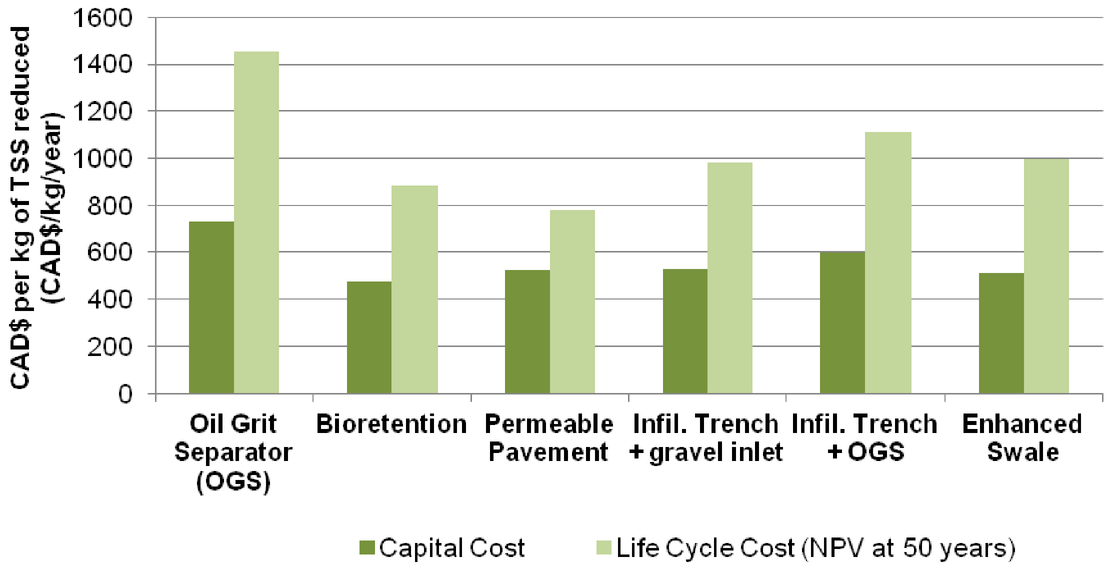


Figure 4.4: Capital and life cycle costs expressed per kilogram of total suspended solids (TSS) load reduced (see text for assumptions)

4.4 Comparison of Study Findings to Other Literature

A literature review was conducted to compare construction, maintenance and rehabilitation costs estimated in this study with those found in other studies or estimated by other models. The literature review was intended to provide an overview of key sources of LID cost information rather than a comprehensive summary of all the literature available on the topic.

Capital cost literature values are compared in the next section, followed by a comparison of maintenance and rehabilitation costs. Most literature values were converted to 2010 $CAD and to the Toronto location using RSMeans year and location conversion factors.

In reviewing the literature, every attempt was made to select a design similar to the model designs in this study in order to provide more robust comparisons. However, in several instances this was not possible as each study/model incorporated its own unique design assumptions, and included or excluded different components from the construction cost. These differences in methodologies contributed to some of the variation in costs among studies.

4.4.1 Review of literature on LID construction costs

Capital costs of LID practices included in this study are compared with other comparable literature in Table 4.3. The comparison indicates that cost estimates of bioretention and permeable pavers from this study fall on the low end of the range suggested by literature and other models when converted to 2010 $CAD. Differences in design and costing assumptions account for some of the discrepancy. For instance, WERF added 20% contingency to its permeable paver cost, which was not included in this study. The Olson et al (2010) estimate for permeable pavers provided in Table 4.3 is interpolated from detailed costing of 3 projects in Denver Colorado ranging in size from 324 m^2 to 2,671 m^2.

The cost of infiltration trenches in this study (without the hydrodynamic separator) appears to be on the high end of the range suggested by literature. There was no literature available for Infiltration Chambers. However, the cost of the Infiltration Chamber system (without the hydrodynamic separator) matched relatively closely to that suggested by the chamber manufacturer. The cost of the hydrodynamic separator used as a pretreatment device for the chambers and trenches was lower than the Olson et al (2010) estimate.

Cost estimates in this study for rainwater harvesting were higher than the two sources reviewed, likely due to differences in the design and/or range of costs included. Costs from the STEP (2010a) study were provided by the design engineer and did not include indoor piping. WERF had higher tank and installation costs, but lower costs for the pump and piping. Filter and top-up system costs, which accounted for over 10K in the present study did not appear to be included.

Green roof costs in this study were lower than green roof industry sources, possibly due to a lower assumed mark-up. Our costs, however, did line up with those of WERF, which takes a unit costing approach similar to ours. The TRCA survey of local green roofs installed in the GTA reported slightly lower costs, in part because many of the buildings in this survey were low rises that did not require expensive equipment to move the green roof materials (STEP, 2007). .

Table 4.3: LID capital cost comparison to literature/other models. Italisized text indicates literature values are lower; bolded text indicates literature costs are higher, and normal text indicates costs are similar

LID	Model design	Capital cost in this study	Literature values			
Bioretention	Full Infiltration	$32K	$26K	$32K	**$40K**	**$44K**
			WERF 2009	Weiss et al 2007	Brown & Schueler 1997	Olson et al 2010
	Partial Infiltration	$42K	**$49K**	**$55K**	**$59K**	**$60K**
			Weiss et al 2007	WERF 2009	Brown & Schueler 1997	Olson et al 2010
	No Infiltration	$39K	$41K	**$49K**	**$52K**	**$55K**
			Weiss et al 2007	Brown & Schueler 1997	Olson et al 2010	WERF 2009
Permeable Pavers	Full Infiltration Partial Infiltration No Infiltration	$98K $100K $110K	*$55K* (This only includes paver, bedding, base & sub-base)	$99K - $198K (This includes 20% contingency, not included in our estimate)	**$188K**	
			ICPI 2011	WERF 2009	Olson et al 2010	
Infiltration Trench	Full Infiltration – 2000m^2 roof runoff	$28K	*$14K* Brown & Schueler 1997	$25K Weiss et al 2007		
	Full Infiltration – 1500m^2 parking lot + 500m^2 roof runoff	$45K	This design includes a hydrodynamic separator, which is assessed below.			
Infiltration Chamber	Full Infiltration – 2000m^2 roof runoff	$26K	*$17K* (This is lower because Stormtech is only including items directly related to the chambers)			
			Stormtech 2012			
	Full Infiltration – 1500m^2 parking lot + 500m^2 roof runoff	$43K	Lit review not done. This design includes a hydrodynamic separator, which is assessed below.			
	Hydrodynamic separator	$15K	$4K - $72K	**$38K**		
			USEPA 1999	Olson et al 2010		
Rainwater Harvesting	Buried concrete tank	$47K	*$23K* *General rule of thumb $1/L*	*$24K*		
	Indoor plastic tank	$41K		*$21K*		
				WERF 2009		

LID	Model design	Capital cost in this study	Literature values		
Green Roof (extensive)	Cheap Case (4” growing medium, sedum plugs, lower building)	$247K	*$189K* (costs are similar when design differences between studies are considered)	**$344K - $430K**	**$646K-$754K**
			WERF 2009	Bass 2012	Wylie 2012
	Expensive Case (6” growing medium, sedum mats, higher building)	$473K	*$316K* (costs are similar when design differences between studies are considered)		*$279 - $397* (based on supplier estimates for the green roof system including the base roof)
			WERF 2009		STEP 2007
	Expensive Case (no membrane, green roof only)	$339K			*$238-256K* based on actual green roof costs of projects in the GTA, not including the membrane. $228K-$360K based on supplier estimates not including the base roof)
					STEP 2007

4.4.2 Review of literature on LID maintenance and rehabilitation costs

Table 4.4 presents LID maintenance cost comparisons from various literature sources. Overall, cost estimates for maintenance provided in this study align reasonably well with literature values.

The maintenance costs for bioretention cells estimated in this study are in good agreement with most of the values from the literature or other models. None of the literature sources indicated a periodic rehabilitation cost. Incorporating the rehabilitation cost at 25 years into the annual maintenance cost would only increase it to $1,103 per year. A 134 m^2 bioretention facility installed in Vaughan, Ontario in 2010 and monitored through the TRCA's Sustainable Technologies Evaluation Program had annual maintenance costs of approximately $1200, mostly for weeding and plant maintenance (STEP, 2010b).

The annual cost estimates in this study for maintaining permeable pavers were consistent with those suggested by other literature. Higher end ranges in the literature assumed that more frequent maintenance may be required in some circumstances. Major rehabilitation costs varied among literature sources. WERF recommended removing, washing and replacing all the aggregate at a cost equal to the initial cost of installation. In the present study, it was assumed that the rehabilitation would cost only about two thirds of the initial cost because fines would be largely removed from the surface through regular cleaning, thereby preserving the integrity of the open graded base. The 2010 Olson et al study assumed rehabilitation would cost 80% of the initial installation cost, and that it would be required after only 18 years. The present study suggested a 30 year timeline for rehabilitation based on observations of the structural condition of older permeable pavement sites in the Greater Toronto Area.

Infiltration trenches and chambers were assumed to require very little maintenance if adequate pretreatment was provided based on installations monitored in Ontario (e.g. SWAMP, 2004; JF Sabourin and Associates, 2008). Hence maintenance costs for cleanout of the hydrodynamic device providing pretreatment to the infiltration trench and chamber was the primary maintenance cost for these practices. Costs for clean-out of this device agreed well with other models. The Olson et al (2010) model assumed an additional cost for replacing the hydrodynamic separator after 25 years which was deemed unnecessary in this study.

Rainwater harvesting annual maintenance costs were slightly lower than the lower end estimate by WERF. However, WERF assumed a longer replacement cost for the plastic tank. This extra replacement cost contributes significantly to the 50 year maintenance burden.

Green roof annual maintenance costs in the first two years agree well with other references (CMHC, 2003; GRHC, 2006) that consider this initial period of plant establishment to be a period of more intense maintenance. Higher end maintenance costs may be required on accessible green roofs, or roofs visible from the building windows. However, most green roofs in Ontario are not of this type. Two green roofs monitored by TRCA/STEP in the Toronto area have required very little maintenance after the first year, as plants brought to the rooftop garden by wind or animals have been allowed to thrive or replace the original plant stock.

Table 4.4: LID maintenance and rehabilitation cost comparison to literature/other models. Italisized text indicates literature values are lower; bolded text indicates literature costs are higher, and normal text indicates costs are similar

LID	Maintenance or rehabilitation	Cost in this study	Literature values			
Bioretention	Annual maintenance	$945 - $952 (2%-3% of construction cost)	0.7% - 10.9% of construction cost Weiss et al 2005	$454 - $6425 WERF 2009	$1182 Olson et al 2010	**5% - 7% of construction cost** USEPA, 1999
	Rehabilitation	$7,504 after 25 years	None of the above references mention separate rehab costs.			
Permeable Pavers	Annual maintenance	$433 -$436	*$64* Olson et al 2010	$130 - $3,550 (medium is $330) WERF 2009	**$450 - $3,400 (median of $1,900) for sediment removal only** Erickson et al 2010	
	Rehabilitation	$75K (63% - 71% of initial construction cost) after 30 years	**100% of initial construction cost** after 25, 35 or 45 years WERF 2009	**80% of initial construction cost** **every 18 years** Olson et al 2010		
Infiltration Trench						
2000m^2 roof runoff	Annual maintenance	$74 (all for sediment removal) (0.3% of construction cost)	**$371 - $742 for sediment removal** Erickson et al 2010	**5% - 20% of construction cost** USEPA 1999	**5.1% - 126.0% of construction cost** Weiss et al 2005	**10% - 15% of construction cost** Alberta 1999
1500m^2 parking lot + 500m^2 roof runoff	Annual maintenance	$1277 (all for sediment removal) (2.8% of construction cost)	*$370 - $740 for sediment removal* Erickson et al 2010	**5% - 20% of construction cost** USEPA 1999	**5.1% - 126.0% of construction cost** Weiss et al 2005	**10% - 15% of construction cost** Alberta 1999
Infiltration Chamber						
2000m^2 roof runoff	Annual maintenance	$74	Lit review not done.			
1500m^2 parking lot + 500m^2 roof runoff	Annual maintenance	$1212	This cost is mainly to clean out the hydrodynamic separator. See lit review for hydrodynamic separator below.			
Hydrodynamic separator	Annual maintenance	$1200	$420 - $1,400 WERF 2005	$1,027 Olson et al 2010	**$1,800** USEPA 1999	
	Rehabilitation	assumed to last 50	**120% of initial cost after 25 years**			

LID	Maintenance or rehabilitation	Cost in this study	Literature values		
		years	BMP-REALCOST 2010		
Rainwater Harvesting	Annual maintenance	$744	**$815 - $13K**		
	Rehabilitation	$5970 plastic tank replacement at year 40	*WERF does not replace tank.* WERF 2009		
Green Roof	Annual maintenance	$1,714 - $2,022			**$2,840 - $43,400** WERF 2009
	First 2 years	$640 - $26,620	$2.7 - $44/m2 ($5.4K - $88K) GRHC 2006	$13-$21/m2 ($26K - $42K) CMHC 2003	
	Rehabilitation	$342K - $617K	No lit review done on rehab costs.		

5.0 CONCLUSIONS

This project has employed a robust and replicable methodology to compile capital and life cycle costs for a number of the most common low impact development practices. Results show the costs associated with construction, maintenance and rehabilitation of each practice. The broader public benefits and avoided infrastructure costs associated with applying the practices are not documented as these will vary depending on a range of factors specific to each site. Combining the cost data collected in this project with these more site specific considerations will help guide decisions on the type and combination of low impact development practices best suited to each site.

Model LID practice design costs documented in this study indicate that bioretention, infiltration chambers, infiltration trenches and enhanced swales are some of the least expensive practices to implement when only the practice cost itself is considered. The practice of rainwater harvesting provides added savings by reducing the cost of potable water supplies. Permeable pavements are comparably more expensive than most other practices, but in many instances these costs would be offset to some extent by a reduction in the need to pave the drainage area, since the pavements serve both as a parking surface and stormwater treatment practice. The practice also does not require as much land as some other practices, making it particularly well suited to retrofit contexts. Green roofs are by far the most expensive practice as they are installed in less accessible locations and need to be carefully engineered to protect the integrity of the building envelope. This practice is often selected because of its aesthetic, biodiversity and energy saving benefits, as well as its overall contribution to green building rating schemes, the value of which were not considered in our cost assessment. The costs and benefits of green roofs are best assessed in relation to those of conventional roofs over long time periods to capture the cost savings associated with the longer life of green roofs (see, for example, STEP, 2007).

Just as green roofs replace conventional roofs, other LID practices supplant more conventional treatment practices. An analysis of different treatment scenarios for an asphalt parking lot revealed that LID practices had comparable life cycle costs to conventional treatment using an oil grit separator (OGS). When the treatment costs of the scenarios were expressed in relation to the superior water quality benefits of LID, the life cycle costs of the LID practices were between 35 and 77% less expensive than conventional OGS treatment.

Capital and life cycle costs generated through this project have been scaled and programmed into a spreadsheet decision support tool for each practice that allows users to input site design information (e.g drainage area size and type) and alter unit costs in order to generate estimates of overall practice costs based on site specific data and considerations. This tool is available on the Sustainable Technologies Evaluation Program website at www.sustaianbletechnologies.ca.

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APPENDIX A:

Detailed Costing Tables

Table A.1: Bioretention

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost ($CND) - other source	Units	Full Infiltration	Partial Infiltration	No Infiltration	Assumptions/Notes
Site Investigation								
Dig test pit 1	80 HP backhoe (equipment)	$24.88		$/m^3	$29.86	$99.52	$0.00	Test pit is 1 m x 1 m x 1.275 m, volume is 1.2 m^3 (For Full) Test pit is 1m x 1m x 2m and sloped 1:1 above 1.2 m depth, volume is ~ 4 m^3 (For Partial) RSMeans costs for light & heavy soil were averaged.
	80 HP backhoe + 1 labourer (labour)	$49.58		$/m^3	$59.50	$198.32	$0.00	
Dig test pit 2	80 HP backhoe (equipment)	$24.88		$/m^3	$29.86	$99.52	$0.00	Test pit is 1 m x 1 m x 1.275 m, volume is 1.2 m^3 (For Full) Test pit is 1m x 1m x 2m and sloped 1:1 above 1.2 m depth, volume is ~ 4 m^3 (For Partial) RSMeans costs for light & heavy soil were averaged.
	80 HP backhoe + 1 labourer (labour)	$49.58		$/m^3	$59.50	$198.52	$0.00	
Infiltration tests	Double-ring infiltrometer	$608.85		$/test	$2,435.40	$2,435.40	$0.00	2 infiltration tests per test pit
Site Preparation								
Preconstruction meeting	Part of overhead				$0.00	$0.00	$0.00	
Stakeout of utilities			$500.00	lump sum	$500.00	$500.00	$500.00	Assume no interfering utilities are found as a result.
Tree & plant protection					$0.00	$0.00	$0.00	Assume no trees
Traffic control					$0.00	$0.00	$0.00	Assume not required
Install erosion & sediment control and control drainage	2" submersible gas pump for 3 days (incl. gas)		$81.15	$/day	$243.45	$243.45	$0.00	
	Silk sack in catchbasin		$65.00	$/unit	$65.00	$65.00	$0.00	
	Silt fence 1m around perimeter of excavation		$2.21	$/m	$179.01	$191.47	$0.00	
	Silt fence labour		$1.77	$/m	$143.37	$153.35	$0.00	
Mobilization/demobilization					$0.00	$0.00	$0.00	Active construction site, so all equipment on site
Excavation								
Vegetation removal	Clearing, grubbing, haul away material				$0.00	$0.00	$0.00	Active construction site, assume already done
Topsoil salvage - Stockpile & stabilize					$0.00	$0.00	$0.00	Assume 6" of topsoil is already removed
Excavation	1.5 m^3 bucket excavator + 1 labourer (labour)	$1.24		$/Bm^3	$181.35	$330.46	$245.94	Assume excavation rate of 100 Bm^3/hr (188 Lm^3/hr) Excavation is sloped 1:1 above 1.2 m depth
	1.5 m^3 bucket excavator (equipment)	$1.89		$/Bm^3	$276.41	$503.69	$374.86	
	Loading - 15 % of excavation cost			%	$68.66	$125.12	$93.12	
	Hauling in a 13.76 m^3 truck (including truck & driver)	$172.92		$/hr/truck	$760.85	$1,400.65	$1,037.52	Assume 20 min. cycle time to dump elsewhere on site
Safety fencing	4' high fencing, 6 m around perimeter of excavation (124 m). Assume 1 week rental.	$800.00		$/week	$800.00	$800.00	$800.00	Includes setup & takedown
Material and Installation								
Impermeable membrane	0.762 mm HDPE liner (materials)	$4.96		$/m^2	$0.00	$0.00	$1,602.08	Assume membrane extends 1 m beyond edges
	0.762 mm HDPE liner (labour)	$9.32		$/m^2	$0.00	$0.00	$3,010.36	Adjusted RSMeans labour cost of $8.88 by +5% to $9.32 because of the smaller quantity.

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost ($CND) - other source	Units	Full Infiltration	Partial Infiltration	No Infiltration	Assumptions/Notes
HDPE Piping	Underdrain 200 mm diameter, perforated (material)		$16.87	$/m	$0.00	$548.28	$548.28	Pipe materials used: Armtec Boss 2000, corrugated with smooth inner wall
	Underdrain 200 mm diameter, perforated (labour)	$11.40		$/m	$0.00	$370.50	$370.50	
	Clean out pipes, 150 mm diameter (material)		$9.84	$/m	$0.00	$27.06	$27.06	
	Clean out pipes, 150 mm diameter (labour)	$10.86		$/m	$0.00	$29.87	$29.87	
	Overflow pipe 200 mm diameter (material)		$15.37	$/m	$19.60	$31.59	$25.36	
	Overflow pipe 200 mm diameter (labour)	$11.40		$/m	$14.54	$23.43	$18.81	
	Pipe to sewer - 200 mm diameter (trenching not incl.) (material)		$15.37	$/m	$76.85	$76.85	$76.85	
	Pipe to sewer - 200 mm diameter (trenching not incl.) (labour)	$11.40		$/m	$57.00	$57.00	$57.00	
	Monitoring pipes - 150 mm diameter, perforated (material)		$10.94	$/m	$27.90	$44.96	$0.00	
	Monitoring pipes - 150 mm diameter, perforated (labour)	$10.86		$/m	$27.69	$44.63	$0.00	
	Delivery for all pipes		$50 to $100	$/delivery	$50.00	$100.00	$100.00	
HDPE Pipe Fittings	Underdrain: 3 end caps (200 mm)	$5.40		$/unit	$0.00	$16.20	$16.20	
	Underdrain: 3 Tees (200 mm)	$107.58		$/unit	$0.00	$322.74	$322.74	Assume the labour for Tees are $100 ea, labour for manhole adaptor is $200
	Cleanouts: 2 caps at surface (150 mm)	$65.00		$/unit	$0.00	$130.00	$130.00	
	Cleanouts: 2 Tees (150 mm to 200 mm)	$107.58		$/unit	$0.00	$215.16	$215.16	
	Overflow pipe: 1 inlet guard (200 mm)	$25.00		$/unit	$25.00	$25.00	$25.00	
	Overflow pipe: 1 Tee	$107.58		$/unit	$107.58	$107.58	$107.58	
	Overflow Pipe: with 1 endcap/footplate (200 mm)	$5.40		$/unit	$5.40	$5.40	$5.40	
	Pipe to sewer: 1 manhole adapter (200 mm)	$36.38		$/unit	$36.38	$36.38	$36.38	
	Monitoring pipes: 2 caps at surface (150 mm)	$65.00		$/unit	$130.00	$130.00	$0.00	
	Monitoring pipes: 2 footplates	$5.40		$/unit	$10.80	$10.80	$0.00	
Pipe fittings: Labour	Underdrain: 3 end caps (200 mm)	$50.00		$/unit	$0.00	$150.00	$150.00	
	Underdrain: 3 Tees (200 mm)	$100.00		$/unit	$0.00	$300.00	$300.00	
	Cleanouts: 2 caps at surface (150 mm)	$50.00		$/unit	$0.00	$100.00	$100.00	
	Cleanouts: 2 Tees (150 mm to 200 mm)	$100.00		$/unit	$0.00	$200.00	$200.00	
	Overflow pipe: 1 inlet guard (200 mm)	$50.00		$/unit	$50.00	$50.00	$50.00	
	Overflow pipe: 1 Tee	$100.00		$/unit	$100.00	$100.00	$100.00	
	Overflow Pipe: with 1 endcap/footplate (200 mm)	$50.00		$/unit	$50.00	$50.00	$50.00	

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost ($CND) - other source	Units	Full Infiltration	Partial Infiltration	No Infiltration	Assumptions/Notes
	Pipe to sewer: 1 manhole adapter (200 mm)	$200.00		$/unit	$200.00	$200.00	$200.00	
	Monitoring pipes: 2 caps at surface (150 mm)	$50.00		$/unit	$100.00	$100.00	$0.00	
	Monitoring pipes: 2 footplates	$50.00		$/unit	$100.00	$100.00	$0.00	
Pipe to sewer trenching	Pipe trenching & backfill, 0.6 m wide, 1.2 m deep, no slope	$15.59		$/m	$77.95	$77.95	$77.95	This trench depth was chosen assuming the site is excavated already a certain amount for asphalt paving
	Pipe bedding, 0.6 m wide	$13.18		$/m	$65.90	$65.90	$65.90	
Stone	50 mm clear		$36.00	$/Cm^3	$0.00	$3,182.40	$1,287.00	
	1.5 m^3 bucket excavator + 1 labourer (labour)	$1.24		$/m^3	$0.00	$109.62	$44.33	Assumed cost is similar to cost of excavation (100 m^3/hr)
	1.5 m^3 bucket excavator (equipment)	$1.89		$/m^3	$0.00	$167.08	$67.57	
Pea Gravel	Material	$56.10		$/m^3	$0.00	$729.30	$729.30	
	1.5 m^3 bucket excavator + 1 labourer (labour)	$1.24		$/m^3	$0.00	$16.12	$16.12	
	1.5 m^3 bucket excavator (equipment)	$1.89		$/m^3	$0.00	$24.57	$24.57	
	Level by hand	$1.56		$/m^2	$0.00	$202.80	$202.80	
Geotextile	Material	$3.10		$/m^2	$24.80	$145.70	$139.50	
	Labour	$0.40		$/m^2	$3.20	$18.80	$18.00	
Filter media	Gro-Bark (material)		$41.40	$/Lm^3	$6,727.50	$6,727.50	$6,727.50	
	1.5 m^3 bucket excavator + 1 labourer (labour)	$1.24		$/Cm^3	$161.20	$161.20	$161.20	Assumed cost is similar to cost of excavation (100 m^3/hr)
	1.5 m^3 bucket excavator (equipment)	$1.89		$/Cm^3	$245.70	$245.70	$245.70	
	Delivery	$900.00		$/delivery	$900.00	$900.00	$900.00	
Backfill sides of excavation	80 HP dozer + 0.5 labourer (labour)	$1.02		$/Lm^3	$0.00	$26.72	$4.69	Assume swell factor of 25% and compaction factor of 0.9 (US Army 2000*)
	80 HP dozer (equipment)	$0.66		$/Lm^3	$0.00	$17.29	$3.04	
Curbs & gutter with curb inlets	150 mm high curb, 150 mm thick gutter & 600 mm wide	$88.35		$/m	$6,449.55	$6,449.55	$6,449.55	Assume cost is same with or without inlets
	Labour	$26.26		$/m	$1,916.98	$1,916.98	$1,916.98	
Vegetation	Mixture of Shrubs, grasses & broadleaf/herb. Includes delivery and labour	$50.20		$/m^2	$4,367.40	$4,367.40	$4,367.40	Assume vegetation covers 2/3 of cell area = 87 m^2 Assume 50% shrub, 40% grasses, 10% broadleaf/herb.
Wood mulch	75 mm deep (material)	$2.72		$/m^2	$337.28	$337.28	$337.28	130 m^2 area minus 6 m^2 stone inlets
	Labour	$5.18		$/m^2	$642.32	$642.32	$642.32	
Stone inlets	50 mm clear (material)		$36.00	$/Cm^3	$21.60	$21.60	$21.60	Assume 50 mm clear, 100 mm deep. Area = 0.5 m^2 x 12 inlets = 6 m^2. Vol = 6 m^2 x 100 mm = 0.6 m^3.
	Spread by hand (labour)	$173.11		$/m^3	$103.87	$103.87	$103.87	
SUBTOTAL					**$29,066**	**$37,706**	**$35,480**	
Fees								
Project Overhead		10%		% of subtotal	$2,906.62	$3,770.55	$3,548.02	
TOTAL					**$31,973**	**$41,476**	**$39,028**	

Table A2. Permeable pavement

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost (2010$CND) - other source	Units	Full Infiltration	Partial Infiltration	No Infiltration	Assumptions/Notes
Site Investigation								
Dig test pit 1	80 HP backhoe (equipment)	$24.88		$/m^3	$10.70	$10.70	$0.00	Assume test pit is 1 m x 1 m x 430 mm. RSMeans costs for light & heavy soil were averaged.
	80 HP backhoe + 1 labourer (labour)	$49.58		$/m^3	$21.32	$21.32	$0.00	
Dig test pit 2	80 HP backhoe (equipment)	$24.88		$/m^3	$10.70	$10.70	$0.00	
	80 HP backhoe + 1 labourer (labour)	$49.58		$/m^3	$21.32	$21.32	$0.00	
Infiltration tests		$608.85		$/test	$2,435.40	$2,435.40	$0.00	2 infiltration tests per test pit.
Soil strength testing					$0.00	$0.00	$0.00	Not costed; assumed geotech tests done previously
Soil quality testing					$0.00	$0.00	$0.00	Not costed; assumed soil dumped elsewhere on site
Site Preparation								
Pre-construction meeting	Part of overhead				$0.00	$0.00	$0.00	
Stakeout of utilities			$500.00	lump sum	$500.00	$500.00	$500.00	
Erosion and sediment controls	8" dia. FilterSoxx along 60 m edge along asphalt		$10.00	$/m	$600.00	$600.00	$0.00	Assume items already on site, labour negligible
Mobilization/demobilization					$0.00	$0.00	$0.00	Active construction site, so all equipment on site
Excavation								
Vegetation removal	Clearing, grubbing, haul away material				$0.00	$0.00	$0.00	Active construction site, assume already done
Topsoil salvage, haul to stockpile	6" removed, 60 m travel to stockpile, 200 HP dozer + 0.5 labourer (labour)	$1.15		$/m^3	$175.26	$175.26	$175.26	
	6" removed, 60 m travel to stockpile, 200 HP dozer (equipment)	$2.06		$/m^3	$313.94	$313.94	$313.94	Assumed this equipment is not too heavy
Excavate	1.5 m^3 bucket excavator + 1 labourer, productivity 100 Bm^3/hr (labour)	$1.24		$/Bm^3	$347.20	$347.20	$347.20	Assumed 100 Bm^3/hr as for Bioretention excavation. Assumed 6" of topsoil has already been removed, so do not need to excavate full depth.
	1.5 m^3 bucket excavator, productivity 100 Bm^3/hr (equipment)	$1.89		$/Bm^3	$529.20	$529.20	$529.20	
	Loading - 15% of excavation cost			%	$131.46	$131.46	$131.46	
	Hauling in a 13.76 m^3 truck (including truck & driver)	$172.92		$/hr	$1,466.36	$1,466.19	1466.36	Assumed swell factor of 25%, cycle time of 20 min.
Compaction of native soil	30,000 lb grader + 25T vibratory roller + 1 labourer (labour)	$1.16		$/m^2	$1,160.00	$1,160.00	$1,160.00	Assumed this equipment is not too heavy
	30,000 lb grader + 25T vibratory roller (equipment)	$1.14		$/m^2	$1,140.00	$1,140.00	$1,140.00	
	Proctor test	$149.45		$/test	$149.45	$149.45	$149.45	1 test required
	Nuclear density test	$42.81		$/test	$171.24	$171.24	$171.24	Average of 4 tests required - test is done to check compaction.
Materials and Installation								
Impermeable membrane	0.762 mm HDPE liner (materials)	$4.96		$/m^2	$0.00	$0.00	$5,720.86	Assume membrane extends 0.57 m beyond edges
	0.762 mm HDPE liner - 3 skilled workers (labour)	$9.32		$/m^2	$0.00	$0.00	$10,745.96	
Geotextile	Polypropylene filtration fabric (materials)	$3.10		$/m^2	$3,100.00	$3,100.00	$0.00	
	Polypropylene filtration fabric - 2 labourers	$0.40		$/m^2	$400.00	$400.00	$0.00	

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost (2010$CND) - other source	Units	Full Infiltration	Partial Infiltration	No Infiltration	Assumptions/Notes
	(labour)							
HDPE Piping	Underdrain, 150 mm diameter perforated pipe (materials)		$10.94	$/m	$0.00	$176.13	$176.13	Piping materials used: HDPE Armtec Boss 2000 pipe
	Underdrain, 150 mm diameter perforated pipe (labour)	$10.86		$/m	$0.00	$174.85	$174.85	
	Clean out pipes, 100 mm diameter pipe (materials)		$4.79	$/m	$0.00	$1.10	$1.34	
	Clean out pipes, 100 mm diameter pipe (labour)	$10.19		$/m	$0.00	$2.34	$2.85	
	Pipe to catchbasin, 150 mm diameter pipe (materials)		$9.84	$/m	$0.00	$4.92	$4.92	
	Pipe to catchbasin, 150 mm diameter pipe (labour)	$10.86		$/m	$0.00	$5.43	$5.43	
	Monitoring pipes, 150 mm diameter, perforated pipe (materials)		$10.94	$/m	$4.70	$4.70	$0.00	
	Monitoring pipes, 150 mm diameter, perforated pipe (labour)	$10.86		$/m	$4.67	$4.67	$0.00	
	Delivery (total for all pipe)		$50.00	n/a	$0.00	$50.00	$50.00	Assume delivery negligible
Pipe fittings	Underdrain 150 mm end cap (materials)		$2.92	$/ea.	$0.00	$2.92	$2.92	
	Underdrain 150 mm end cap (labour)	$50.00		$/ea.	$0.00	$50.00	$50.00	From looking at RSMeans, assumed $50 for simplicity
	Underdrain 150 mm coupler (materials)		$1.50	$/ea.	$0.00	$1.50	$1.50	
	Underdrain 150 mm coupler (labour)	$50.00		$/ea.	$0.00	$50.00	$50.00	From looking at RSMeans, assumed $50 for simplicity
	Clean-out 100 mm surface cap (materials)		$65.00	$/ea.	$0.00	$65.00	$65.00	Cast iron cap, assumed to be suitable as a surface cap.
	Clean-out 100 mm surface cap (labour)	$50.00		$/ea.	$0.00	$50.00	$50.00	From looking at RSMeans, assumed $50 for simplicity
	Clean-out tee, 100 - 150 mm (materials)		$111.65	$/ea.	$0.00	$111.65	$111.65	
	Clean-out tee, 100 - 150 mm (labour)	$100.00		$/ea.	$0.00	$100.00	$100.00	Assumed $100 from RSMeans cost of $189 for a 300 mm tee.
	Manhole adapter for pipe to catchbasin, 150 mm (materials)		$27.58	$/ea.	$0.00	$27.58	$27.58	
	Manhole adapter for pipe to catchbasin, 150 mm (labour)		$200.00	$/ea.	$0.00	$200.00	$200.00	
	Monitoring pipe 150 mm surface cap (materials)		$65.00	$/ea.	$65.00	$65.00	$0.00	
	Monitoring pipe 150 mm surface cap (labour)	$50.00		$/ea.	$50.00	$50.00	$0.00	From looking at RSMeans, assumed $50 for simplicity
	Monitoring pipe footplate (materials)		$2.92	$/ea.	$2.92	$2.92	$0.00	Assumed same cost as an end-cap
	Monitoring pipe footplate (labour)	$50.00		$/ea.	$50.00	$50.00	$0.00	From looking at RSMeans, assumed $50 for simplicity
Flow restrictor	Canpipe 4" ball valve (materials)		$93.90	$/ea.	$0.00	$93.90	$0.00	
	Canpipe 4" ball valve (labour)	$50.00		$/ea.	$0.00	$50.00	$0.00	From looking at RSMeans, assumed $50 for simplicity
Sub-base, 200 mm deep	50 mm clear limestone (materials)		$36.00	$/m^3	$7,200.00	$7,200.00	$7,200.00	
	30,000 lb grader, 1.5 cy front-end loader, 300 HP dozer, 25 T vibratory roller, truck tractor & water tank trailer + 1 labour foreman + 2 labourers (labour)	$1.00		$/m^2	$1,000.00	$1,000.00	$1,000.00	Assume equip not too heavy. These RSMeans costs are for 40 mm stone. Assume costs for 50 mm stone is same.
	30,000 lb grader, 1.5 cy front-end loader, 300	$1.29		$/m^2	$1,290.00	$1,290.00	$1,290.00	

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost (2010$CND) - other source	Units	Full Infiltration	Partial Infiltration	No Infiltration	Assumptions/Notes
	HP dozer, 25 T vibratory roller, truck tractor & water tank trailer (equipment)							
Base, 100 mm deep	19 mm clear limestone (materials)		$37.00	$/m^3	$3,700.00	$3,700.00	$3,700.00	
	30,000 lb grader, 300 HP dozer, 25 T vibratory roller, truck tractor & water tank trailer + 1 labour foreman (labour)	$0.58		$/m^2	$580.00	$580.00	$580.00	Assume equipment not too heavy
	30,000 lb grader, 300 HP dozer, 25 T vibratory roller, truck tractor & water tank trailer (equipment)	$1.01		$/m^2	$1,010.00	$1,010.00	$1,010.00	Assume equipment not too heavy
Compaction test	Nuclear density test	$42.81		$/test	$85.62	$85.62	$85.62	Assume 2 tests
Concrete curb along 1 edge	150 mm wide, 450 mm deep, cast-in-place (materials)	$40.64		$/m	$2,438.40	$2,438.40	$2,438.40	Assume 450 mm is sufficient to extend to the sub-base of adjacent asphalt pavement.
	150 mm wide, 450 mm deep, cast-in-place - 1 carpenter foreman, 4 carpenters, 1 labourer (labour)	$19.69		$/m	$1,181.40	$1,181.40	$1,181.40	
Plastic edge restraints along 3 edges	Snapedge® (materials)		$4.76	$/m	$444.58	$444.58	$444.58	Delivery negligible because the product is very light and can be transported with the pavers.
	Snapedge® spikes (materials)		$1.03	$/m	$96.20	$96.20	$96.20	Need 5 spikes per 8 ft (2.44 m) of Snapedge. Spikes are $0.50 each.
	Snapedge® (labour)		$1.80	$/m	$168.12	$168.12	$168.12	$52.73/hr wage, 29.3 m can be installed per hour. Installation speed (96 ft/hr)
Bedding & Pavers	80 mm interlocking pavers (materials)		$31.56	$/m^2	$31,560.00	$31,560.00	$31,560.00	Source is average of five prices
	Pavers (labour + equip only) and bedding including 50 mm layer and enough for void filling (materials, labour, equipment)		$25.30	$/m^2	$25,300.00	$25,300.00	$25,300.00	Machine installation of pavers. Price is an average of range provided ($21.30-$29.30) for union labour.
Striping		$0.46		$/m	$460.00	$460.00	$460.00	
SUBTOTAL					**$89,375**	**$90,592**	**$100,139**	
Fees								
Project overhead		10.00%		% of sub total	$8,937.52	$9,059.23	$10,013.94	
TOTAL					**$98,313**	**$99,652**	**$110,153**	

Table A3: Infiltration trenches

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost - other source ($CND)	Units	Roof Only	Road & Roof	Assumptions/Notes
Site Investigation							
Dig test pit 1	80 HP backhoe (equipment)	$24.88		$/m^3	$299.13	$299.13	Assume test pit is 1m x 1m, 2.72m deep, & sloped 1:1 above 1.2m depth. RSMeans costs for light & heavy soil were averaged.
	80 HP backhoe + 1 labourer (labour)	$49.58		$/m^3	$596.10	$596.10	
Dig test pit 2	80 HP backhoe (equipment)	$24.88		$/m^3	$299.13	$299.13	
	80 HP backhoe + 1 labourer (labour)	$49.58		$/m^3	$596.10	$596.10	
Infiltration tests	Double-ring infiltrometer	$608.85		$/test	$2,435.40	$2,435.40	2 infiltration tests per test pit
Soil strength testing							Not costed; assumed geotech tests done previously
Soil quality testing							Not costed; assumed soil dumped elsewhere on site.
Site Preparation							
Pre-construction meeting	Part of overhead						
Stakeout of utilities	Assume no interfering utilities found as a result		$500.00	lump sum	$500.00	$500.00	
Erosion and sediment controls	Silt fence (material)	$2.21		$/m	$112.71	$112.71	Silt fence along one edge ~ 51 m (decided by Mariko Uda, similar to approach with Infiltration Chamber)
	2 labourers	$1.77		$/m	$90.27	$90.27	
Mobilization/demobilization					$0.00	$0.00	Active construction site, so all equipment on site
Excavation							
Vegetation removal	Clearing, grubbing, haul away material				$0.00	$0.00	Active construction site, assume already done
Topsoil salvage, haul to stockpile	200 HP dozer (equipment)	$2.06		$/m^3	$31.93	$31.93	6" removed, 60 m travel to stockpile. 101.76 m^2 x 152 mm = 15.5 m^3
	200 HP dozer + 0.5 labourer (labour)	$1.15		$/m^3	$17.83	$17.83	
Excavate trench with trench box	Trench 2-3 m deep with trench box; 1.9 m^3 bucket excavator (equipment)	$3.01		$/Bm^3	$787.12	$787.12	Use a trench box. Assumed common earth. 1.9 m^3 bucket was used. Depth is 2.57m (2.72 m - 0.15 m topsoil already removed). Therefore vol = 2.57m x 101.76 m^2 = 261.5 m^3
	Trench 2-3 m deep with trench box; 1.9 m^3 bucket excavator + 1 labourer (labour)	$1.39		$/Bm^3	$363.49	$363.49	
	Loading - 15% of excavation cost			%	$172.59	$172.59	
	Hauling in a 13.76 m^3 truck (includes driver)	$172.92		$/hr	$1,017.39	$1,017.39	Assumed some soil not hauled away (used later for backfill). Assumed swell factor of 25% and 20 min. cycle time to dump elsewhere on site. Assumed 13.76 m^3 truck size. Backfill (trench) = 660 mm x 2 m x 50.88 m = 67.162 Bm^3; Therefore vol to haul away = 261.5 Bm^3 - 67.2 Bm^3 = 194.3 Bm^3.
Level subgrade	Assume this can be done as part of excavation step, as assumed with Infiltration Chambers						
Safety fencing	4' high, 1 week rental, including setup & takedown		$251.75	lump sum	$251.75	$251.75	Assume 1m length of excavation left open (hole of 1 m x 2 m). Put a safety fence 1 m around it, total 14 m.
Materials and Installation							
Manhole	Precast concrete, 4' dia., 8' deep (includes excavation of 34.2 Bm^3, formed concrete footing, frame & cover, steps, compacted backfill) (material)	$2,837.00		lump sum	$2,837.00	$2,837.00	
	Labour & equipment	$2,354.00		lump sum	$2,354.00	$2,354.00	
	Loading excavated soil	15%		% of excavation cost	$53.10	$53.10	Used 15% of RSMeans cost for 4' dia., 8' deep manhole includes an excavation cost of $354 to excavate 34.2 Bm^3
	Hauling in a 13.76 m^3 truck (includes driver)	$172.92		$/hr	$179.08	$179.08	Assumed swell factor of 25% (*US Army 2000) and 20 min. cycle time to dump elsewhere on site. Assume all 34.2 Bm^3 excavated is hauled away
Geotextile - bottom, sides & top	Polypropylene filtration fabric (materials)	$3.10		$/m^2	$1,162.50	$1,162.50	Assumed this RSMeans line is suitable. Area = 101.8 m^2 (top) + 101.8 m^2 (bottom) + [2 sides x (50.88 m x 1.62 m deep)] + [2

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost - other source ($CND)	Units	Roof Only	Road & Roof	Assumptions/Notes
							ends x (2 m x 1.62 m deep)] = 375 m^2 total area.
	2 labourers	$0.40		$/m^2$	$150.00	$150.00	
Hydrodynamic Separator	Downstream Defender - 4' wide (material + delivery)		$12,000.00	lump sum	$0.00	$12,000.00	
	Assume installation cost is roughly similar to that of 4' dia., 10' deep precast manhole in RSMeans that includes 47.9 Bm^3 excavation (labour & equipment)	$2,883.00		lump sum	$0.00	$2,883.00	
	Loading excavated soil	15%		% of excavation cost	$0.00	$432.45	
	Hauling in a 13.76 m^3 truck (includes driver)	$172.92		$/hr	$0.00	$250.81	Assumed swell factor of 25% (*US Army 2000) and 20 min. cycle time to dump elsewhere on site. Assume all 47.9 Bm^3 excavated is hauled away
Pipe from separator to manhole - 2 m long trench	Trenching, common earth, no slope, 2' wide, 6' deep; 3/8 cy bucket hydraulic track-mounted backhoe, backfill, compaction, removal of spoil by truck; the backfill has been reduced to take into account pipe of suitable size & bedding (labour)	$15.12		m	$0.00	$30.24	
	Equipment	$5.58		m	$0.00	$11.16	
Pipe from separator to manhole - attach 300 mm pipe to both separator & manhole	Armtec Boss 2000 solid pipe, 300 mm dia. (material)		$22.81	m	$0.00	$45.62	
	Armtec Boss 2000 solid pipe, 300 mm manhole adaptor (material)		$46.00	ea.	$0.00	$46.00	
	Labour		$200.00	ea.	$0.00	$400.00	Assume cost is similar to attaching pipe to separator
Pipe from separator to manhole - pipe bedding	Pipe bedding, side slope 0 to 1, 2' wide, pipe size 10" dia., compacted sand for bedding & 12" above pipe; pipe, trench, backfill not included (material)	$8.22		m	$0.00	$16.44	
	Labour & equipment	$5.10		m	$0.00	$10.20	
Attachment for pipe from parking lot to separator (do not cost pipe/trench, just cost out the attachment)	Labour		$200.00	ea	$0.00	$200.00	Assume cost is similar to attaching pipe to a separator
Attachment for pipe from roof to control manhole (do not cost pipe/trench, just cost out the attachment)	Armtec Boss 2000 solid pipe, 200 or 300 mm manhole adaptor (material)		$42.08	ea	$42.08	$42.08	Assume close to cost of 250 mm adaptor ($42.08).
	Labour		$200.00	ea	$200.00	$200.00	
Attach overflow pipe to control manhole (do not cost pipe/trench, just cost out the attachment)	Armtec Boss 2000 solid pipe, 300 mm manhole adaptor (material)		$46.00	ea	$46.00	$46.00	
	Labour		$200.00	ea	$200.00	$200.00	
Inlet pipe - attach pipe to both control manhole & perforated pipe	Armtec Boss 2000 solid pipe, 300 mm dia. (material)		$22.81	m	$6.84	$6.84	
	Armtec Boss 2000 300 mm manhole adaptor (material)		$46.00	ea	$46.00	$46.00	
	Labour to attach pipe to manhole		$200.00	ea	$200.00	$200.00	
	Labour to attach pipe to perforated pipe		$50.00	ea	$50.00	$50.00	
Perforated pipe	Armtec Boss 2000 perforated pipe, 300 mm dia. (material)		$23.75	m	$1,194.15	$1,194.15	Assumed length of pipe is 2' (0.6m) less than length of trench.
	Installation of storm drainage piping, HDPE, 300 mm dia.; 1 foreman, 1 skilled labourer, 1 labourer (labour)	$12.52		m	$629.51	$629.51	
	Armtec Boss 2000 end cap, belled (300 mm) (material)		$11.46	ea	$11.46	$11.46	

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost - other source ($CND)	Units	Roof Only	Road & Roof	Assumptions/Notes
	Labour		$50.00	ea	$50.00	$50.00	
Line inside of pipe with filter cloth & expandable rings	Assume polypropylene filtration fabric (materials)	$3.10		$/m^2	$148.80	$148.80	Assumed this RSMeans line is suitable. Area = 50.58 m (length) x 3.14 x 0.3 m = 48 m^2.
	Labour	$50.00		hr	$200.00	$200.00	Assume 2 labourers, 2 hours
Monitoring wells	Armtec Boss 2000 perforated pipe, 150 mm dia. (material)		$10.94	m	$59.51	$59.51	
	Installation of storm drainage piping, HDPE, 150 mm dia.; 1 foreman, 1 skilled labourer, 1 labourer (labour)	$10.86		m	$59.08	$59.08	Each monitoring well is 2.72 m deep. There are 2 wells.
	Cast iron cap (assume these can be used for caps at surface)		$65.00	ea	$130.00	$130.00	
	Labour		$50.00	ea	$100.00	$100.00	
	Footplate - assume we can use Armtec Boss 2000 endcap, 150 mm dia., although this may be an underestimate.		$2.92	ea	$5.84	$5.84	
	Labour		$50.00	ea	$100.00	$100.00	
50 mm stone	50 mm clear limestone (materials)		$36.00	$/Cm^3	$5,806.80	$5,806.80	Calculated volume as follows: total vol = 101.8 m^2 area x 1.62 m depth = 164.9 m^3; vol of pipe = π(0.15 m)(0.15 m) x 50.28 m = 3.6 m^3; thus, vol of stone req'd = 164.9 m^3 - 3.6 m^3 = 161.3 m^3.
	1.5 m^3 excavator + 1 labourer (labour)	$1.23		$/Bm^3	$198.40	$198.40	Assumed cost to place stone is similar to that of excavating soil (100 Bm^3/hr).
	1.5 m^3 excavator	$1.88		$/Bm^3	$303.24	$303.24	
Compact stone	21" wide walk-behind vibrating plate compactor, 2 passes, 12" lifts (equipment)	$0.11		$/Em^3	$17.74	$17.74	2 passes fine for light compaction and that with this stone hardly need compaction.
	21" wide walk-behind vibrating plate compactor, 2 passes, 12" lifts; 1 labourer (labour)	$1.01		$/Em^3	$162.91	$162.91	
Place fill	1.5 m^3 excavator + 1 labourer (labour)	$1.23		$/Bm^3	$93.97	$93.97	Assumed cost to place fill is similar to that of excavating soil (100 Bm^3/hr). volume = 101.8 m^2 x 0.750 m = 76.4 m^3.
	1.5 m^3 excavator	$1.88		$/Bm^3	$143.63	$143.63	
Compact fill in 6" lifts to 95% Proctor density	Compact in 200 mm lifts with vibrating plate compactor (labour)	$2.83		$/Cm^3	$216.21	$216.21	Assume same cost whether compacted in 200 or 150 mm lifts.
	Equipment	$0.25		$/Cm^3	$19.10	$19.10	
	Proctor test	$149.45		$/test	$149.45	$149.45	1 test required
	Nuclear density test	$42.81		$/test	$171.24	$171.24	
SUBTOTAL					**$25,069**	**$41,395**	
Fees							
Project Overhead		10.00%		% of sub total	$2,506.86	$4,139.45	
TOTAL					**$27,575**	**$45,534**	

Table A4: Infiltration chambers

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost (CND) - other source	Units	Roof Only	Road & Roof	Assumptions/Notes
Site Investigation							
Dig test pit 1	80 HP backhoe (equipment)	$24.88		$/m^3	$69.66	$69.66	Assume test pit is 1 m x 1 m, 1.8 m deep, & sloped 1:1 above 1.2 m depth. RSMeans costs for light & heavy soil were averaged.
	80 HP backhoe + 1 labourer (labour)	$49.58		$/m^3	$138.82	$138.82	
Dig test pit 2	80 HP backhoe (equipment)	$24.88		$/m^3	$69.66	$69.66	
	80 HP backhoe + 1 labourer (labour)	$49.58		$/m^3	$138.82	$138.82	
Infiltration tests	Double-ring infiltrometer	$608.85		$/test	$2,435.40	$2,435.40	2 infiltration tests per test pit
Soil strength testing							Not costed; assumed geotech tests done previously
Soil quality testing							Not costed; assumed soil dumped elsewhere on site
Site Preparation							
Pre-construction meeting	Part of Overhead				$0.00	$0.00	
Stakeout of utilities	Assume no interfering utilities found as a result		$500.00	lump sum	$500.00	$500.00	
Erosion and sediment controls		$2.21		$/m	$26.52	$26.52	Silt fence along one edge ~ 12 m (decided by Mariko Uda & Lisa Rocha)
	2 labourers	$1.77		$/m	$21.24	$21.24	
Mobilization/demobilization	Active construction site, so all equipment on site				$0.00	$0.00	
Excavation							
Vegetation removal	Clearing, grubbing, haul away material				$0.00	$0.00	Active construction site, assume already done
Topsoil salvage, haul to stockpile	200 HP dozer + 0.5 labourer (labour)	$1.15		$/m^3	$18.29	$18.29	6" removed, 60 m travel to stockpile
	200 HP dozer (equipment)	$2.06		$/m^3	$32.75	$32.75	6" removed, 60 m travel to stockpile
Excavate	1.5 m^3 bucket excavator + 1 labourer (labour)	$1.23		$/Bm^3	$223.86	$223.86	Assumed common earth, 100 Bm^3/hr (interpolated in RSMeans), that depth is 1.65 m (1.8 m - 0.15 m topsoil already removed), that excavation is sloped 1:1 above 1.2 m depth.
	1.5 m^3 bucket excavator (equipment)	$1.88		$/Bm^3	$342.16	$342.16	
	Loading - 15% of excavation cost			%	$84.90	$84.90	
	Hauling in a 13.76 m^3 truck (includes driver)	$172.92		$/hr	$788.57	$788.57	Assumed swell factor of 25%*, assumed 20 min. cycle time to dump elsewhere on site. Assumed volume to haul away is excavated volume (182 Bm^3) minus volume to be reused as fill (300 mm x 104.7 m^2 = 31.4 Bm^3). So, haul away 150.6 Bm^3.
Level subgrade	Can be done as part of excavation step.				$0.00	$0.00	
Safety fencing	4' high, 1 week rental, including setup & takedown).	$650.00		lumpsum	$650.00	$650.00	Assume 6 m around perimeter of excavation -> total 89 m
Materials and Installation							
Manhole	Precast concrete, 4' dia., 8' deep (includes excavation of 34.2 Bm^3, formed concrete footing, frame & cover, steps, compacted backfill) (material)	$2,837.00		lump sum	$2,837.00	$2,837.00	This RSMeans cost does not include hauling away excavated soil or pipe connections
	Labour and equipment	$2,354.00		lump sum	$2,354.00	$2,354.00	
	Loading excavated soil - 15% of excavation cost			%	$53.10	$53.10	RSMeans cost for 4'dia., 8' deep manhole includes an excavation cost of $354 to excavate 34.2 Bm^3
	Hauling in a 13.76 m^3 truck (includes driver)	$172.92		$/hr	$179.08	$179.08	Assumed swell factor of 25% (*US Army 2000), assumed 20 min. cycle time to dump elsewhere on site. Assume all 34.2 Bm^3 excavated is hauled away.
Hydrodynamic Separator	Downstream Defender - 4' wide (material + delivery)		$12,000.00	lump sum	$0.00	$12,000.00	
	Assume installation cost is roughly similar to that of 4' dia., 10' deep precast manhole in RSMeans that includes 47.9 Bm^3 excavation (labour & equipment)	$2,883.00		lump sum	$0.00	$2,883.00	

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost (CND) - other source	Units	Roof Only	Road & Roof	Assumptions/Notes
	Loading excavated soil - 15% of excavation cost			%	$0.00	$432.35	
	Hauling in a 13.76 m^3 truck (includes driver)	$172.92		$/hr	$0.00	$250.81	Assumed swell factor of 25% (*US Army), assumed 20 min. cycle time to dump elsewhere on site. Assume all 47.9 Bm^3 excavated is hauled away.
Pipe from separator to manhole - 2 m long trench	Trenching, common earth, no slope, 2' wide, 6' deep; 3/8 cy bucket hydraulic track-mounted backhoe, backfill, compaction, removal of spoil by truck; the backfill has been reduced to take into account pipe of suitable size & bedding (labour)	$15.12		m	$0.00	$30.24	
	Equipment	$5.58		m	$0.00	$11.16	
Pipe from separator to manhole - attach 300 mm pipe to both separator & manhole	Armtec Boss 2000 solid pipe, 300 mm dia. (material)		$22.81	m	$0.00	$45.62	
	Armtec Boss 2000 solid pipe, 300 mm manhole adaptor (material)		$46.00	ea.	$0.00	$46.00	
	Labour		$200.00	ea.	$0.00	$400.00	
Pipe from separator to manhole - pipe bedding	Pipe bedding, side slope 0 to 1, 2' wide, pipe size 10" dia., compacted sand for bedding & 12" above pipe; pipe, trench, backfill not included (material)	$8.22		m	$0.00	$16.44	
	Labour and equipment	$5.10		m	$0.00	$10.20	
Attach pipe from parking lot to separator (do not cost pipe/trench, just cost out the attachment)	Labour		$200.00	ea	$0.00	$200.00	
Attach pipe from roof to control manhole (do not cost pipe/trench, just cost out the attachment)	Armtec Boss 2000 solid pipe, 200 or 300 mm manhole adaptor (material)		$42.08	ea	$42.08	$42.08	Assume close to cost of 250mm adaptor ($42.08).
	Labour		$200.00	ea	$200.00	$200.00	
Attach overflow pipe to control manhole (do not cost pipe/trench, just cost out the attachment)	Armtec Boss 2000 solid pipe, 300 mm manhole adaptor (material)		$46.00	ea	$46.00	$46.00	
	Labour		$200.00	ea	$200.00	$200.00	
Inlet pipe to chamber - attach pipe to both control manhole & chamber	Armtec Boss 2000 solid pipe, 600 mm manhole adaptor (material)		$135.98	ea	$135.98	$135.98	
	Labour to attach pipe to manhole		$200.00	ea	$200.00	$200.00	
	Labour to attach pipe to chamber		$50.00	ea	$50.00	$50.00	
Geotextile surrounding stone	Polypropylene filtration fabric (materials)	$3.10		$/$m^2$	$784.30	$784.30	Assumed this RSMeans line is suitable for the Class 2 non-woven geotextile. Area = 104.7 m^2 (top) + 104.7 m^2 (bottom) + (41.186 m perimeter x 1.067 m deep) = 253 m^2 total area. account.
	2 labourers	$0.40		$/$m^2$	$101.20	$101.20	
50 mm stone, 6" (152mm) deep, place	50 mm clear limestone (materials)		$36.00	$/$Cm^3$	$572.76	$572.76	
	1.5 m^3 bucket excavator + 1 labourer (labour)	$1.23		$/$Bm^3$	$19.57	$19.57	Assumed cost is similar to cost of excavation
	1.5 m^3 bucket excavator (equipment)	$1.88		$/$Bm^3$	$29.91	$29.91	
Level the stone	Hand grade select gravel (2 labourers)	$1.56		$/$m^2$	$163.33	$163.33	
Geotextile for scour protection	Polypropylene filtration fabric (materials)	$3.10		$/$m^2$	$107.57	$107.57	Assumed this RSMeans line is suitable for the Class 1 woven geotextile. Area = 3.8 m x 9.138 m = 34.7 m^2 total area.
	2 labourers	$0.40		$/$m^2$	$13.88	$13.88	
Infiltration chambers & end caps	Stormtech SC-740 chambers		$96.00	$/$m^3$ storage	$6,535.68	$6,535.68	Material + delivery cost for chambers, endcaps, fittings, couplers, geotextile is approximately $100/$m^3$ of storage. Exclude geotextile at approximately $1/$m^2$. Estimated cost is $96/$m^3$ of storage.
	2 labourers	$50.00		$/person-hr	$100.00	$100.00	Installation rate is 30 chambers per hour by 2 labourers
Geotextile for isolator row	Polypropylene filtration fabric (materials)	$3.10		$/$m^2$	$0.00	$162.13	Assumed this RSMeans line is suitable for the Class 1 & 2 woven geotextile. Class 1 geotextile on bottom: area = 1.4 m x 10.9 m x 2 layers = 30.5 m^2. Class 2 geotextile on top/sides: area = perimeter of half-circle of 2 m x 10.9 m = 21.8 m^2 thus,

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost (CND) - other source	Units	Roof Only	Road & Roof	Assumptions/Notes
							total area of geotextile = 52.3 m^2.
	2 labourers	$0.40		$/m^2$	$0.00	$20.92	
50mm stone, fill around chambers and 6" (152 mm) over top	50 mm clear limestone (materials)		$36.00	$/Cm^3$	$2,044.80	$2,044.80	Calculated volume as follows: total vol = 104.7 m^2 area x (1.067 m depth - 152 mm stone depth below) = 95.8 m^3; vol inside chambers = 30 chambers x 1.3 m^3/chamber = 39 m^3; thus, vol of stone req'd = 95.8m^3 - 39 m^3 = 56.8 m^3.
	1.5 m^3 bucket excavator + 1 labourer (labour)	$1.23		$/Bm^3$	$69.86	$69.86	Assumed cost is similar to cost of excavation
	1.5 m^3 bucket excavator (equipment)	$1.88		$/Bm^3$	$106.78	$106.78	
Level the stone	Hand grade select gravel (2 labourers)	$1.56		$/m^2$	$163.33	$163.33	
Well-graded soil, 390 mm depth, compacted	Assume native soil on-site is suitable (so no material cost)				$0.00	$0.00	
	1.5 m^3 bucket excavator + 1 labourer (labour)	$1.23		$/Bm^3$	$50.18	$50.18	Assumed cost is similar to cost of excavation. Compacted volume = 390 mm x 104.7 m = 40.8 Cm^3
	1.5 m^3 bucket excavator (equipment)	$1.88		$/Bm^3$	$76.70	$76.70	
	Compact in 200 mm lifts with vibrating plate compactor (labour)	$2.83		$/Cm^3$	$115.46	$115.46	Assume same cost whether compacted in 200 or 300mm lifts.
	Equipment	$0.25		$/Cm^3$	$10.20	$10.20	
	Proctor test	$149.45		$/test	$149.45	$149.45	1 test required
	Nuclear density test	$42.81		$/test	$171.24	$171.24	Average of 4 tests required - test is done to check compaction.
SUBTOTAL					**$23,224**	**$39,733.10**	
Fees							
Project Overhead		10.00%		% of sub total	$2,322.41	$3,973.31	
TOTAL					**$25,547**	**$43,706**	

Table A5: Enhanced grass swale

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost - other source ($CND)	Units	Curb check dam	Filter sock check dam	Rock check dam	Assumptions/Notes
Site Investigation								
Dig test pit 1	80 HP backhoe (equip)	$24.88		$/m^3	$29.86	$29.86	$29.86	Test pit is 1m x 1m x 1.275m, therefore volume is ~ 1.2m^3 RSMeans costs for light & heavy soil were averaged.
	80 HP backhoe + 1 labourer (labour)	$49.58		$/m^3	$59.50	$59.50	$59.50	
Dig test pit 2	80 HP backhoe (equip)	$24.88		$/m^3	$29.86	$29.86	$29.86	Test pit is 1m x 1m x 1.275m, therefore volume is ~ 1.2m^3 RSMeans costs for light & heavy soil were averaged.
	80 HP backhoe + 1 labourer (labour)	$49.58		$/m^3	$59.50	$59.50	$59.50	
Infiltration tests	Double-ring infiltrometer	$608.85		$/test	$2,435.40	$2,435.40	$2,435.40	2 infiltration tests per test pit
Soil quality testing	Not costed; assumed soil dumped elsewhere on site.							
Site Preparation								
Preconstruction meeting	Part of overhead							
Stakeout of utilities	Assume no interfering utilities are found as a result.		$500.00	lump sum	$500.00	$500.00	$500.00	
Tree & plant protection	Assume no trees							
Traffic control	Assume not required							
Install erosion & sediment control and control drainage	2" submersible gas pump (incl. gas)	$81.15		$/day	$243.45	$243.45	$243.45	Assume 3 days
	Silt sack in catchbasin		$65.00	$/unit	$65.00	$65.00	$65.00	
	Silt fence 1m around excavation (material)	$2.21		$/m	$341.00	$341.00	$341.00	Assume distance is 2x(69.9 m + 2m) + 2x(3.25 m + 2m), total is 154.3 m. Swale 61.5 m + driveway 8.4 m = 69.9 m.
	Silt fence 1m around excavation (labour)	$1.77		$/m	$273.11	$273.11	$273.11	
Mobilization/demobilization	Active construction site so all equipment on site					$0.00	$0.00	
Excavation								
Vegetation removal	Clearing, grubbing, haul away material				$0.00	$0.00	$0.00	Active construction site, assume already done
Topsoil salvage, haul to stockpile	200 HP dozer (equip)	$2.06		$/m^3	$0.00	$0.00	$0.00	Assumed already done as part of regular construction
	200 HP dozer + 0.5 labourer (labour)	$1.15		$/m^3	$0.00	$0.00	$0.00	
Excavation	1.5 m^3 bucket excavator + 1 labourer (labour)	$1.24		$/Bm^3	$88.68	$88.68	$88.68	Assume excavation rate of 100 Bm^3/hr (Mark Preston). Excavation is sloped 2.5:1 along edges 0.5 m depth. Excavation of swale (L 61.5 m, V 62.49 m^3) and driveway with additional 0.15 m depth non-sloped (L 8.4m, V 10.33 m^3), total Volume = 72.82 m^3
	1.5 m^3 bucket excavator (equipment)	$1.89		$/Bm^3	$135.17	$135.17	$135.17	Swale bottom = 23.06, sides = 38.91, Corners - 0.52, swale total = 62.49 m^3, Driveway bottom = 4.1, slopes = 5.72, corners - 0.52, Driveway total - 10.33 m^3, TOTAL EXCAVATION = 72.82 m^3
Loading excavated soil		15%		% of excavation cost	$33.58	$33.58	$33.58	
Hauling excavated soil	13.76m^3 truck (incl. driver)	$172.92		$/hr/truck	$397.72	$397.72	$397.72	71.52 m^3 x 1.25 (swell factor, US Army 2000*) = 89.4 Lm^3; thus, 6.5, so 7 truckloads. Assume 20 min. cycle time to dumb elsewhere on site; thus, 2 hours and 20 minutes /truck
Safety fencing	4' high fencing, 6m around perimeter of excavation. Assume 1 week rental (incl. setup & takedown).		$800.00	lump sum for 124m	$800.00	$800.00	$800.00	
Materials and Installation								
HDPE Pipe	Pipe to sewer - 200 mm diameter Armtec Boss 2000, corrugated with smooth inner wall (material)		$15.37	$/m	$76.85	$76.85	$76.85	
	Pipe to sewer (labour)	$11.40		$/m	$57.00	$57.00	$57.00	
	Delivery for all pipes		$50.00	lumpsum	$50.00	$50.00	$50.00	
HDPE Pipe Fittings	Pipe to sewer:-manhole adapter (200 mm)	$36.38		$/unit	$36.38	$36.38	$36.38	

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost - other source ($CND)	Units	Curb check dam	Filter sock check dam	Rock check dam	Assumptions/Notes
Pipe Fittings: Labour	Pipe to sewer:manhole adapter (200 mm)	$200.00		$/unit	$200.00	$200.00	$200.00	
Pipe to sewer trenching	Pipe trenching & backfill, 0.6m wide, 1.2m deep, no slope	$15.59		$/m	$77.95	$77.95	$77.95	
	Pipe bedding, 0.6m wide	$13.18		$/m	$65.90	$65.90	$65.90	
Pipe for culvert	300 mm, 1.6 mm thickness		$40.00	$/m	$336.00	$336.00	$336.00	Smaller than recommended however small depth, 8.4 m width
	Labour	$11.40		$/m	$95.76	$95.76	$95.76	Assumed to be the same as HDPE pipe
	Delivery		$50.00	lumpsum	$50.00	$50.00	$50.00	Assumed to be the same as HDPE pipe
Curbs & gutter with curb inlets	150 mm high curb, 150 mm thick gutter, 600 mm wide (not sure if reinforced) (material)	$88.35		$/m	$5,433.53	$5,433.53	$5,433.53	Assumed perimeter along one side, not including driveway
	Labour	$26.26		$/m	$1,614.99	$1,614.99	$1,614.99	
Catchbasins	Frame and cover		$500.00	each	$500.00	$500.00	$500.00	
	Catchbasin		$367.00	m	$279.65	$279.65	$279.65	Minimum size is 0.762 m
	Installation		$500.00	each	$500.00	$500.00	$500.00	
Sod	Material		$2.00	$/m^2	$441.00	$441.00	$441.00	Sod covers bottom (46.15 m^2) and sides (174.34 m^2), total 220.5 m^2
	Labour		$1.00	$/m^2	$220.50	$220.50	$220.50	
Check dams	0.3 m curb		$150.00	$/m^2	$337.50	$0.00	$0.00	1 m long, 0.3 m high curbs, length 0.75 m bottom, then up sides 0.75 in length to reach 0.3 m height, so 0.75*3 = 2.25 m for each check dam
	Biofilter sock		$15.00	$/m	$0.00	$20.25	$0.00	1 m long, 0.3 m high for each check dam
	Rocks 50 mm clear (material)		$36.00	$/m^3	$0.00	$0.00	$19.44	Main section 0.75 m wide by 0.3 m high by minimum 0.6 m length (0.135 m^3), plus front and back slopes at 2:1 ratio (0.068 m^3 per slope), plus sides of main section (0.068 m^3 per side), plus sides of front and back slopes (0.034 m^3 per slope side), TOTAL 0.54 m^3
	Rocks 50 mm clear (labour)	$173.11		$/m^3	$0.00	$0.00	$93.48	
	Geotextile Material	$3.10		$/m^2	$0.00	$0.00	$9.77	Geotextile required under rock check dam
	Geotextile Labour	$0.40		$/m^2	$0.00	$0.00	$1.26	
Stone inlets	50 mm clear (material)		$36.00	$/Cm^3	$16.20	$16.20	$16.20	Assume 50 mm clear, 100mm deep, 1 every 6 m. Area = 0.5m^2 x 9 inlets = 4.5 m^2. Vol = 4.5 m^2 x 0.1 m = 0.45 m^3.
	Spread by hand (labour)	$173.11			$77.90	$77.90	$77.90	
	Geotextile Material	$3.10		$/m^2	$13.95	$13.95	$13.95	Assume 50 mm clear, 100mm deep. Area = 0.5m^2 x 9 inlets = 4.5 m^2.
	Geotextile Labour	$0.40		$/m^2	$1.80	$1.80	$1.80	
Headwalls for culvert	Headwall on either side of driveway		$200.00	each	$400.00	$400.00	$400.00	
50mm stone	50 mm clear limestone (materials)		$36.00	$/Cm^3	$291.60	$291.60	$291.60	Free draining backfill around pipe in culvert, surrounding pipe, 0.15 m below (rectangle trench) and 0.15 m above
	1.5 m^3 excavator + 1 labourer (labour)	$1.23		$/Bm^3	$9.96	$9.96	$9.96	Volume of pipe = 0.59 m^3, volume of backfill: flat - 3.645, slopes 5.06, total 8.708 m^3. Backfill - pipe volume - 8.1 m^3
	1.5 m^3 excavator	$1.88		$/Bm^3	$15.23	$15.23	$15.23	
Compact stone	21" wide walk-behind vibrating plate compactor, 2 passes, 6" lifts (equip)	$0.11		$/Em^3	$0.89	$0.89	$0.89	Assumed cost is the same whether compacted in 6" or 12" lifts
	21" wide walk-behind vibrating plate compactor, 2 passes, 6" lifts; 1 labourer (labour)	$1.01		$/Em^3	$8.18	$8.18	$8.18	
	Proctor test	$149.45		$/test	$149.45	$149.45	$149.45	
	Nuclear density test	$42.81		$/test	$42.81	$42.81	$42.81	Assume 1 would be sufficient with smaller area
SUBTOTAL					**$16,893**	**$16,576**	**$16,679**	
Fees								
Project Overhead		10.00%		% of subtotal	$1,689.28	$1,657.56	$1,667.92	
TOTAL					**$18,582.08**	**$18,233.11**	**$18,347.17**	

Table A6: Rainwater harvesting

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost (CND) - other source	Units	Concrete Tank Outdoor	Plastic Tank Indoor	Assumptions/Notes
Site Investigation							
Soil strength testing					$0.00	$0.00	Not costed; assumed geotech tests done previously
Soil quality testing					$0.00	$0.00	Not costed; assumed soil dumped elsewhere on site
Site Preparation							
Preconstruction meeting	Part of overhead				$0.00	$0.00	
Stakeout of utilities	Assume no interfering utilities are found as a result.		$500.00	lump sum	$500.00	$0.00	
Mobilization/demobilization	Active construction site, so all equipment on site				$0.00	$0.00	
Excavation							
Conveyance Pipe trenching & backfill	0.6 m wide, 1.2 m deep, no slope	$15.59		m	$155.90	$0.00	
Conveyance Pipe Excavation	1.5 m^3 bucket excavator + 1 labourer (labour)	$2.48		Bm^3	$62.25	$0.00	Assumed common earth, 50 Bm^3/hr (guesstimate by Mariko Uda because this is a small excavation), excavation is 18" around tank (assume same clearance as for rainwater harvesting tank; see below) and sloped 1:1 about 1.2 m depth, and that tank is buried 0.5 m with 6" of bedding underneath
	1.5 m^3 bucket excavator (equipment)	$3.78		Bm^3	$94.88	$0.00	
	Loading - 15% of excavation cost			%	$5.85	$0.00	Assume only 6.3 Bm^3 of soil (vol of tank & bedding) is hauled away. Excavation cost of just 6.3 Bm^3 is ($62 + $95) * 6.3 Bm^3 / 25.1 Bm^3 = $39
	Hauling in a 13.76 m^3 truck (includes driver)	$172.92		hr	$32.85	$0.00	Assume only 6.3 Bm^3 of soil (vol of tank & bedding) is hauled away. 6.3 Bm^3 x 1.25 (swell factor, US Army 2000*) = 7.88 Lm^3; thus, 0.57 truckload. Assume 20 min. cycle time to dump elsewhere on site. Thus, 0.19 truck-hours
Tank Excavation	1.5 m^3 bucket excavator + 1 labourer (labour)	$2.48		Bm^3	$277.51	$0.00	Assumed common earth, 50 Bm^3/hr (guesstimate by Mariko Uda because this is a small excavation), excavation is 18" around tank (according to Technical Advisory Council for Onsite Wastewater Treatment 2006*, put min 18" clearance on all sides of precast concrete septic tank) and sloped 1:1 above 1.2 m depth, and that tank is buried 0.75 m with 6" of bedding underneath.
	1.5 m^3 bucket excavator (equipment)	$3.78		Bm^3	$422.98	$0.00	
	Loading - 15% of excavation cost			%	$29.10	$0.00	Assume only 31.0 Bm^3 of soil (vol of tank & bedding) is hauled away. Excavation cost of just 31.0 Bm^3 is ($278 + $423) * 31.0 Bm^3 / 111.9 Bm^3 = $194.
	Hauling in a 13.76 m^3 truck (includes driver)	$172.92		hr	$162.54	$0.00	Assume only 31.0 Bm^3 of soil (vol of tank & bedding) is hauled away. 31.0 Bm^3 x 1.25 (swell factor, US Army 2000*) = 38.75 Lm^3; thus, 2.82 truckload. Assume 20 min. cycle time to dump elsewhere on site. Thus, 0.94 truck-hours.
Service pipe: burying					$0.00	$0.00	Buried with conveyance pipe
Top-up pipe: burying					$0.00	$0.00	Assume for simplicity that top-up pipe is buried in same trench as conveyance & service pipes
Overflow pipe trenching & backfill	0.6 m wide, 1.2 m deep, no slope	$15.59		m	$0.00	$0.00	Do not cost as would be needed even without rainwater harvesting
Materials and Installation							
Conveyance Pipe							
PVC SDR 35	300 mm diameter (material)	$75.31		m	$753.10	$0.00	Just costed length from exterior of building to tank
	300 mm diameter (labour)	$16.20		m	$162.00	$0.00	
	300 mm diameter	$1.62		m	$16.20	$0.00	
Pipe bedding	0.6 m wide	$13.18		m	$131.80	$0.00	
Inline German-style filter	3P VF4 by 3P Technik, which is suitable for a		$5,825.00	ea	$5,825.00	$5,825.00	

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost (CND) - other source	Units	Concrete Tank Outdoor	Plastic Tank Indoor	Assumptions/Notes
	2000 m^2 catchment						
Precast concrete tank to put filter in	2.1 m long x 1.5 m wide x 1.7 m deep		$3,000.00	ea	$3,000.00	$3,000.00	
Installation of filter into tank and delivery of combined tank/filter	RH20 provides service to install 3P VF4 filter into tank		$2,000.00	ea	$2,000.00	$2,000.00	
Bedding	20 mm clear (material)		$37.00	m^3	$33.74	$0.00	Concrete tanks usually have bedding of 6" of 20-25 mm clean stone. Vol = 6" (152 mm) x 3 m x 2 m = 0.912 m^3
	1.5 m^3 bucket excavator + 1 labourer (labour)	$2.11		m^3	$1.92	$0.00	Assumed cost is similar to cost of excavation but for gravel. Used RSMeans bost for excavationi but deducted 15% as suggested by RSMeans for soft soil or sand. Assumed similar for gravel
	1.5 m^3 bucket excavator (equipment)	$3.21		m^3	$2.93	$0.00	
Attach inflow, outflow and overflow pipes to tank			$100.00	ea	$300.00	$300.00	
Backfill	80 HP dozer + 0.5 labourer (labour)	$1.02		Lm^3	$26.62	$0.00	Vol of backfill = vol of excavated (25.06 Bm^3) - vol of tank (5.355 m^3) - vol of bedding (0.912 Cm^3) = 18.8 Cm^3. Assuming swell factor of 25% and compaction factor of 0.9 (US Army 2000*), 18.8 Cm^3 would equal 26.1 Lm^3 (18.8 Cm^3 * 1.25 / 0.9).
	80 HP dozer (equipment)	$0.66		Lm^3	$17.23	$0.00	
Compact backfill	Walk-behind vibrating plate (labour)	$3.07		Cm^3	$57.72	$0.00	
	Walk-behind vibrating plate (equipment)	$0.28		Cm^3	$5.26	$0.00	
<u>Tank</u>							
Pre-cast concrete (below ground)			$0.30	L	$6,900.00	$0.00	
Standard tank access riser			$418.00	ea	$418.00	$0.00	
Plastic tank (above-ground)			$0.29	L	$0.00	$6,670.00	
Concrete tank delivery			$233.00	tank	$233.00	$0.00	
Bedding	20 mm clear (material)		$37.00	m^3	$106.19	$0.00	Concrete tanks usually have bedding of 6" of 20-25 mm clean stone. Vol = 6" (152 mm) x 3.2 m x 5.9 m = 2.87 m^3.
	1.5 m^3 bucket excavator + 1 labourer (labour)	$2.11		m^3	$6.06	$0.00	Assumed cost is similar to cost of excavation but for gravel. Used RSMeans cost for excavation but deducted 15% as suggested by RSMeans for soft soil or sand. Assumed similar for gravel.
	1.5 m^3 bucket excavator + 1 labourer (equipment)	$3.21		m^3	$9.21	$0.00	
Installation/craning	For precast concrete tanks > 20,000 L		$155.00	hr	$620.00	$0.00	
Attach connections (conveyance pipe, service pipe, overflow pipe, fill pipe, wiring)			$100.00	ea	$500.00	$500.00	
Backfill	80 HP dozer + 0.5 labourer (labour)	$1.02		Lm^3	$114.65	$0.00	Vol of backfill = vol of excav (111.94 Bm^3) - vol of tank (28.175 m^3) - vol of bedding (2.87 Cm^3) = 80.895 Cm^3. Assuming swell factor of 25% and compaction factor of 0.9 (US Army 2000*), 80.895 Cm^3 would equal 112.4 Lm^3 (80.895 Cm^3 * 1.25 / 0.9)
	80 HP dozer (equipment)	$0.66		Lm^3	$74.18	$0.00	
Compact backfill	Walk-behind vibrating plate (labour)	$3.07		Cm^3	$248.35	$0.00	
	Walk-behind vibrating plate (equipment)	$0.28		Cm^3	$22.65	$0.00	
<u>Plumbing Accessories</u>							
Submersible pump	81.2 lpm fountain pump with controls (material)	$2,485.00		ea	$2,485.00	$2,485.00	3/4 hp costs $2234.05 (material); thus $30.60 (material)/lpm. Thus for 81.2 lpm --> $2485 (material).
	81.2 lpm fountain pump with controls (labour)	$245.00		ea	$245.00	$245.00	3/4 hp costs $220.33 (labour); thus $3.02 (labour)/lpm. Thus for 81.2 lpm --> $245 (labour).
Pressure tank	439 L (116 gallons) potable water tank (material)	$3,362.49		ea	$3,362.49	$3,362.49	Steel water tanks can be used as pressure tanks

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost (CND) - other source	Units	Concrete Tank Outdoor	Plastic Tank Indoor	Assumptions/Notes
	439 L (116 gallons) potable water tank (labour)	$68.62		ea	$68.62	$68.62	
Pump float switch	Approx. 1hp		97.38	ea	$97.38	$97.38	
Pump float electrical wiring	Approx. 14 gauge	$1.76		m	$26.40	$8.80	
Service pipe: Polyethylene (PE) C901	40 mm diameter (material)	$5.15		m	$87.55	$25.75	PE C901 usually comes in coils or 20' lenghts, no couplings required
	40 mm diameter (labour)	$5.58		m	$94.86	$27.90	
Service pipe: Polyethylene (PE) C901 fittings	40 mm diameter elbow (material)	$7.24		ea	$28.96	$14.48	
	40 mm diameter elbow (labour)	$14.94		ea	$59.76	$29.88	
Service pipe through wall	Pipe sleeve with link seal for 1-1/2" diameter pipe (material)	$64.09		ea	$64.09	$0.00	
	Pipe sleeve with link seal for 1-1/2" diameter pipe (labour)	$93.80		ea	$93.80	$0.00	
Service pipe: hangers every meter indoors	Hanger consisting of clamp, clevis & rod (material)	$11.81		ea	$59.05	$35.43	
	Hanger consisting of clamp, clevis & rod (labour)	$15.69		ea	$78.45	$47.07	
Supply pipe: Copper Class K	40 mm diameter, includes couplings & hangers (material)	$46.95		m	$4,436.78	$4,436.78	
	40 mm diameter, includes couplings & hangers (labour)	$37.39		m	$3,533.36	$3,533.36	
Supply pipe: Copper fittings	40 mm diameter 90 degree elbows (material)	$20.98		ea	$629.40	$629.40	Assume cost of fittings on average is the cost of an elbow
	40 mm diameter 90 degree elbows (labour)	$43.78		ea	$1,313.40	$1,313.40	
Top-up float switch	Approx. 1/2 hp		$54.16	ea	$54.16	$54.16	
Top-up float electrical wiring	Approx. 14 gauge	$1.76		m	$26.40	$8.80	
Solenoid valve	Domestic/commerical, bronze, compound, flanged, 20 mm		$309.90	ea	$309.90	$309.90	
Water hammer arrestor	20 mm (material)	$22.48		ea	$22.48	$22.48	
	20 mm (labour)	$47.42		ea	$47.42	$47.42	
Water meter	40 mm (material)	$305.90		ea	$305.90	$305.90	
	40 mm (labour)	$75.88		ea	$75.88	$75.88	
Air gap (tundish)	3P Tundish by 3P Technik (material)		$75.00	ea	$75.00	$75.00	
	Tundish (labour)		$50.00	ea	$50.00	$50.00	
Top-up pipe: ABS (int. installation)	50 mm diameter, including couplings and hangers (material)	$8.49		m	$42.45	$42.45	
	50 mm diamter, including couplings and hangers (labour)	$54.26		m	$271.30	$271.30	
Top-up pipe: ABS elbow	50 mm diameter (material)	$2.53		ea	$2.53	$2.53	Assumed need atleast 1 elbow
	50 mm diameter (labour)	$31.01		ea	$31.01	$31.01	
Top-up pipe through wall	Pipe sleeve with link seal for 2" diameter pipe (material)	$75.05		ea	$75.05		Method used to bring pipes through walls in commercial applications
	Pipe sleeve with link seal for 2" diameter pipe (labour)	$106.68		ea	$106.68	$0.00	
Top-up pipe: ABS (ext.installation)	50 mm diameter (does not include coupling or hangers) (material)	$4.84		m	$48.40	$0.00	
	50 mm diameter (does not include coupling or hangers) (labour)	$28.22		m	$282.20	$0.00	
Top-up pipe: ABS couplings	50 mm diameter (material)	$1.06		ea	$1.06	$0.00	Assume 1 coupling required
	50 mm diameter (labour)	$31.01		ea	$31.01	$0.00	
Reduced pressure backflow preventer	50 mm (material)	$909.09		ea	$909.09	$909.09	
	50 mm (labour)	$81.17		ea	$81.17	$81.17	
Overflow							

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost (CND) - other source	Units	Concrete Tank Outdoor	Plastic Tank Indoor	Assumptions/Notes
PVC SDR 35	300 mm diameter	$93.13		m	$0.00	$0.00	Do not cost as would be needed even without rainwater harvesting
Pipe bedding	0.6 m wide	$13.18		m	$0.00	$0.00	
1 bend	PVC SDR 35, 300 mm diameter elbow (material)	$279.73		ea	$0.00	$0.00	
	PVC SDR 35, 300 mm diameter elbow (labour)	$101.85		ea	$0.00	$0.00	
SUBTOTAL					**$42,943.11**	**$36,942.82**	
Fees							
Project Overhead		10.00%		% of sub total	$4,294.31	$3,694.28	
TOTAL					**$47,237**	**$40,637**	

Table A7: Extensive greenroof

Item	Item detail	RSMeans Unit Cost (2010 or 2011$CND)	Unit cost ($CND) - other source	Units	Cheap	Expensive	Assumptions/Notes
Site Preparation							
Pre-construction meeting	Part of construction mgmt fee				$0.00	$0.00	
Mobilization/demobilization	Crane, 55 ton	$158.00		2-way	$316.00	$0.00	Assumed for 2 mobilizations/demobilization's because crane is initially needed to lift membrane, then is not needed until later for the rest of the materials.
Mobilization/demobilization	Crane, 100 ton	$453.00		way	$0.00	$1,812.00	Assumed for 2 mobilizations/demobilization's because crane is initially needed to lift membrane, then is not needed until later for the rest of the materials.
Crane							
55T crane to lift membrane, drainage layer, stone, edging, cuttings to under 5 storeys	Equipment & labour	$4,632.38		day	$13,897.14	$0.00	55T crane does 28 picks per day, will need it for 2.6 days - round up to 3 days.
100T crane to lift membrane, root barrier, drainage layer, stone, edging, sedum mats to 6-10 storeys	Equipment & labour	$5,152.38		day	$0.00	$56,676.18	100T crane does 21 picks per day will need it fo 11.2 days - round down to 11 days.
Materials and Installation							
Waterproof membrane: TPO	Material & delivery - TPO, 60mils thick, fully adhered	$12.48		m^2	$24,960.00	$0.00	
	Lift onto roof - equipment & labour	See above -Crane					
	Labour	$10.14		m^2	$20,280.00	$0.00	
	Equipment	$0.83		m^2	$1,660.00	$0.00	
	Extra labour for flashing around parapets & roof penetrations - assume labour cost similar to PVC sheet flashing	$17.22		m^2	$1,248.45	$0.00	Assume 330 mm of flashing around parapets, mechanical units and drains.
Waterproof membrane: EPDM	Material & delivery - EPDM, 60 mils thick, fully adhered	$18.21		m^2	$0.00	$36,420.00	
	Lift onto roof - equipment & labour	See above -Crane					
	Labour	$9.74		m^2	$0.00	$19,480.00	
	Equipment	$0.79		m^2	$0.00	$1,580.00	
	Extra labour for flashing around parapets & roof penetrations - assume labour cost similar to PVC sheet flashing	$17.22		m^2	$0.00	$1,248.45	Assume 330 mm of flashing around parapets, mechanical units and drains.
Water leakage test: EFVM	EFVM by International Leak Detection - cost to install grid & conduct initial test		$13.99	m^2	$0.00	$27,980.00	Tested in one visit
Water leakage test: other option more cheaper than EFVM	Applied potential electrical method or water lance method by I-CORP International - cost to do initial test		$3,000.00	lump sum	$3,000.00	$0.00	Conductive material is required below the waterproof membrane, assumed a concrete structure. These methods cannot be used for black EPDM, which has too much carbon content.
Root barrier (not needed for TPO, possibly needed for EPDM)	Material		$4.30	m^2	$0.00	$8,600.00	Average of quotes
	Lift onto roof - equipment & labour	See above -Crane					
	Labour - assume similar to laying drainage mat.	$4.16		m^2	$0.00	$8,320.00	
R20 insulation	Material - Dow Roofmate		$23.68	m^2	$47,360.00	$47,360.00	
	Lift onto roof - equipment & labour	See above -Crane					
	Labour	$4.95		m^2	$9,900.00	$9,900.00	
Drainage layer + filter cloth (combined):	Material + delivery: average cost of 3 different drainage layers (3RFoam, dimple board, and another dimple board).		$11.09	m^2	$22,180.00	$22,180.00	Average cost for drainage layer
	Onto roof - equipment & labour	See above -Crane					

Item	Item detail	RSMeans Unit Cost (2010 or 2011$CND)	Unit cost ($CND) - other source	Units	Cheap	Expensive	Assumptions/Notes
	Labour - similar to laying drainage mat	$4.16		m^2	$8,320.00	$8,320.00	
Irrigation system	Total installed cost		$10.76	m^2	$0.00	$21,520.00	Assumed irrigation cost costs approx. $1/sf.
Edging: aluminium	Permaloc's GeoEdge 4-1/2" aluminum edging		$30.70	m	$7,521.50	$0.00	
	Permaloc's GeoEdge 4-1/2" aluminum corners		$43.06	corner	$1,033.44	$0.00	No delivery cost included, assumed not significant. Assume pre-made corners for the 4 perimeter corners and the corners around the 5 mechanical units (4 corners each), but not for the drains.
	Permaloc's GeoEdge 6-1/2" aluminum edging		$46.05	m	$0.00	$11,282.25	
	Permaloc's GeoEdge 6-1/2" aluminum corners		$57.46	corner	$0.00	$1,379.04	No delivery cost included, assumed not significant. Assume pre-made corners for the 4 perimeter corners and the corners around the 5 mechanical units (4 corners each), but not for the drains.
	Onto roof - equipment & labour	See above -Crane					
	Labour - assume similar to installing lumber edging	$8.89		m	$2,311.40	$2,311.40	
Vegetation-free zone - 3" of 1-1/2" washed round stone	Material + delivery: average cost of 3 different suppliers		$7.93	m^2	$958.34	$958.34	
	Onto roof - equipment & labour	See above -Crane					
	Labour - assume similar to spreading same volume of pea gravel	$62.13		m^3	$1,568.38	$1,568.38	
4" growing medium - in bulk, not in sacks	Material - average of 3 suppliers		$13.00	m^2	$24,206.00	$0.00	
	Delivery in bulk		$0.85	m^2	$1,582.70	$0.00	
	Blowing onto roof with blower truck		$7.10	m^2	$13,220.20	$0.00	
6" growing medium - in sacks	Material		$23.40	m^2	$0.00	$43,570.80	
	Delivery of sacks		$1.99	m^2	$0.00	$3,705.38	
	Lifting onto roof with crane 6-10 stories & spreading - equipment & labour	$20.77		m^2	$0.00	$38,673.74	
Plants; sedum cuttings	Material		$2.12	m^2	$3,947.44	$0.00	
	Delivery		$0.11	m^2	$204.82	$0.00	
	Onto roof - equipment & labour	See above -Crane					
	Labour - assume similar to applying 2 bushels/1000 sf of sprigs	$0.31		m^2	$577.22	$0.00	Assumed an application rate of 25lb/1000 sf.
Plants; sedum plugs	Material		$4.30	m^2	$0.00	$0.00	Toronto's Green Roof Bylaw says min. 1 plug/sf.
	Delivery		$0.61	m^2	$0.00	$0.00	Assume truck cost of $500 plus $160 per rack. 4 racks would be needed. Therefore, total delivery charge is $1140, or $0.61/m2.
	Onto roof - equipment & labour	See above -Crane					
	Labour - assume similar to planting 2-1/4" potted plants at 1/sf.	$5.49		m^2	$0.00	$0.00	
Plants; sedum mats	Material		$31.22	m^2	$0.00	$58,131.64	This material includes 1" of growing medium, so we can minus 1" of growing medium.
	Delivery		$1.42	m^2	$0.00	$2,644.04	3 trucks needed at a cost of $750 each. Pallets are required for $390. Therefore total cost is $2640, or $1.42/$m^2$.
	Onto roof - equipment & labour	See above -Crane					
	Labour	$4.63		m^2	$0.00	$8,621.06	
	SAVINGS because can reduce growing medium by 1"		-$14,325.00	lump sum	$0.00	-$14,325.00	The savings are estimated at $14,325 if growing medium is in sacks & craned up 6-10 stories.
SUBTOTAL with membranes					**$210,253.03**	**$429,917.70**	
Fees							

Item	Item detail	RSMeans Unit Cost (2010 or 2011$CND)	Unit cost ($CND) - other source	Units	Cheap	Expensive	Assumptions/Notes
Project Overhead (10%)		10.00%		% of sub total	$21,025.30	$42,991.77	
TOTAL					**$231,278**	**$472,909**	
SUBTOTAL without membranes [1]							
Fees					**$100,054**	**$307,871**	
Project Overhead (10%)		10.00%			**$10,005**	**$30,787**	
TOTAL					**$110,060**	**$338,658**	

Notes: [1]Subtotal without membranes excluded costs for membranes and R20 insulation, as well craning was reduced to 1 day for cheap, and 2 days for expensive.

Table A8: Asphalt (used for comparative analysis)

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost ($CND) - other source	Units	Total ($CND)	Assumptions/Notes
Site Investigation						
Soil strength testing						Not costed; assumed geotech tests done previously
Soil quality testing						Not costed; assumed soil dumped elsewhere on site
Site Preparation						
Pre-construction meeting	Part of overhead					
Stakeout of utilities	Assume no interfering utilities found as a result		$500.00	lump sum	$500.00	
Mobilization/demobilization						Active construction site, so all equipment on site
Excavation						
Vegetation removal	Clearing, grubbing, haul away material				$0.00	Active construction site, assume already done
Topsoil salvage, haul to stockpile	6" removed, 60 m travel to stockpile, 200 HP dozer + 0.5 labourer (labour)	$1.15		$/m^3	$175.26	
	6" removed, 60 m travel to stockpile, 200 HP dozer (equipment)	$2.06		$/m^3	$313.94	
Excavate	1.5 m^3 bucket excavator + 1 labourer, productivity 100 Bm^3/hr (labour)	$1.24		$/Bm^3	$248.50	Assumed a productivity of 100 Bm^3/hr. Assumed common earth. 6" of topsoil has already been removed, so do not need to excavate full depth, plus catchbasins and pipe
	1.5 m^3 bucket excavator, productivity 100 Bm^3/hr (equipment)	$1.89		$/Bm^3	$378.76	60 m x 16.7 m x 0.2 m = 200.4 m3 for parking lot
	Loading	15%		% of excavation cost	$94.09	
	Hauling in a 13.76 m^3 truck (including truck & driver)	$172.92		$/hr	$1,038.84	Assumed swell factor of 25% (*US Army 2000), cycle time of 20 min.
Compaction of native soil	30,000 lb grader + 25T vibratory roller + 1 labourer (labour)	$1.16		$/m^2	$1,160.00	
	30,000 lb grader + 25T vibratory roller (equipment)	$1.14		$/m^2	$1,140.00	
	Proctor test	$149.45		$/test	$149.45	1 test required
	Nuclear density test	$42.81		$/test	$171.24	Avg. 4 tests required - test is done to check compaction.
Hydrodynamic Separator	-					
Hydrodynamic Separator	Downstream Defender - 4' wide (mat + delivery)		$12,000.00	lump sum	$0.00	
	Assume installation cost is roughly similar to that of 4' dia., 10' deep precast manhole in RSMeans that includes 47.9 Bm^3 excavation (labour & equip)	$2,883.00		lump sum	$0.00	
	Loading excavated soil	15%		% of excavation cost	$0.00	
	Hauling in a 13.76 m^3 truck (includes driver)	$172.92		$/hr	$0.00	
Materials and Installation						
Catchbasins	Frame and cover		$500.00	each	$0.00	
	Catchbasin		$367.00	m	$0.00	Minimum size is 0.762, two catchbasins = 1.524 m
	Installation		$500.00	each	$0.00	
Conveyance pipes from catchbasins to HDS	Armtec Boss 2000 solid pipe, 300 mm dia. (material)		$22.81	m	$0.00	Catchbasins on either end of parking lot at halfway point, drain to HDS at halfway along other end, so 2 x 30 m = 60 m, plus 2 x 8.335 m = 16.67 m, TOTAL 66.67 m
	(labour & equip)	$5.10		m	$0.00	
Base, 300 mm deep	20 mm crusher run (material)		$43.00	$/Cm^3	$12,900.00	
	30,000 lb grader, 300 HP dozer, 25 T vibratory roller, truck tractor & water tank trailer + 1 labour foreman (labour)	$0.75		$/m^2	$750.00	

Item	Item detail	RSMeans Unit Cost (2010$CND)	Unit cost ($CND) - other source	Units	Total ($CND)	Assumptions/Notes
	30,000 lb grader, 300 HP dozer, 25 T vibratory roller, truck tractor & water tank trailer (equipment)	$1.20		$/m^2	$1,200.00	
Compaction test	Proctor test				$0.00	Assume supplier provides curve, so not required.
	Nuclear density test	$42.81		$/test	$214.05	Assume 5 tests
Asphalt	Plant mix asphalt, wearing course, 50 mm thick (material)	$18.37		$/m^2	$18,370.00	60 m x 33.34 m = 2000 m2
	1 foreman, 7 labourers, 4 equipment operators (labour)	$1.02		$/m^2	$1,020.00	
	130 HP asphalt paver, 2 10T tandem rollers, 1 12T pneumatic whl roller (equipment)	$0.61		$/m^2	$610.00	
	Hauling in a 13.76 m^3 truck (including truck & driver)	$172.92		$/hr	$864.60	Assume cycle time of 1h, assumed a 18 cy (13.76 m^3) / 25T ton truck. The vol of asphalt required is 50 mm x 1000 m^2 = 50 m^3. If the compacted density of asphalt is 145 lb/cu ft (2322 kg/m^3), then we need 50 m^3 x 2322 kg/m^3 = 116.1 T. If each truck load takes 25 T, we need 4.6 (i.e. 5) truck loads. Therefore 5 truck hours.
	Asphalt lab test		$200.00	$/test	$200.00	For the 1000 m^2 parking lot, we need 116.1 T. Thus, assume just 1 test.
	Asphalt nuclear density tests		$60.00	$/hr	$180.00	For this 1000 m^2 parking lot, the asphalt paving productivity is 5305m^2 per day according to RSMeans which is lower than other sources. Assume 3 hours.
Striping		$0.46		$/m^2	$460.00	
SUBTOTAL					**$42,138.72**	
Fees						
Project overhead		10.00%		% of sub total	$4,213.87	
TOTAL					**$46,353**	

APPENDIX B:

Maintenance Costs

Table B1: Bioretention maintenance yearly costs

Maintenance Task	Frequency	Full Infiltration	Partial or No Infiltration
Watering	Year 1: Weekly first 2 months, bi-weekly May to August	$302	$302
	Year 2: 10% of plants that are new, weekly for first 2 months, biweekly May-August	$212	$212
	Year 3: Biweekly May-August	$20	$20
Inspection	Years 1 & 2: 4.5 times per year	$212	$212
	2.5 times per year in subsequent years	$118	$118
Remove litter and debris	6 times per year	$120	$120
Remove Sediment	Every 2 years, or as needed	$912	$912
	After year 2	$362	$362
Prune	Annually or as needed	$58	$58
Weed	6 times per year	$120	$120
Add mulch to maintain 75 mm	Replace every 3 years	$980	$980
Restore lost vegetation	10% in year 2	$437	$437
Unclog underdrain	Every 10 years	$0	$77
Average per year		**$945**	**$952**

Table B2: Bioretention rehabilitation

Item	Full, Partial or No Infiltration
Remove all plants	$137
Install new plants	$4,367
Install new filter media	$1,738
Till	$103
TOTAL	**$6,345**

Table B3: Permeable pavement maintenance yearly costs

Maintenance Task	Frequency	Full Infiltration	Partial or No Infiltration
Surface sweeping with vacuum	Every 2 years	$582	$582
Restriping	Every 3 years	$460	$460
Pave replacement (10 pavers)	Every 8 years	$57	$57
Clean out pipes	Every 10 years	$0	$38
Average per year		**$433**	**$436**

Table B4: Permeable pavement rehabilitation

Item	**Full, Partial or No Infiltration**
Removal of Pavers and Stone	
Remove pavers	$1,625
Remove No. 8, and top 2" of No.57 stone	$2,057
Cost of removal at year 30	**$3,682**
Installation of New Pavers and Stone	
Erosion and sediment control	$600
Mobilization & demobilization	$1,516
Base, 50 mm deep	$3,440
Compaction test	$86
Plastic edge restraints	$709
Bedding & pavers	$56,860
Striping	$460
Cost of installation at year 30	**$63,670**
SUBTOTAL	$67,35
Clean up	$6,735
TOTAL	**$74,088**

Table B5: Infiltration trenches yearly costs

Maintenance Task	**Frequency**	**Roof Only**	**Road & Roof**
Catchbasin cleanout	Once a year for roof runoff only design	$75	$0
Vacuum sediment & oil from hydrodynamic separator	Annually for parking lot runoff design	$0	$1,200
Soil Test	At 8 years for parking lot runoff design	$0	$550
Remove & replace filter cloth inner lining from perforated pipe. Test & dispose of sediment.	Once every 8 years for parking lot runoff design	$0	$750
Average per year		**$74**	**$1,277**

Table B6: Infiltration chambers yearly costs

Maintenance task	**Frequency**	**Roof Only**	**Road & Roof**
Catchbasin cleanout	Once a year for Roof Runoff only design	$75	$0
Vacuum sediment & oil from hydrodynamic separator	Annually	$0	$1,200
Jet vac & vacuum sediment from isolator row of infiltration chambers	Once every 8 years	$0	$300
Average per year		**$74**	**$1,212**

Table B7: Enhanced grass swales yearly costs

Maintenance task	Frequency	Curb/Filter sock/Rock check dam
Watering	Year 1: Weekly first 2 months, bi-weekly May to August	$767
	Year 2: 10% of plants that are new, weekly for first 2 months, biweekly May-August	$534
	Year 3: Biweekly May-August	$51
Inspection	Years 1 & 2: 4.5 times per year	$212
	2.5 times per year in subsequent years	$118
Remove litter and debris	Years 1 & 2: 4.5 times per year	$90
	2.5 times per year in subsequent years	$50
Remove sediment	Every 2 years, or as needed	$912
	After year 2	$362
Restore lost vegetation	In Year 2	$66
Mowing	Once a month, as as needed May to September	$106
Average per year		**$500**

Table B8: Rainwater harvesting yearly costs

Maintenance Task	Frequency	Concrete Tank Outdoor	Plastic Tank Indoor
Cleaning in-line filter	Annually	$75	$75
Inspection	Annually	$100	$100
Cleaning out tank	Every 10 years	$1,200	$1,200
Replacing pump	Every 10 years	$2,485	$2,485
Replacing pressure tank	Every 10 years	$3,431	$3,431
Average per year		**$744**	**$863**
Rehabilitation (replace plastic tank)	Every 40 years	n/a	$7,170

Table B9: Extensive greenroof maintenance yearly costs

Maintenance Task	Frequency	Cheap	Expensive
Watering	Year 1: Cheap case – once or twice a day until establishment (14 weeks), then once a week for 2.5 months	$15,800	$0
	Year 2: Cheap case – once every 2-3 weeks for 4 months	$700	$0
	Year 3: Cheap case – once every 2-3 weeks for 4 months	$700	$0
Weeding	Year 1: Cheap case – every other week for 2 months, then once a month for 4 months Expensive case - Once	$8,640	$1,080
	Year 2: Cheap case – once a month for 6 months Expensive case – ½ of area once	$6,480	$540
	Year 3: Cheap case – three times Expensive case – ½ of area once	$3,240	$540
	Subsequent years: Both case – ½ of area once	$540	$540
Plant replacement (10%)	Every 40 years	$2,080	$2,080
Check drains, flashing, membrane	Twice a year	$100	$100
Test Membrane	Every 5 years	$3,000	$5,000
Membrane repair of small leak	Every 5 years after 10 years	$762	$762
Average per year		**$9495**	**$13.985**

Table B10: Extensive greenroof rehabilitation

Item	Cheap	Expensive
Remove sedum, growing medium & stone[1]	$45,470	$68,205
Remove drainage layer[1]	$10,505	$10,505
Remove insulation[1]	$27,034	$27,034
Remove TPO/EPDM[1]	$13,036	$13,036
Chute	$4,731	$12,617
Cost of demolition	**$100,776**	**$131,397**
Cost of new greenroof	**$210,253**	**$429,918**
Subtotal	$311,029	$561,315
Project overhead	$31,103	$56,131
TOTAL	**$342,132**	**$617,446**

Notes: [1]Includes carrying across roof and disposal

Table B11: Asphalt yearly costs (used for comparative analysis)

Maintenance Task	Frequency	Yearly cost
Sealcoat	Every 3 years	$2,900
Cleaning surface prior to sealcoating	Every 3 years	$220
Restriping (after sealcoat)	Every 3 years	$460
Crack filling, pothole filling, patches	Ongoing as needed	$1,000
Average per year		$2,146

Table B12: Asphalt rehabilitation (used for comparative analysis)

Item	Total cost
Remove asphalt	$6,470
Regrading, compacting as necessary	$490
New asphalt	$21,245
Striping	$460
Cost of rehabilitation at 25 years	**$28,665**
Project overhead	$2,867
Overall cost of rehabilitation at 25 years	**$31,532**

APPENDIX C:

Life Cycle Maintenance Costs

Table C1: Bioretention

Maintenance Task	Full Infiltration	Partial or No Infiltration
Water	$534	$534
Inspection	$6,088	$6,088
Litter	$6,000	$6,000
Sediment	$9,600	$9,600
Prune	$2,900	$2,900
Weed	$6,000	$6,000
Mulch	$15,680	$15,680
Vegetation	$437	$437
Underdrain	$0	$385
Rehab	$7504	$7504
TOTAL	**$54,743**	**$55,128**

Table C2: Permeable pavement

Maintenance Task	Full Infiltration	Partial or No Infiltration
Vacuum sweep	$13,968	$13,968
Replace pavers	$339	$339
Clean out pipes	$0	$154
Restriping	$7,360	$7,360
Rehab	$72,990	$72,990
TOTAL	**$94,657**	**$94,811**

Table C3: Infiltration trenches

Maintenance Task	Roof Only	Road & Roof
Cleanout catchbasin	$3,675	$0
Clean-out hydrodynamic separator	$0	$58,800
Replace filter cloth & dispose sediment	$0	$4,500
Test sediment	$0	$550
TOTAL	**$3,675**	**$63,850**

Table C4: Infiltration chambers

Maintenance Task	Roof Only	Road & Roof
Cleanout catchbasin	$3,675	$0
Clean-out separator	$0	$58,800
Clean-out infiltration chamber	$0	$1,800
TOTAL	**$3,675**	**$60,600**

Table C5: Enhanced grass swales

Maintenance Task	Curb/Filter sock/Rock check dam
Water	$1,351
Inspection	$6,088
Litter	$2,580
Remove sediment	$9,600
Restore vegetation	$66
Mowing	$5,300
TOTAL	**$24,985**

Table C6: Rainwater harvesting

Maintenance Task	Concrete Tank	Plastic Tank
Cleaning in-line filter	$3,750	$3,750
Inspection	$5,000	$5,000
Cleaning out tank	$4,800	$4,800
Replacing pump & pressure tank	$23,664	$23,664
Replacement	n/a	$5,970
TOTAL	**$37,214**	**$43,184**

Table C7: Extensive greenroof

Maintenance Task	Cheap	Expensive
Water	$17,200	$0
Weeding	$43,740	$27,540
Plant replacement	$2,080	$2,080
Check drains, flashing, membrane	$5,000	$5,000
Test membrane	$27,000	$45,000
Repair membrane, small leak	$6,096	$6,096
Replacement	$373,628	$613,542
TOTAL	**$474,744**	**$699,258**

Table C8: Asphalt (used for comparative analysis)

Maintenance Task	Asphalt
Clean, sealcoat and restriping	$57,280
Crack filling, pothole filling and patching	$50,000
Rehabilitation	$26,951
TOTAL	**$134,231**

APPENDIX

B

Stormwater Management Calculations

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Subject **Rainfall Data**

2. Rainfall data

Stormwater management facilities should be designed based on the IDF tables developed by Environment Canada for Barrie WPCC based on rain gauge data for the period 1979 - 2003 including a 15% increase in rainfall intensity data to account for climate change. The adjusted Chicago distribution parameters for different return periods are provided below

Rainfall parameters

Return Period (Year)	2	5	10	25	50	100
A	678.085	853.608	975.865	1146.275	1236.152	1426.41
B	4.699	4.699	4.699	4.922	4.699	5.273
C	0.781	0.766	0.76	0.757	0.751	0.759

City of Barrie 4-hr Chicago Storm Hyetographs (Adjusted to Account for Climate Change)

Time (min)	Intensity (mm/hr)					
	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
0	0.00	0.00	0.00	0.00	0.00	0.00
10	2.47	3.57	4.32	5.22	5.93	6.41
20	2.82	4.07	4.91	5.94	6.74	7.29
30	3.31	4.76	5.73	6.93	7.85	8.52
40	4.05	5.79	6.96	8.42	9.50	10.36
50	5.30	7.53	9.03	10.91	12.27	13.45
60	7.98	11.20	13.36	16.13	18.04	19.96
70	18.78	25.64	30.27	36.37	40.22	45.22
80	83.11	108.92	126.55	148.15	164.22	180.15
90	24.57	33.31	39.22	47.06	51.92	58.54
100	13.01	17.99	21.35	25.72	28.58	31.96
110	9.01	12.60	15.01	18.11	20.23	22.45
120	6.97	9.82	11.74	14.17	15.88	17.52
130	5.73	8.12	9.72	11.74	13.20	14.50
140	4.89	6.96	8.35	10.09	11.37	12.44
150	4.28	6.12	7.35	8.89	10.03	10.94
160	3.82	5.48	6.59	7.96	9.00	9.80
170	3.46	4.97	5.99	7.24	8.19	8.90
180	3.17	4.56	5.50	6.65	7.53	8.16
190	2.93	4.22	5.09	6.15	6.98	7.56
200	2.72	3.93	4.74	5.74	6.51	7.04
210	2.55	3.68	4.45	5.38	6.11	6.60
220	2.39	3.47	4.19	5.08	5.77	6.22
230	2.26	3.28	3.97	4.80	5.46	5.89
240	2.15	3.12	3.77	4.57	5.19	5.59
Depth (mm)	**36.96**	**50.52**	**59.69**	**71.24**	**79.45**	**87.58**

A	678.085	853.608	975.865	1146.275	1236.152	1426.408
B	4.699	4.699	4.699	4.922	4.699	5.273
C	0.781	0.766	0.760	0.757	0.751	0.759

Storm Event	Depth (mm)	
	12-hr SCS (no climate change)	12-hr SCS (climate change)
2-year	40.8	46.8
5-year	56.4	64.8
10-year	66.0	75.6
25-year	79.2	91.2
50-year	88.8	102.0
100-year	98.4	112.8
Regional (Hazel)	212	

Subject

Pre-Development Conditions Time to Peak

Airport Equation To be used if "C" value is less than or equal to 0.4

$$t_c = 3.26 * (1.1 - C) * L^{0.5} * S_w^{-0.33}$$

Where: t_c = time of concentration, minutes
C = runoff coefficient
L = watershed length, m
S_w = watershed slope, %

(

Catchment Name	Max Ele.	Minimum Ele,	L	Slope %	C	Tc	TP
Catchment 101	275	226	2335	2.10	0.2	1.85	1.23
Catchment 102	237	224.7	980.5	1.25	0.2	1.42	0.95
Catchment 103	272	222.8	4350	1.13	0.2	3.10	2.06
Catchment 104	270.5	223.99	3271	1.42	0.20	2.49	1.66
Catchment 105	236.5	222.82	303	4.51	0.20	0.52	0.35
Catchment 106-1	253.5	226.15	787	3.48	0.20	0.91	0.61
Catchment 107	255.5	229.30	1292	2.03	0.20	1.39	0.93
Catchment 108	275	235.71	4287.00	0.92	0.20	3.30	2.20
Catchment 109	248	241.00	296.00	2.36	0.20	0.63	0.42
Catchment 110	250	227.30	1103.00	2.06	0.20	1.28	0.85
Catchment 111	236.5	230.90	1576.00	0.36	0.20	2.73	1.82
Catchment 112	255	245.56	3146.00	0.30	0.20	4.08	2.72

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Subject **Pre-development Conditions Road Drainage Areas**

Pre-development Area Breakdown

Catchment Name	Area (ha)	Road Area (ha)	TIMP (%)	XIMP (%)	Road Imp (%)	Outlet name
Catchment 101	182	N.A	23	23	N.A	(1800 mm and 900mm diameter Existing Culverts)
Catchment 101-1	42	N.A	35	35	N.A	
Catchment 1001L (R)	N.A	0.2100	N.A	N.A	79	
Catchment 1001R (R)	N.A	0.2300	N.A	N.A	78	
Catchment 102	45	N.A	0	0	N.A	(500 mm diameter Existing Culvert)
Catchment 1002L (R)	N.A	0.7300	N.A	N.A	71	
Catchment 1002R (R)	N.A	0.8300	N.A	N.A	75	
Catchment 103	384	N.A	0	0	N.A	(1100mm x 1500 mm diameter Existing Culvert)
Catchment 1003L (R)	N.A	0.3800	N.A	N.A	66	
Catchment 1003R (R)	N.A	0.3900	N.A	N.A	79	
Catchment 104	242	N.A	0	0	N.A	(800mm diameter Existing Culvert)
Catchment 1004L (R)	N.A	0.3500	N.A	N.A	69	
Catchment 1004R (R)	N.A	0.3800	N.A	N.A	74	
Catchment 105	135	N.A	0	0	N.A	(1200mm and 800 mm diameters Existing Culverts)
Catchment 1005L (R)	N.A	0.3700	N.A	N.A	66	
Catchment 1005R (R)	N.A	0.3600	N.A	N.A	62	
Catchment 106	29	N.A	0	0	N.A	(500mm x 700 mm diameter Existing Culverts)
Catchment 1006L (R)	N.A	0.6500	N.A	N.A	65	
Catchment 1006R (R)	N.A	0.6600	N.A	N.A	62	
Catchment 107	59.6	N.A	0	0	N.A	(800mm diameter Existing Culvert)
Catchment 1007L (R)	N.A	0.7200	N.A	N.A	60	
Catchment 1007R (R)	N.A	0.7400	N.A	N.A	71	
Catchment 108-1	207	N.A	0	0	N.A	(700mm x 1000 mm diameter Existing Culverts)
Catchment 1008-L	N.A	0.21	N.A	N.A	52	
Catchment 1008-R	N.A	0.16	N.A	N.A	87	
Catchment 108-2	207	N.A	0	0	N.A	(900mm diameter Existing Culvert)
Catchment 1008-L	N.A	0.21	N.A	N.A	52	
Catchment 1008-R	N.A	0.21	N.A	N.A	87	
Catchment 109	6	N.A	0	0	N.A	(450mm diameter Existing Culvert)
Catchment 1009L	N.A	0.50	N.A	N.A	74	
Catchment 1009R	N.A	0.63	N.A	N.A	81	
Catchment 110	178	N.A	38	38	N.A	(Existing Bridge 6 m x 3.2 m)
Catchment 1100 L	N.A	0.91	N.A	N.A	55	
Catchment 1100R	N.A	0.88	N.A	N.A	72	
Catchment 111	109	N.A	0	0	N.A	Existing Culvert
Catchment 1110-L	N.A	1.06	N.A	N.A	59	Existing Culvert
Catchment 1110-R	N.A	0.97	N.A	N.A	78	Existing Culvert
Catchment 112	192	N.A	0	0	N.A	Existing Culvert
Catchment 1120-L	N.A	1.21	N.A	N.A	68	Existing Culvert
Catchment 1120-R	N.A	1.22	N.A	N.A	69	Existing Culvert
Total		15.29	68.1			

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Subject: Post-Development Drainage Areas and LID Units Footprint Areas

Post-Development Area Breakdown

Catchment Name	Road Catchment Area (ha)	TIMP (%)	XIMP (%)	LID Footprint Area (ha)	Total Pervious Area (ha)	Outlet name
Catchment 2001.1(L)- Context 3	0.100	90	90	0.006	0.01	Existing storm pipe
Catchment 2001.1 R- Context 3	0.099	79	79	0.011	0.02	
Catchment Name	**Road Catchment Area (ha)**	**TIMP (%)**	**XIMP (%)**	**LID Footprint Area (ha)**	**Total Pervious Area (ha)**	**Outlet name**
Catchment 2001.2(L)- Context 1	0.11	95	95	0.01	0.01	(1800 mm and 900mm diameter Existing Culverts)
Catchment 2001.2(R)- Context 1	0.13	96	96	0.01	0.01	
Catchment 2002L (R) -Context 1	0.70	94	94	0.044	0.08	(500 mm diameter Existing Culvert)
Catchment 2002R (R) (Context 1)	0.80	95	95	0.04	0.12	
Catchment 2003L (R) (Context 1)	0.43	90	90	0.0167	0.04	(1100mm x 1500 mm diameter Existing Culvert)
Catchment 2003R (R) (Context 1)	0.47	87	87	0.04	0.06	
Catchment 2004L (R) (Context 1)	0.35	89	89	0.015	0.04	(800mm diameter Existing Culvert)
Catchment 2004R (R) (Context 1)	0.36	85	85	0.05	0.05	
Catchment 2005L (R) (Context 1)	0.28	90	90	0.01	0.03	(1200mm and 800 mm diameters Existing Culverts)
Catchment 2005R (R) (Context 1)	0.29	78	78	0.03	0.06	
Catchment 2006L (R) (Context 1)	0.65	88	88	0.05	0.08	(500mm x 700 mm diameter Existing Culverts)
Catchment 2006R (R) (Context 1)	0.73	80	80	0.03	0.15	
Catchment 2007L (R) (Context 1)	0.58	85	85	0.06	0.09	(800mm diameter Existing Culvert)
Catchment 2007R (R) (Context 1)	0.64	84	84	0.07	0.11	
Catchment 20081-L (Context 1)	0.07	84	84	0.007	0.011	700mm x 1000 mm diameter Existing Culverts and 900mm diameter Existing Culvert
Catchment 20081-R (Context 1)	0.07	83	83	0.006	0.012	
Catchment Name	**Road Catchment Area (ha)**	**TIMP (%)**	**XIMP (%)**	**LID Footprint Area (ha)**	**Total Pervious Area (ha)**	
Catchment 20082-L (Context 3)	0.38	70	70	0.0434	0.117	
Catchment 20082-R (Context 3)	0.39	59	59	0.043	0.160	
Catchment 2009L (Context 3)	0.40	77	77	0.032	0.093	(450mm diameter Existing Culvert)
Catchment 2009R (Context 3)	0.39	77	77	0.037	0.091	
Catchment 2010 L (Context 3)	0.25	82	82	0.02	0.04	(Existing Bridge 6 m x 3.2 m)
Catchment 2010R (Context 3)	0.25	82	82	0.01	0.04	
Catchment Name	**Road Catchment Area (ha)**	**TIMP (%)**	**XIMP (%)**	**LID Footprint Area (ha)**	**Total Pervious Area (ha)**	
Catchment 2010 L (Context 1)	0.47	74	74	0.033	0.12	
Catchment 2010R (Context 1)	0.47	86	86	0.02	0.07	
Catchment 2010 L Total (Context 1, 3)	0.72	77				
Catchment 2010 R Total (Context 1, 3)	0.72	85				
Catchment 2011 L (Context 3,2)	0.87	86	86	0.05	0.12	(450mm diameter Existing Culvert)
Catchment 2011 R (Context 3,2)	0.90	85	85	0.06	0.14	
Catchment 2012-L (Context 2)	1.11	56	56	0.07	0.49	Existing 400 mm Culvert
Catchment 2012-R (Context 2)	1.11	93	93	0.08	0.08	
Total	**15.289**	**82**				

Ratios of impervious drainage areas to bioswales	**14.4**
Ratios of impervious drainage areas to Chambers	**10.7**

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Required Storage Volumes within LID units to meet Stormwater Management Control

Catchment Name	Infiltration Gallery Footprint Area (ha)	LID Required Storage Volume for Quality Control (m^3)	Infiltration Chamber Required Storage Volume to retain 12.5 mm of rainfall depth (m^3)	Infiltration Gallery Provided Volume (m)	Unit Depth (m)
Catchment 2001.1(L)- Context 3	0.006	5	11.2	27.7	1.2
Catchment 2001.1 R- Context 3	0.011	4	9.8	31.0	0.7
Catchment Name	**LID Footprint Area (ha)**	**LID Required Storage Volume for Quality Control (m^3)**	**LID Required Storage Volume to retain 12.5 mm of rainfall depth (m3)**	**LID Provided Volume (m)**	**Unit Depth (m)**
Catchment 2001.2(L)- Context 1	0.01	8	13.1	39	1.9
Catchment 2001.2(R)- Context 1	0.01	1.25	15.6	30.9	1.2
Catchment 2002 (L)- Context 1	0.04	46.39	82.0	254.6	1.2
Catchment 2002(R)- Context 1	0.04	54.83	94.5	268.9	1.2
Catchment 2003 (L)- Context 1	0.02	23.1	48.2	166	2.3
Catchment 2003(R)- Context 1	0.04	21.1	50.9	228	1.2
Catchment 2004 (L)- Context 1	0.015	18.1	38.9	111	1.6
Catchment 2004(R)- Context 1	0.05	14.9	38.4	269	1.2
Catchment 2005 (L)- Context 1	0.008	15	31.4	64	1.5
Catchment 2005(R)- Context 1	0.03	11	28.3	185	1.2
Catchment 2006 (L)- Context 1	0.05	31	71.2	291	1.2
Catchment 2006 (R)- Context 1	0.03	28	72.9	240	1.9
Catchment 2007 (L)- Context 1	0.06	23	61.7	358	1.2
Catchment 2007 (R)- Context 1	0.64	23	66.8	400	1.2
Catchment 20081 (L)- Context 1	0.01	2.54	7.1	45	1.6
Catchment 20082 (L)- Context 3	0.04	13.34	33.3	173	1.00
Catchment 2008 (L)- Context 1&3	Total	**16**	40.3	**219**	
Catchment 20081 (R)- Context 1	0.006	3	7.6	36	1.3
Catchment 20082 (R)- Context 3	0.04	12	28.3	172	1.00
Catchment 2008 (R)- Context 1&3	Total	**161**		**208**	
Catchment 2009 (L)- Context 3	0.032	15	38.4	63	0.50
Catchment 2009 (R)- Context 3	0.037	15	37.4	67	0.50
Catchment 20101 (L)- Context 3	0.022	10	25.6	43	0.50
Catchment 20102 (L)- Context 1	0.033	17	43.8	191	1.2
Catchment 2010 (L)	Total	27	69.4	235	
Catchment 20101(R)- Context 3	0.027	10	25.6	140	1.3
Catchment 20102 (R)- Context 1	0.024	19	76.1	152	1.5
Catchment 2010 (R)	Total	29		292	
Catchment 2011 (L)- Context 3,2	0.053	30	93.3	258	1.2
Catchment 2011 (R)- Context 3,2	0.056	36	95.2	268	1.2
Catchment 2012 (L)- Context 2	0.0693	34	77.5	314	1.2
Catchment 2012 (R)- Context 2	0.077	47	129.1	388	1.3
Total				5285	

Table C 2: Approximate relationships between hydraulic conductivity, percolation time and infiltration rate

Hydraulic Conductivity, K_{fs} (centimetres/second)	Percolation Time, T (minutes/centimetre)	Infiltration Rate, 1/T (millimetres/hour)
0.1	2	300
0.01	4	150
0.001	8	75
0.0001	12	50
0.00001	20	30
0.000001	50	12

Source: Ontario Ministry of Municipal Affairs and Housing (OMMAH). 1997. Supplementary Guidelines to the Ontario Building Code 1997. SG-6 Percolation Time and Soil Descriptions. Toronto, Ontario.

Percolation Rate:				
	BH3	0.0100	cm/s	150.0
	BH12	0.001	cm/s	75.0
	BH1	0.000001	cm/s	50.0
	BH5	0.00000001	cm/s	

Table C 3: Safety correction factors for calculating design infiltration rates

Ratio of Mean Measured Infiltration Rates[1]	Safety Correction Factor[2]
≤ 1	2.5
1.1 to 4.0	3.5
4.1 to 8.0	4.5
8.1 to 16.0	6.5
16.1 or greater	8.5

Source: Wisconsin Department of Natural Resources. 2004. Conservation Practice Standards. Site Evaluation for Stormwater Infiltration (1002). Madison, WI.

	Ratio	Saftey Factor	Infiltration Rate	
BH3	12.50	6.50	23.08	mm/hr
BH12	6.25	4.50	33.33	
BH1	1.0000	2.50	4.80	
BH5	NA			

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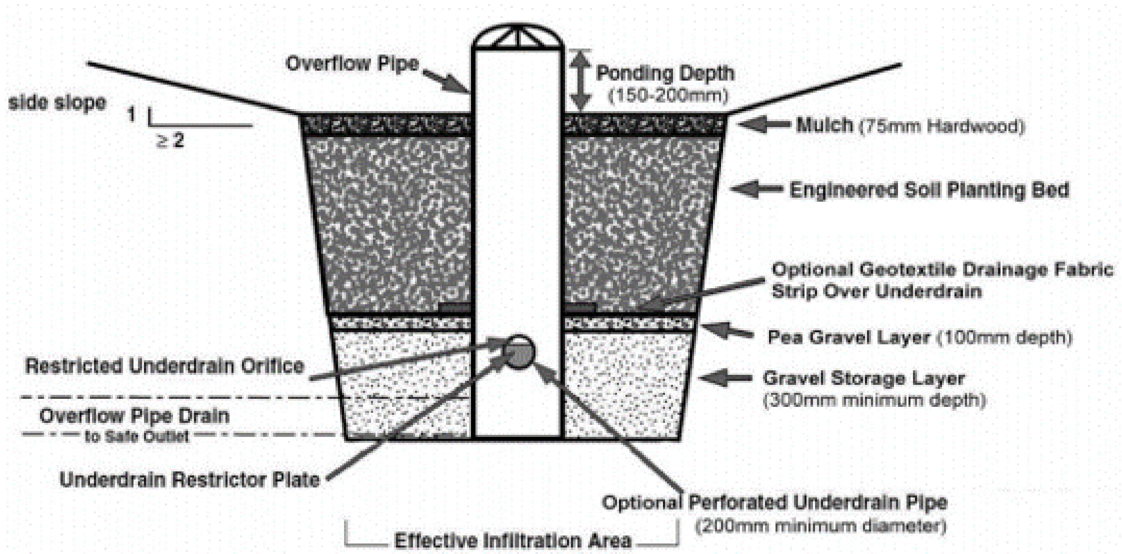
Proposed Bioswale Systems Total Depth, Provided Storage Volumes and Draw Down Time



Bioswale

Bioswale Catchment 2001.2 (L):		Bioswale Catchment 2001.2 (R):	
Base Area Catchment 2001.2 (L)	**56.00 m²**	Base Area Catchment 2001.2 (R)	**55.00 m²**
mulch depth	0.075 m	**mulch depth**	0.075 m
Porosity of mulch	70%	Porosity of mulch	70%
Storage in mulch l	2.940 m³	Storage in mulch l	2.888 m³
Filter Media Depth	1.40 m	**Filter Media Depth**	0.65 m
Porosity of Filter Media	20%	Porosity of Filter Media	20%
Storage in voids of filter media	16 m³	Storage in voids of filter media	7 m³
Percolation rate within gravel layer	300.0 mm/hr	Percolation rate within gravel layer	300.0 mm/hr
Drawdown time within gravel layer (filter media and chocker course layer were included)	**5.0 hr**	Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.5 hr**
Ponding Depth	0.2 m	**Ponding Depth**	0.2 m
Surface Storage	11.2 m³	Surface Storage	11.0 m³
Percolation rate within filter media layer	25.0 mm/hr	Percolation rate within filter media layer	25.0 mm/hr
Drawdown time within filter media (ponding depth and mulch later were included)	**11.0 hr**	Drawdown time within filter media (ponding depth and mulch later were included)	**11.0 hr**
Gravel layer depth	0.30 m	**Gravel layer depth**	0.35 m
Porosity of Gravel layer	40%	Porosity of Gravel layer	40%
Storage in voids of gravel	**6.7 m³**	Storage in voids of gravel	**7.7 m³**
Percolation rate within native soil	33.3 mm/hr	Percolation rate within native soil	33.3 mm/hr
Drawdown time within native soil	**9.0 hr**	**Drawdown time within native soil**	**10.5 hr**
Chocker course	0.1 m	**Chocker course**	0.1 m
Porosity of Chocker course	40%	Porosity of Chocker course	40%
Storage inchocker course layer	2.2 m³	Storage inchocker course layer	2.2 m³
Total depth of system	1.9 m	Total depth of system	1.18 m
Total Storage	**39 m³**	**Total Storage**	**31 m³**
Total drawdown time	**25.0 hr**	**Total drawdown time**	**24.0 hr**

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Proposed Bioswale Systems Total Depth, Provided Storage Volumes and Draw Down Time

Bioswale

Bioswale Catchment 2002 (L):			Bioswale Catchment 2002(R):		
Base Area Catchment 2002 (L)	**437.00**	**m²**	Base Area Catchment 2002 (R)	**439.00**	**m²**
mulch depth	0.075	m	**mulch depth**	0.075	m
Porosity of mulch	70%		Porosity of mulch	70%	
Storage in mulch l	22.943	m³	Storage in mulch l	23.048	m³
Filter Media Depth	0.65	m	**Filter Media Depth**	0.50	m
Porosity of Filter Media	20%		Porosity of Filter Media	20%	
Storage in voids of filter media	57	m³	Storage in voids of filter media	44	m³
Percolation rate within gravel layer	300.0	mm/hr	Percolation rate within gravel layer	300.0	mm/hr
Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.5**	**hr**	Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.0**	**hr**
Ponding Depth	0.2	m	**Ponding Depth**	0.2	m
Surface Storage	87.4	m³	Surface Storage	87.8	m³
Percolation rate within filter media layer	25.0	mm/hr	Percolation rate within filter media layer	25.0	mm/hr
Drawdown time within filter media (ponding depth and mulch later were included)	**11.0**	**hr**	Drawdown time within filter media (ponding depth and mulch later were included)	**11.0**	**hr**
Gravel layer depth	0.40	m	**Gravel layer depth**	0.55	m
Porosity of Gravel layer	40%		Porosity of Gravel layer	40%	
Storage in voids of gravel	**69.9**	**m³**	Storage in voids of gravel	**96.6**	**m³**
Percolation rate within native soil	33.3	mm/hr	Percolation rate within native soil	33.3	mm/hr
Drawdown time within native soil	**12.0**	**hr**	**Drawdown time within native soil**	**16.5**	**hr**
Chocker course	0.1	m	**Chocker course**	0.1	m
Porosity of Chocker course	40%		Porosity of Chocker course	40%	
Storage inchocker course layer	17.5	m³	Storage inchocker course layer	17.6	m³
Total depth of system	1.23	m	Total depth of system	1.23	m
Total Storage	**255**	**m³**	**Total Storage**	**269**	**m³**
Total drawdown time	**25.5**	**hr**	**Total drawdown time**	**29.5**	**hr**

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Proposed Bioswale Systems Total Depth, Provided Storage Volumes and Draw Down Time

Bioswale

Bioswale Catchment 2003 (L):			Bioswale Catchment 2003 (R):		
Base Area Catchment 2003 (L)	**167.00**	**m²**	Base Area Catchment 2003 (R)	**399.00**	**m²**
mulch depth	0.075	m	**mulch depth**	0.075	m
Porosity of mulch	70%		Porosity of mulch	70%	
Storage in mulch l	8.768	m³	Storage in mulch l	20.948	m³
Filter Media Depth	1.40	m	**Filter Media Depth**	0.70	m
Porosity of Filter Media	30%		Porosity of Filter Media	20%	
Storage in voids of filter media	70	m³	Storage in voids of filter media	56	m³
Percolation rate within gravel layer	300.0	mm/hr	Percolation rate within gravel layer	300.0	mm/hr
Drawdown time within gravel layer (filter media and chocker course layer were included)	**5.0**	**hr**	Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.7**	**hr**
Ponding Depth	0.2	m	**Ponding Depth**	0.2	m
Surface Storage	33.4	m³	Surface Storage	79.8	m³
Percolation rate within filter media layer	25.0	mm/hr	Percolation rate within filter media layer	25.0	mm/hr
Drawdown time within filter media (ponding depth and mulch later were included)	**11.0**	**hr**	Drawdown time within filter media (ponding depth and mulch later were included)	**11.0**	**hr**
Gravel layer depth	0.70	m	**Gravel layer depth**	0.35	m
Porosity of Gravel layer	40%		Porosity of Gravel layer	40%	
Storage in voids of gravel	**46.8**	**m³**	Storage in voids of gravel	**55.9**	**m³**
Percolation rate within native soil	33.3	mm/hr	Percolation rate within native soil	33.3	mm/hr
Drawdown time within native soil	**21.0**	**hr**	**Drawdown time within native soil**	**10.5**	**hr**
Chocker course	0.1	m	**Chocker course**	0.1	m
Porosity of Chocker course	40%		Porosity of Chocker course	40%	
Storage inchocker course layer	6.7	m³	Storage inchocker course layer	16.0	m³
Total depth of system	2.28	m	Total depth of system	1.2	m
Total Storage	**166**	**m³**	**Total Storage**	**228**	**m³**
Total drawdown time	**37.0**	**hr**	**Total drawdown time**	**24.2**	**hr**

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Bioswale

Bioswale Catchment 2004 (L):		Bioswale Catchment 2004 (R):	
Base Area Catchment 2004 (L)	**150.00 m²**	Base Area Catchment 2004 (R)	**454.00 m²**
mulch depth	0.075 m	**mulch depth**	0.075 m
Porosity of mulch	70%	Porosity of mulch	70%
Storage in mulch l	7.875 m³	Storage in mulch l	23.835 m³
Filter Media Depth	0.75 m	**Filter Media Depth**	0.50 m
Porosity of Filter Media	25%	Porosity of Filter Media	20%
Storage in voids of filter media	28 m³	Storage in voids of filter media	45 m³
Percolation rate within gravel layer	300.0 mm/hr	Percolation rate within gravel layer	300.0 mm/hr
Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.8 hr**	Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.0 hr**
Ponding Depth	0.2 m	**Ponding Depth**	0.2 m
Surface Storage	30.0 m³	Surface Storage	90.8 m³
Percolation rate within filter media layer	25.0 mm/hr	Percolation rate within filter media layer	25.0 mm/hr
Drawdown time within filter media (ponding depth and mulch later were included)	**11.0 hr**	Drawdown time within filter media (ponding depth and mulch later were included)	**11.0 hr**
Gravel layer depth	0.65 m	**Gravel layer depth**	0.50 m
Porosity of Gravel layer	40%	Porosity of Gravel layer	40%
Storage in voids of gravel	**39.0 m³**	Storage in voids of gravel	**90.8 m³**
Percolation rate within native soil	33.3 mm/hr	Percolation rate within native soil	33.3 mm/hr
Drawdown time within native soil	**19.5 hr**	**Drawdown time within native soil**	**15.0 hr**
Chocker course	0.1 m	**Chocker course**	0.1 m
Porosity of Chocker course	40%	Porosity of Chocker course	40%
Storage inchocker course layer	6.0 m³	Storage inchocker course layer	18.2 m³
Total depth of system	1.58 m	Total depth of system	1.18 m
Total Storage	**111 m³**	**Total Storage**	**269 m³**
Total drawdown time	**33.3 hr**	**Total drawdown time**	**28.0 hr**

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Proposed Bioswale Systems Total Depth, Provided Storage Volumes and Draw Down Time

Bioswale

Bioswale Catchment 2005 (L):			Bioswale Catchment 2005 (R):		
Base Area Catchment 2005 (L)	**84.87**	**m²**	Base Area Catchment 2005 (R)	**313.00**	**m²**
mulch depth	0.075	m	**mulch depth**	0.075	m
Porosity of mulch	70%		Porosity of mulch	70%	
Storage in mulch l	4.456	m³	Storage in mulch l	16.433	m³
Filter Media Depth	0.40	m	**Filter Media Depth**	0.50	m
Porosity of Filter Media	20%		Porosity of Filter Media	20%	
Storage in voids of filter media	7	m³	Storage in voids of filter media	31	m³
Percolation rate within gravel layer	300.0	mm/hr	Percolation rate within gravel layer	300.0	mm/hr
Drawdown time within gravel layer (filter media and chocker course layer were included)	**1.7**	**hr**	Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.0**	**hr**
Ponding Depth	0.2	m	**Ponding Depth**	0.2	m
Surface Storage	17.0	m³	Surface Storage	62.6	m³
Percolation rate within filter media layer	25.0	mm/hr	Percolation rate within filter media layer	25.0	mm/hr
Drawdown time within filter media (ponding depth and mulch later were included)	**11.0**	**hr**	Drawdown time within filter media (ponding depth and mulch later were included)	**11.0**	**hr**
Gravel layer depth	0.95	m	**Gravel layer depth**	0.50	m
Porosity of Gravel layer	40%		Porosity of Gravel layer	40%	
Storage in voids of gravel	**32.3**	**m³**	Storage in voids of gravel	**62.6**	**m³**
Percolation rate within native soil	33.3	mm/hr	Percolation rate within native soil	33.3	mm/hr
Drawdown time within native soil	**28.5**	**hr**	**Drawdown time within native soil**	**15.0**	**hr**
Chocker course	0.1	m	**Chocker course**	0.1	m
Porosity of Chocker course	40%		Porosity of Chocker course	40%	
Storage inchocker course layer	3.4	m³	Storage inchocker course layer	12.5	m³
Total depth of system	1.53	m	Total depth of system	1.18	m
Total Storage	**64**	**m³**	**Total Storage**	**185**	**m³**
Total drawdown time	**41.2**	**hr**	**Total drawdown time**	**28.0**	**hr**

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Bioswale

Bioswale Catchment 2006 (L):			Bioswale Catchment 2006 (R):		
Base Area Catchment 2006 (L)	**491.00**	**m²**	Base Area Catchment 2006 (R)	**319.00**	**m²**
mulch depth	0.075	m	**mulch depth**	0.075	m
Porosity of mulch	70%		Porosity of mulch	70%	
Storage in mulch l	25.778	m³	Storage in mulch l	16.748	m³
Filter Media Depth	0.50	m	**Filter Media Depth**	1.10	m
Porosity of Filter Media	20%		Porosity of Filter Media	20%	
Storage in voids of filter media	49	m³	Storage in voids of filter media	70	m³
Percolation rate within gravel layer	300.0	mm/hr	Percolation rate within gravel layer	300.0	mm/hr
Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.0**	**hr**	Drawdown time within gravel layer (filter media and chocker course layer were included)	**4.0**	**hr**
Ponding Depth	0.2	m	**Ponding Depth**	0.2	m
Surface Storage	98.2	m³	Surface Storage	63.8	m³
Percolation rate within filter media layer	25.0	mm/hr	Percolation rate within filter media layer	25.0	mm/hr
Drawdown time within filter media (ponding depth and mulch later were included)	**11.0**	**hr**	Drawdown time within filter media (ponding depth and mulch later were included)	**11.0**	**hr**
Gravel layer depth	0.50	m	**Gravel layer depth**	0.60	m
Porosity of Gravel layer	40%		Porosity of Gravel layer	40%	
Storage in voids of gravel	**98.2**	**m³**	Storage in voids of gravel	**76.6**	**m³**
Percolation rate within native soil	33.3	mm/hr	Percolation rate within native soil	33.3	mm/hr
Drawdown time within native soil	**15.0**	**hr**	**Drawdown time within native soil**	**18.0**	**hr**
Chocker course	0.1	m	**Chocker course**	0.1	m
Porosity of Chocker course	40%		Porosity of Chocker course	40%	
Storage inchocker course layer	19.6	m³	Storage inchocker course layer	12.8	m³
Total depth of system	1.18	m	Total depth of system	1.88	m
Total Storage	**291**	**m³**	**Total Storage**	**240**	**m³**
Total drawdown time	**28.0**	**hr**	**Total drawdown time**	**33.0**	**hr**

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Bioswale

Bioswale Catchment 2007 (L):			**Bioswale Catchment 2007 (R):**		
Base Area Catchment 2007 (L)	**648.00**	**m²**	Base Area Catchment 2007 (R)	**698.00**	**m²**
mulch depth	0.075	m	**mulch depth**	0.075	m
Porosity of mulch	70%		Porosity of mulch	70%	
Storage in mulch l	34.020	m³	Storage in mulch l	36.645	m³
Filter Media Depth	0.70	m	**Filter Media Depth**	0.60	m
Porosity of Filter Media	20%		Porosity of Filter Media	20%	
Storage in voids of filter media	91	m³	Storage in voids of filter media	84	m³
Percolation rate within gravel layer	300.0	mm/hr	Percolation rate within gravel layer	300.0	mm/hr
Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.7**	**hr**	Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.3**	**hr**
Ponding Depth	0.2	m	**Ponding Depth**	0.2	m
Surface Storage	129.6	m³	Surface Storage	139.6	m³
Percolation rate within filter media layer	25.0	mm/hr	Percolation rate within filter media layer	25.0	mm/hr
Drawdown time within filter media (ponding depth and mulch later were included)	**11.0**	**hr**	Drawdown time within filter media (ponding depth and mulch later were included)	**11.0**	**hr**
Gravel layer depth	0.30	m	**Gravel layer depth**	0.40	m
Porosity of Gravel layer	40%		Porosity of Gravel layer	40%	
Storage in voids of gravel	**77.8**	**m³**	Storage in voids of gravel	**111.7**	**m³**
Percolation rate within native soil	33.3	mm/hr	Percolation rate within native soil	33.3	mm/hr
Drawdown time within native soil	**9.0**	**hr**	**Drawdown time within native soil**	**12.0**	**hr**
Chocker course	0.1	m	**Chocker course**	0.1	m
Porosity of Chocker course	40%		Porosity of Chocker course	40%	
Storage inchocker course layer	25.9	m³	Storage inchocker course layer	27.9	m³
Total depth of system	1.18	m	Total depth of system	1.18	m
Total Storage	**358**	**m³**	**Total Storage**	**400**	**m³**
Total drawdown time	**22.7**	**hr**	**Total drawdown time**	**25.3**	**hr**

Subject

Proposed Bioswale Systems Total Depth, Provided Storage Volumes and Draw Down Time

Bioswale

Bioswale Catchment 20081 (L):		Bioswale Catchment 20081 (R):	
Base Area Catchment 20081 (L)	**69.21 m²**	Base Area Catchment 20081 (R)	**61.12 m²**
mulch depth	0.075 m	**mulch depth**	0.075 m
Porosity of mulch	70%	Porosity of mulch	70%
Storage in mulch l	3.634 m³	Storage in mulch l	3.209 m³
Filter Media Depth	1.00 m	**Filter Media Depth**	0.70 m
Porosity of Filter Media	20%	Porosity of Filter Media	20%
Storage in voids of filter media	14 m³	Storage in voids of filter media	9 m³
Percolation rate within gravel layer	300.0 mm/hr	Percolation rate within gravel layer	300.0 mm/hr
Drawdown time within gravel layer (filter media and chocker course layer were included)	**3.7 hr**	Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.7 hr**
Ponding Depth	0.2 m	**Ponding Depth**	0.2 m
Surface Storage	13.8 m³	Surface Storage	12.2 m³
Percolation rate within filter media layer	25.0 mm/hr	Percolation rate within filter media layer	25.0 mm/hr
Drawdown time within filter media (ponding depth and mulch later were included)	**11.0 hr**	Drawdown time within filter media (ponding depth and mulch later were included)	**11.0 hr**
Gravel layer depth	0.40 m	**Gravel layer depth**	0.40 m
Porosity of Gravel layer	40%	Porosity of Gravel layer	40%
Storage in voids of gravel	**11.1 m³**	Storage in voids of gravel	**9.8 m³**
Percolation rate within native soil	23.1 mm/hr	Percolation rate within native soil	23.1 mm/hr
Drawdown time within native soil	**17.3 hr**	**Drawdown time within native soil**	**17.3 hr**
Chocker course	0.1 m	**Chocker course**	0.1 m
Porosity of Chocker course	40%	Porosity of Chocker course	40%
Storage inchocker course layer	2.8 m³	Storage inchocker course layer	2.4 m³
Total depth of system	1.58 m	Total depth of system	1.28 m
Total Storage	**45 m³**	**Total Storage**	**36 m³**
Total drawdown time	**32.0 hr**	**Total drawdown time**	**31.0 hr**

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Subject

Proposed Bioswale Systems Total Depth, Provided Storage Volumes and Draw Down Time

Bioswale

Bioswale Catchment 2010 (L):			Bioswale Catchment 2010 (R):		
Base Area Catchment 2010 (L)	**334.47**	**m²**	Base Area Catchment 2010 (R)	**240.00**	**m²**
mulch depth	0.075	m	**mulch depth**	0.075	m
Porosity of mulch	70%		Porosity of mulch	70%	
Storage in mulch l	17.560	m³	Storage in mulch l	12.600	m³
Filter Media Depth	0.60	m	**Filter Media Depth**	0.90	m
Porosity of Filter Media	20%		Porosity of Filter Media	20%	
Storage in voids of filter media	40	m³	Storage in voids of filter media	43	m³
Percolation rate within gravel layer	300.0	mm/hr	Percolation rate within gravel layer	300.0	mm/hr
Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.3**	**hr**	Drawdown time within gravel layer (filter media and chocker course layer were included)	**3.3**	**hr**
Ponding Depth	0.2	m	**Ponding Depth**	0.2	m
Surface Storage	66.9	m³	Surface Storage	48.0	m³
Percolation rate within filter media layer	25.0	mm/hr	Percolation rate within filter media layer	60.0	mm/hr
Drawdown time within filter media (ponding depth and mulch later were included)	**11.0**	**hr**	Drawdown time within filter media (ponding depth and mulch later were included)	**4.6**	**hr**
Gravel layer depth	0.40	m	**Gravel layer depth**	0.40	m
Porosity of Gravel layer	40%		Porosity of Gravel layer	40%	
Storage in voids of gravel	**53.5**	**m³**	Storage in voids of gravel	**38.4**	**m³**
Percolation rate within native soil	8.0	mm/hr	Percolation rate within native soil	8.0	mm/hr
Drawdown time within native soil	**50.0**	**hr**	**Drawdown time within native soil**	**50.0**	**hr**
Chocker course	0.1	m	**Chocker course**	0.1	m
Porosity of Chocker course	40%		Porosity of Chocker course	40%	
Storage inchocker course layer	13.4	m³	Storage inchocker course layer	9.6	m³
Total depth of system	1.18	m	Total depth of system	1.48	m
Total Storage	**191**	**m³**	**Total Storage**	**152**	**m³**
Total drawdown time	**63**	**hr**	**Total drawdown time**	**58**	**hr**

Subject

Proposed Bioswale Systems Total Depth, Provided Storage Volumes and Draw Down Time

Bioswale

Bioswale Catchment 2011 (L):			Bioswale Catchment 2011 (R):		
Base Area Catchment 2011 (L)	534.00	m²	Base Area Catchment 2011 (R)	555.00	m²
mulch depth	0.075	m	mulch depth	0.075	m
Porosity of mulch	70%		Porosity of mulch	70%	
Storage in mulch l	28.035	m³	Storage in mulch l	29.138	m³
Filter Media Depth	0.55	m	Filter Media Depth	0.55	m
Porosity of Filter Media	20%		Porosity of Filter Media	20%	
Storage in voids of filter media	59	m³	Storage in voids of filter media	61	m³
Percolation rate within gravel layer	300.0	mm/hr	Percolation rate within gravel layer	300.0	mm/hr
Drawdown time within gravel layer (filter media and chocker course layer were included)	2.2	hr	Drawdown time within gravel layer (filter media and chocker course layer were included)	2.2	hr
Ponding Depth	0.1	m	Ponding Depth	0.1	m
Surface Storage	53.4	m³	Surface Storage	55.5	m³
Percolation rate within filter media layer	25.0	mm/hr	Percolation rate within filter media layer	25.0	mm/hr
Drawdown time within filter media (ponding depth and mulch later were included)	8.0	hr	Drawdown time within filter media (ponding depth and mulch later were included)	8.0	hr
Gravel layer depth	0.45	m	Gravel layer depth	0.45	m
Porosity of Gravel layer	40%		Porosity of Gravel layer	40%	
Storage in voids of gravel	96.1	m³	Storage in voids of gravel	99.9	m³
Percolation rate within native soil	8.0	mm/hr	Percolation rate within native soil	8.0	mm/hr
Drawdown time within native soil	56.3	hr	Drawdown time within native soil	56.3	hr
Chocker course	0.1	m	Chocker course	0.1	m
Porosity of Chocker course	40%		Porosity of Chocker course	40%	
Storage inchocker course layer	21.4	m³	Storage inchocker course layer	22.2	m³
Total depth of system	1.18	m	Total depth of system	1.18	m
Total Storage	258	m³	Total Storage	268	m³
Total drawdown time	66	hr	Total drawdown time	66	hr

Subject **Proposed Bioswale Systems Total Depth, Provided Storage Volumes, Draw Down Time & Maintenance cost**

Bioswale

Bioswale Catchment 2012 (L):			Bioswale Catchment 2012 (R):		
Base Area Catchment 2012 (L)	**693.00**	**m²**	Base Area Catchment 2012 (R)	**773.00**	**m²**
mulch depth	0.075	m	**mulch depth**	0.075	m
Porosity of mulch	70%		Porosity of mulch	70%	
Storage in mulch l	36.383	m³	Storage in mulch l	40.583	m³
Filter Media Depth	0.70	m	**Filter Media Depth**	0.65	m
Porosity of Filter Media	20%		Porosity of Filter Media	20%	
Storage in voids of filter media	97	m³	Storage in voids of filter media	100	m³
Percolation rate within gravel layer	300.0	mm/hr	Percolation rate within gravel layer	300.0	mm/hr
Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.7**	**hr**	Drawdown time within gravel layer (filter media and chocker course layer were included)	**2.5**	**hr**
Ponding Depth	0.1	m	**Ponding Depth**	0.1	m
Surface Storage	69.3	m³	Surface Storage	77.3	m³
Percolation rate within filter media layer	25.0	mm/hr	Percolation rate within filter media layer	25.0	mm/hr
Drawdown time within filter media (ponding depth and mulch later were included)	**7.0**	**hr**	Drawdown time within filter media (ponding depth and mulch later were included)	**7.0**	**hr**
Gravel layer depth	0.30	m	**Gravel layer depth**	0.45	m
Porosity of Gravel layer	40%		Porosity of Gravel layer	40%	
Storage in voids of gravel	**83.2**	**m³**	Storage in voids of gravel	**139.1**	**m³**
Percolation rate within native soil	8.0	mm/hr	Percolation rate within native soil	8.0	mm/hr
Drawdown time within native soil	**37.5**	**hr**	**Drawdown time within native soil**	**56.3**	**hr**
Chocker course	0.1	m	**Chocker course**	0.1	m
Porosity of Chocker course	40%		Porosity of Chocker course	40%	
Storage inchocker course layer	27.7	m³	Storage inchocker course layer	30.9	m³
Total depth of system	1.18	m	Total depth of system	1.28	m
Total Storage	**314**	**m³**	**Total Storage**	**388**	**m³**
Total drawdown time	**47**	**hr**	**Total drawdown time**	**66**	**hr**

Bioswale Maintenance Cost

Total Bioswale Footprint Area (m^2)	Cost per 130 m2	Total Cost
7967.67	$952	$58,347.86

Infiltration Chamber Maintenance Cost

Total Bioswale Footprint Area (m^2)	Cost per 104.7 m2	Total Cost
2043.39	$1,212	$23,654.14

Subject **Drain Pipe Sizing Calculations**

Catchment 2001.1(L)- Context 3

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.041	m^3/s	0.041	0.049
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**150**	mm		
	A = Cross-section Area of Orifice (m^2)	0.018	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	0.425	m		
	Invert of Orifice	0.00	m		

Catchment 2001.1 R- Context 3

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.036	m^3/s	0.04	0.046
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**150**	mm		
	A = Cross-section Area of Orifice (m^2)	0.018	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	0.325	m		
	Invert of Orifice	h = Water Head above Centerli	m		

Catchment 2001.2 L-Context 1

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.084	m^3/s	0.045	0.053
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**150**	mm		
	A = Cross-section Area of Orifice (m^2)	0.018	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.800	m		
	Invert of Orifice	0.00	m		

Catchment 2001.2 R-Context 1

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.066	m^3/s	0.053	0.063
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**150**	mm		
	A = Cross-section Area of Orifice (m^2)	0.018	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.100	m		
	Invert of Orifice	0.00	m		

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Subject

Drain Pipe Sizing Calculations

Catchment 2002 L-Context 1

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
				0.285	0.339
Where,	Q_{100} =Flow Rate (m^3/s)	0.399	m^3/s		
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.038	m		
	Invert of Orifice	0.00	m		

Catchment 2002 R-Context 1

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
				0.321	0.381
Where,	Q_{100} =Flow Rate (m^3/s)	0.399	m^3/s		
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.038	m		
	Invert of Orifice	0.00	m		

Catchment 2003 L-Context 1

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.255	m^3/s	0.175	0.209
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**250**	mm		
	A = Cross-section Area of Orifice (m^2)	0.049	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	2.150	m		
	Invert of Orifice	#REF!	m		

Catchment 2003 R-Context 1

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.260	m^3/s	0.191	0.226
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**300**	mm		
	A = Cross-section Area of Orifice (m^2)	0.071	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.075	m		
	Invert of Orifice	0.00	m		

Subject **Drain Pipe Sizing Calculations**

Catchment 2004 L-Context 1

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
				0.17	0.35
Where,	Q_{100} =Flow Rate (m^3/s)	0.461	m^3/s		
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.388	m		
	Invert of Orifice	0.00	m		

Catchment 2004 R-Context 1

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.200	m^3/s	0.146	0.172
	C = Flow Coefficient for Orifice	0.63			
	d = Required Overflow Pipe Size (mm)	**300**	mm		
	A = Cross-section Area of Orifice (m^2)	0.071	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.025	m		
	Invert of Orifice	0.00	m		

Catchment 2005 L-Context 1

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.133	m^3/s	0.114	0.136
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**200**	mm		
	A = Cross-section Area of Orifice (m^2)	0.031	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.425	m		
	Invert of Orifice	0.00	m		

Catchment 2005 R-Context 1

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.254	m^3/s	0.115	0.135
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**300**	mm		
	A = Cross-section Area of Orifice (m^2)	0.071	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.025	m		
	Invert of Orifice	0.00	m		

Subject **Drain Pipe Sizing Calculations**

Catchment 2006 L-Context 1

$$Q = CA\sqrt{2gh}$$

		Value	Unit	12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.389	m^3/s	0.26	0.31
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	0.988	m		
	Invert of Orifice	0.00	m		

Catchment 2006 R-Context 1

$$Q = CA\sqrt{2gh}$$

		Value	Unit	12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.508	m^3/s	0.29	0.33
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.688	m		
	Invert of Orifice	0.00	m		

Catchment 2007 L-Context 1

$$Q = CA\sqrt{2gh}$$

		Value	Unit	12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.389	m^3/s	0.23	0.28
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	0.988	m		
	Invert of Orifice	0.00	m		

Catchment 2007 R-Context 1

$$Q = CA\sqrt{2gh}$$

		Value	Unit	12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.389	m^3/s	0.26	0.28
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	0.988	m		
	Invert of Orifice	0.00	m		

Subject

Drain Pipe Sizing Calculations

Catchment 20081 L-Context 1

$$Q = CA\sqrt{2gh}$$

		Value	Unit	12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.034	m^3/s	0.028	0.033
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**100**	mm		
	A = Cross-section Area of Orifice (m^2)	0.008	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.525	m		
	Invert of Orifice	0.00	m		

Catchment 20082 L-Context 1

$$Q = CA\sqrt{2gh}$$

		Value	Unit	12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.353	m^3/s	0.147	0.163
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	0.813	m		
	Invert of Orifice	0.00	m		

Catchment 20081 R -Context 1

$$Q = CA\sqrt{2gh}$$

		Value	Unit	12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.069	m^3/s	0.033	0.07
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**150**	mm		
	A = Cross-section Area of Orifice (m^2)	0.018	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.200	m		
	Invert of Orifice	0.00	m		

Catchment 20082 R-Context 1

$$Q = CA\sqrt{2gh}$$

		Value	Unit	12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.353	m^3/s	0.151	0.39
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	0.813	m		
	Invert of Orifice	0.00	m		

Subject **Drain Pipe Sizing Calculations**

Catchment 2009 L-Context 1

$$Q = CA\sqrt{2gh}$$

		Value	Unit	12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.219	m^3/s	0.157	0.179
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	0.313	m		
	Invert of Orifice	0.00	m		

Catchment 2009 R-Context 1

$$Q = CA\sqrt{2gh}$$

		Value	Unit	12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.219	m^3/s	0.25	0.296
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	0.313	m		
	Invert of Orifice	0.00	m		

Catchment 2010 L -Context 1

$$Q = CA\sqrt{2gh}$$

		Value	Unit	12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.389	m^3/s	0.284	0.325
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	0.988	m		
	Invert of Orifice	0.00	m		

Catchment 2010 R-Context 1

$$Q = CA\sqrt{2gh}$$

		Value	Unit	12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.444	m^3/s	0.38	0.449
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.288	m		
	Invert of Orifice	0.00	m		

Subject **Drain Pipe Sizing Calculations**

Catchment 2011 L-Context 1

12- hr SCS	4- hr Chicago Storm
0.331	0.364

$$Q = CA\sqrt{2gh}$$

Where,	Q_{100} =Flow Rate (m^3/s)	0.389	m^3/s
	C = Flow Coefficient for Orifice	0.80	
	d = Required Overflow Pipe Size (mm)	**375**	mm
	A = Cross-section Area of Orifice (m^2)	0.110	m^2
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2
	h = Water Head above Centerline of Orifice (m)	0.988	m
	Invert of Orifice	0.00	m

Catchment 2011 R-Context 1

12- hr SCS	4- hr Chicago Storm
0.356	0.409

$$Q = CA\sqrt{2gh}$$

Where,	Q_{100} =Flow Rate (m^3/s)	0.389	m^3/s
	C = Flow Coefficient for Orifice	0.80	
	d = Required Overflow Pipe Size (mm)	**375**	mm
	A = Cross-section Area of Orifice (m^2)	0.110	m^2
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2
	h = Water Head above Centerline of Orifice (m)	0.988	m
	Invert of Orifice	0.00	m

Catchment 2012 L -Context 1

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.389	m^3/s	0.398	0.417
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	0.988	m		
	Invert of Orifice	0.00	m		

Catchment 2012 R-Context 1

$$Q = CA\sqrt{2gh}$$

				12- hr SCS	4- hr Chicago Storm
Where,	Q_{100} =Flow Rate (m^3/s)	0.408	m^3/s	0.44	0.506
	C = Flow Coefficient for Orifice	0.80			
	d = Required Overflow Pipe Size (mm)	**375**	mm		
	A = Cross-section Area of Orifice (m^2)	0.110	m^2		
	g = Gravity Acceleration (m/s^2)	9.81	m/s^2		
	h = Water Head above Centerline of Orifice (m)	1.088	m		
	Invert of Orifice	0.00	m		

Subject **Water Qualiy Control**

Require long-term average removal of 80% TSS on an annual loading basis from all runoff leaving the site.

7.1.1 Infiltraiton

The TSS removal efficiency of the Infiltration System shall be evaluated per Table 3.2 of 2003 MOECP SWMPDM.

Protection Level	SWMP Type	Storage Volume (m^3/ha) for Impervious Level			
		35%	55%	70%	85%
Enhanced 80% long-term S.S. removal	Infiltration	25	30	35	40
	Wetlands	80	105	120	140
	Hybrid Wet Pond/Wetland	110	150	175	195
	Wet Pond	140	190	225	250

Quality Control Required Storage Volumes

Catchment	Area (ha)	IMP Imp (%)	Required Infiltration Volume		TSS Removal (%)
			(m^3)	(m^3/ha)	
Catchment 2001.1(L)- Context 3	0.10	90	5.37	53.67	80.00
Catchment 2001.1 R- Context 3	0.10	79	3.78	38.15	80.00
Catchment 2001.2(L)- Context 1	0.11	95	7.67	69.73	80.00
Catchment 2001.2(R)- Context 1	0.13	96	1.25	72.31	80.00
Catchment 2002L (R) -Context 1	0.70	94	46.39	66.27	80.00
Catchment 2002R (R) (Context 1)	0.80	95	54.83	68.54	80.00
Catchment 2003L (R) (Context 1)	0.43	90	23.08	53.67	80.00
Catchment 2003R (R) (Context 1)	0.47	87	21.07	44.84	80.00
Catchment 2004L (R) (Context 1)	0.35	89	18.06	51.60	80.00
Catchment 2004R (R) (Context 1)	0.36	85	14.85	41.26	80.00
Catchment 2005L (R) (Context 1)	0.28	90	15.03	53.67	80.00
Catchment 2005R (R) (Context 1)	0.29	78	10.93	37.69	80.00
Catchment 2006L (R) (Context 1)	0.65	88	31.11	47.86	80.00
Catchment 2006R (R) (Context 1)	0.73	80	27.95	38.28	80.00
Catchment 2007L (R) (Context 1)	0.58	85	23.40	40.35	80.00
Catchment 2007R (R) (Context 1)	0.64	84	22.81	35.64	80.00
Catchment 20081-L (Context 1)	0.07	84	2.54	37.87	80.00
Catchment 20082-L (Context 3)	0.38	70	13.34	34.84	80.00
Catchment 20081-R (Context 1)	0.07	83	2.55	34.86	80.00
Catchment 20082-R (Context 3)	0.39	59	12.13	31.33	80.00
Catchment 2009-L (Context 3)	0.40	77	14.92	37.29	80.00
Catchment 2009-R (Context 3)	0.39	77	14.53	37.26	80.00
Catchment 20101-L (Context 3)	0.25	82	9.75	39.00	80.00
Catchment 20102-L (Context 1)	0.47	74	17.15	36.49	80.00
Catchment 20101-R (Context 3)	0.25	82	9.75	39.00	80.00
Catchment 20102-R (Context 1)	0.47	86	18.93	40.28	80.00
Catchment 2011-L (Context 3,2)	0.87	86	29.58	34.00	80.00
Catchment 2011-R (Context 3,2)	0.90	85	35.89	39.88	80.00
Catchment 2012-L (Context 2)	1.11	56	33.67	30.33	80.00
Catchment 2012-R (Context 2)	1.11	93	47.37	42.68	80.00
Total			**589.68**		

Subject **Post to Pre Control (4 -hr Chicago Strom)**

Catchment Name	Pre-development Flow 4-hr Chicago Storm (m3/s)	Post-development Flow 4-hr Chicago Storm (m3/s)	Required Storage Volume (m3)	Available Storage Volume for Quantity Control (m3)
Catchment 2001 (L)- Contexts 1&3	0.098	0.102	25	29.2
Catchment 2001 R- Contexts 1& 3	0.107	0.109	24	31.5
Catchment 2002 (L)- Context 1	0.314	0.339	83	126.1
Catchment 2002(R)- Context 1	0.366	0.381	84	119.5
Catchment 2003 (L)- Context 1	0.159	0.209	80	94.5
Catchment 2003(R)- Context 1	0.182	0.226	79	156.5
Catchment 2004 (L)- Context 1	0.149	0.17	51	54.1
Catchment 2004(R)- Context 1	0.167	0.172	38	215.7
Catchment 2005 (L)- Context 1	0.155	0.136	N.A	17.5
Catchment 2005(R)- Context 1	0.142	0.135	91	146.2
Catchment 2006 (L)- Context 1	0.269	0.31	91	188.6
Catchment 2006 (R)- Context 1	0.26	0.332	114	139.2
Catchment 2007 (L)- Context 1	0.28	0.277	50	272.9
Catchment 2007 (R)- Context 1	0.319	0.304	N.A	310.0
Catchment 2008 (L)- Context 1&3	0.078	0.197	122	162.3
Catchment 2008 (R)- Context 1&3	0.101	0.184	90	157.6
Catchment 2009 (L)- Context 3	0.22	0.179	N.A	9.6
Catchment 2009 (R)- Context 3	0.296	0.296	N.A	15.4
Catchment 2010 (L)- Contexts 1&3	0.34	0.325	N.A	138.6
Catchment 2010 (R)- Contexts 1&3	0.38	0.449	140	161.8
Catchment 2011 (L)- Context 3,2	0.407	0.364	N.A	134.8
Catchment 2011 (R)- Context 3,2	0.435	0.109	N.A	136.7
Catchment 2012 (L)- Context 2	0.508	0.417	N.A	202.4
Catchment 2012 (R)- Context 2	0.516	0.506	N.A	212.0
Total				

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Subject **Post to Pre Control (12-hr SCS II)**

Catchment Name	Pre-development Flow 12-hr SCS II (m3/s)	Post-development Flow 12-hr SCS II (m3/s)	Required Storage Volume (m3)	Available Storage Volume for Quantity Control (m3)
Catchment 2001 (L)- Contexts 1&3	0.083	0.085	25	29.2
Catchment 2001 R- Contexts 1& 3	0.091	0.092	27	31.5
Catchment 2002 (L)- Context 1	0.282	0.285	40	126.1
Catchment 2002(R)- Context 1	0.324	0.321	N.A	119.5
Catchment 2003 (L)- Context 1	0.142	0.175	94	94.5
Catchment 2003(R)- Context 1	0.154	0.191	102	156.5
Catchment 2004 (L)- Context 1	0.135	0.142	51	54.1
Catchment 2004(R)- Context 1	0.148	0.146	N.A	215.7
Catchment 2005 (L)- Context 1	0.138	0.114	N.A	17.5
Catchment 2005(R)- Context 1	0.133	0.115	N.A	146.2
Catchment 2006 (L)- Context 1	0.241	0.263	99	188.6
Catchment 2006 (R)- Context 1	0.243	0.289	135	139.2
Catchment 2007 (L)- Context 1	0.263	0.234	N.A	272.9
Catchment 2007 (R)- Context 1	0.285	0.256	N.A	310.0
Catchment 2008 (L)- Context 1&3	0.075	0.175	162	162.3
Catchment 2008 (R)- Context 1&3	0.085	0.171	141	157.6
Catchment 2009 (L)- Context 3	0.195	0.157	N.A	9.6
Catchment 2009 (R)- Context 3	0.25	0.25	N.A	15.4
Catchment 2010 (L)- Contexts 1&3	0.326	0.284	N.A	138.6
Catchment 2010 (R)- Contexts 1&3	0.34	0.38	159	161.8
Catchment 2011 (L)- Context 3,2	0.385	0.331	N.A	134.8
Catchment 2011 (R)- Context 3,2	0.382	0.356	N.A	136.7
Catchment 2012 (L)- Context 2	0.461	0.398	N.A	202.4
Catchment 2012 (R)- Context 2	0.466	0.44	N.A	212.0

Percipitation	**932.9**	**mm**	According to Comprehensive Stormwater Managemnt Master Plan	
Average Annual Precipitation	**932.9**	**mm, or**	0	m^3
Annual Evapotranspiration	**598.2**	**mm, or**	0	m^3

Available Water Surplus (or excess of precipitation over evapotranspiration)

334.7	mm, or	0	m^3

Then, infiltration factors are used to determine the fraction of water surplus that infiltrates into the ground and the fraction that runs off the site.
Infiltration factor is determined by summing a factor for topography, soil, and cover.

Table 3.1: Hydrologic Cycle Component Values

**This is the total infiltration of which some discharges back to the stream as base flow. The infiltration factor is determined by summing a factor for topography, soils and cover.*

Topography	Flat Land, average slope < 0.6 m/km	0.3
	Rolling Land, average slope 2.8 m to 3.8 m/km	0.2
	Hilly Land, average slope 28 m to 47 m/km	0.1
Soils	Tight impervious clay	0.1
	Medium combinations of clay and loam	0.2
	Open Sandy loam	0.4
Cover	Cultivated Land	0.1
	Woodland	0.2

SWM Planning & Design Manual - 3-4 - *Environmental Design Criteria*

Pervious Area Pre-Devlopment Conditions	**4.87**	ha
Impervious Area Pre-Devlopment Conditions	**10.42**	ha

Pervious Area Pre-Devlopment Conditions	**4.87**		
Topography Factor	0.20		
Soil Factor	0.30	silt	
Cover	0.15		
Therefore, the total infiltration factor is	0.65		
Therefore, the annual infiltration amount is	388.8	mm, or	18,936
and the annual runoff amount is	209.4	mm, or	10,196

	(%)	(mm)	(m^3)	Comments/Assumptions:
Infiltration	41.7%	388.8	18,936	...
Evapotranspiration	35.9%	334.7	16,300	...
Runoff	22.4%	209.4	10,196	...
Precipitation	100.0%	932.9	45,432	

Subject **Water Balnce Calculations Pre-Development Conditions**

Impervious Area Pre-Devlopment Conditions **10.42**

	(%)	(mm)	(m^3)	*Comments/Assumptions:*
Infiltration	0.0	0.0	0	*...*
Evapotranspiration	12.5	116.6	12,151	*1 mm depression.*
Runoff	87.5	816.3	85,057	*...*
Precipitation	100.0	932.9	97,208	

Pre-Development Conditions

Hydrologic Cycle Components	Pre-development Conditions (m^3)
Infiltration	**18,936**
Evapotranspiration	28,451
Runoff	95,253
Precipitation	142,640

Subject **Water Balnce Calculations Post-Development Conditions**

Pervious Area Pre-Devlopment Conditions	**2.91**	ha
Impervious Area Pre-Devlopment Conditions	**12.38**	ha

Pervious Area Pre-Devlopment Conditions **2.91**

Topography Factor	0.20	
Soil Factor	0.30	silt
Cover	0.15	
Therefore, the total infiltration factor is	0.65	

Therefore, the annual infiltration amount is 388.8 mm, or 11,315

and the annual runoff amount is 209.4 mm, or 6,093

	(%)	(mm)	(m^3)	*Comments/Assumptions:*
Infiltration	41.7%	388.8	11,315	...
Evapotranspiration	35.9%	334.7	9,740	...
Runoff	22.4%	209.4	6,093	...
Precipitation	100.0%	932.9	27,147	

Impervious Area Pre-Devlopment Conditions **12.38**

	(%)	(mm)	(m^3)	*Comments/Assumptions:*
Infiltration	0.0	0.0	0	...
Evapotranspiration	12.5	116.6	14,437	*1 mm depression.*
Runoff	87.5	816.3	101,056	...
Precipitation	100.0	932.9	115,493	

Post-Development Conditions

Hydrologic Cycle Components	Pre-development Conditions (m^3)
Infiltration	11,315
Evapotranspiration	24,176
Runoff	107,149
Precipitation	142,640

Infiltration Deficit **7,621 m3**

Ratios of impervious drainage areas to bioswales: 14.5

Ratios of impervious drainage areas to underground chambers. 10.7

Land Use	Area (ha)	Cover %
Drainage Areas to Bioswales	9.944	65.0
Drainage Areas to the Underground Chamber	3.160	20.7
Remaining Pervious Area of the Road	2.184	14.3
Total Study Area	**15.29**	**100.0**

Infiltration Deficit	7,621	m3/year			
Average Annual Precipitation		932.9	mm, or	142,640	m^3
Annual Evapotranspiration		598.2	mm, or	91,465	m^3
Available Water Surplus (or excess of precipitation over evapotranspiration)					
		334.7	mm, or	51,176	m^3

Bioswale Units 70.0 % runoff reduction

	(%)	(mm)	m3
Infiltration	35.0	326.5	*32470*
Evapotranspiration	35.0	326.5	*32470*
Runoff	30.0	279.9	*27831*
Precipitation	100.0	932.9	*92771*

Table 4.5.2 Volumetric runoff reduction[1] achieved by bioretention

LID Practice	Location	% Runoff Reduction[1]	Reference
Bioretention without underdrain	Connecticut	99%	Dietz and Clausen (2005)
	Pennsylvania	80%	Ermilio (2005)
	Pennsylvania	70%	Emerson and Traver (2004)
Bioretention with underdrain	North Carolina	40 to 60%	Smith and Hunt (2007)
	North Carolina	33 to 50%	Hunt and Lord (2006)
	Maryland and North Carolina	20 to 50%	Li *et al.* (2009)
Runoff Reduction Estimate[2]		**85% without underdrain 45% with underdrain**	

Infiltration Chamber 60.0 % runoff reduction

	(%)	(mm)	m3
Infiltration	30.0	279.9	*8845*
Evapotranspiration	30.0	279.9	*8845*
Runoff	40.0	373.2	*11794*
Precipitation	100.0	932.9	*29484*

Table 4.4.2 Volumetric runoff reduction[1] achieved by infiltration trenches and perforated pipe systems

LID Practice	Location	Runoff Reduction[1]	Reference
Infiltration trench with underdrain	Virginia	60%	Schueler (1983)
Grass swale/ Perforated pipe system	Ontario	73%	J.F. Sabourin and Associates (2008a)
Grass swale/ Perforated pipe system	Ontario	86%	J.F. Sabourin and Associates (2008a)
Perforated pipe system	Ontario	95%	SWAMP (2005)
Perforated pipe system	Ontario	89%	SWAMP (2005)
Runoff Reduction Estimate[2]		**85%**	

Notes:

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Subject Water Balance with Mitigation Measures

Pervious Area

	(%)	(mm)	m3
Infiltration	41.7	388.8	*8492*
Evapotranspiration	35.9	334.7	*7310*
Runoff	22.4	209.4	*4573*
Precipitation	100.0	932.9	*20376*

Water Balance Components with Mitigation Measures

Hydrologic Cycle Components	Area #1 Drainage Areas to Bioswales	Area#2 Drainage Areas to Chamber Systems	Area#3 Remaining Pervious Area of the Road
% Land-Use Coverage	65.0%	20.7%	14.3%
Infiltration	326.5	279.9	388.8
Evapotranspiration	326.5	279.9	334.7
Runoff	279.9	373.2	209.4
Precipitation	932.9	932.9	932.9

Post-Development Condition Water Balance Relationship with Mitigation Measures

Hydrologic Cycle Components	Post-Development Condition Water Balance Relationship with Mitigation Measures		
	mm	%	m^3
% Land-Use Coverage	100.0%		
Infiltration	325.8	34.9%	49,808
Evapotranspiration	318.0	34.1%	48,625
Runoff	289.1	31.0%	44,198
Precipitation	932.9	100.0%	142,640

Pre-development Infiltration (Hyrogeology Report):	1375	m3
Post-development Infiltration without Mitigation Measures (Hyrogeology Report):	919	m3
Post-development Infiltration with Mitigation Measures:	**49808**	**m3**

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Subject: **Phosphorus Loading Study - Calculation Summary Sheet**

Catchment Description	Land Cover Classification	Proposed Treatment Method(s)	Area (ha)	'P' Export Coefficient (kg/ha/yr)	SWM Treatment Reduction (%)	Annual 'P' Loading (kg/yr)
PRE-DEVELOPMENT CONDITIONS:						
Road Impervious Areas	High Residential	--	10.42	1.32	--	13.75
Road Pervious Areas	Hay-pasture		4.87	0.07		0.34
Totals	**--**	**--**	**15.29**	**--**	**--**	**14.10**
POST-DEVELOPMENT CONDITIONS (without water quality controls):						
Road Impervious Areas	High Residential	---	12.38	1.32	--	16.34
Road Pervious Areas	Hay-pasture		2.91	0.07		0.20
Totals	**--**	**--**	**15.29**	**--**	**--**	**16.55**
				Target Removal Efficieny:	**14.8**	
POST-DEVELOPMENT CONDITIONS (with mitigation measures):						
Road Areas to Infiltration Chamber	High Residential	Infiltration Trench	3.16	1.32	100.0	0.00
Remaining Road Pervious Areas	Hay-pasture		2.19	0.07		0.15
Road Impervious to Bioswales	High Residential		9.94	1.32	80.0	2.62
Totals	**--**	**--**	**15.29**	**--**		**2.78**
				Target Removal Efficieny:	**83.2**	

* From LSCRA Phosphorous Offsetting Policy (2017):

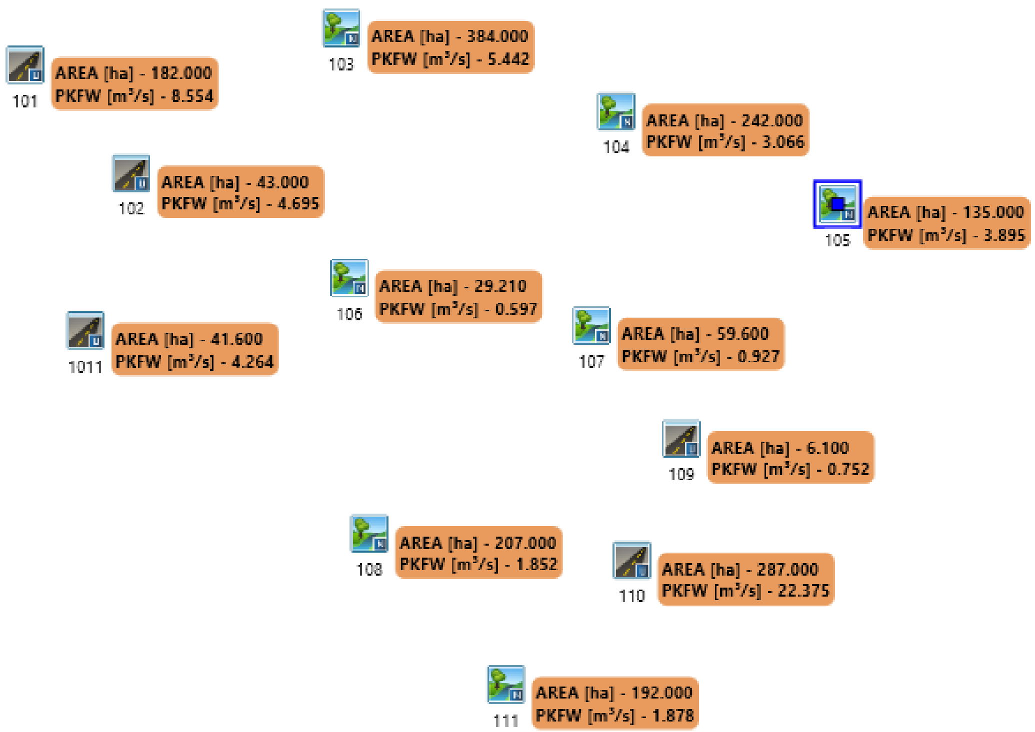
Net Effect on 'P' Load (kg/year)	**2.78**
* Offset Ratio (-)	2.5
* Offset Cost (/kg/year)	$35,000
15% LSRCA Administration Fee	$5,250
Total	$248,256

APPENDIX

C

Visual OTTHYMO Results

25- year 4 hour Chicago Storm existing conditions



```
=====================================================================================================

      V    V   I    SSSSS  U    U    A     L               (v 6.1.2002)
      V    V   I    SS     U    U   A A    L
       V  V    I     SS    U    U  AAAAA   L
       V  V    I      SS   U    U  A    A  L
        VV     I    SSSSS  UUUUU  A    A  LLLLL

       OOO    TTTTT  TTTTT  H   H  Y   Y  M   M   OOO     TM
      O   O     T      T    H   H   Y Y   MM MM  O   O
      O   O     T      T    H   H    Y    M   M  O   O
       OOO      T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```



```
                  *****  D E T A I L E D    O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\f0359d21
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\f0359d21


DATE: 09-14-2021                             TIME: 08:38:27

USER:



COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------------------------
  **********************************************
  ** SIMULATION : Run 04                      **
  **********************************************


--------------------
|    READ STORM     |    Filename: C:\Users\caef070146\AppD
|                   |              ata\Local\Temp\
|                   |              71794fb4-24ae-4a1d-b11d-298611ff8a03\53217781
| Ptotal= 71.24 mm  |    Comments: 25-year, 4 hr-Chicago, City of Barrie
--------------------
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
                0.17     5.22 |  1.17    36.37 |  2.17    11.74 |  3.17     6.15
                0.33     5.94 |  1.33   148.15 |  2.33    10.09 |  3.33     5.74
                0.50     6.93 |  1.50    47.06 |  2.50     8.89 |  3.50     5.38
                0.67     8.42 |  1.67    25.72 |  2.67     7.96 |  3.67     5.08
                0.83    10.91 |  1.83    18.11 |  2.83     7.24 |  3.83     4.80
                1.00    16.13 |  2.00    14.17 |  3.00     6.65 |  4.00     4.57

-------------------------------------------------------------------------------------
--------------------
| CALIB             |
| NASHYD   ( 0105)|   Area     (ha)= 135.00   Curve Number   (CN)= 53.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   6.01   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.35

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
               0.083     5.22 | 1.083    36.37 | 2.083    11.74 |  3.08     6.15
               0.167     5.22 | 1.167    36.37 | 2.167    11.74 |  3.17     6.15
               0.250     5.94 | 1.250   148.15 | 2.250    10.09 |  3.25     5.74
               0.333     5.94 | 1.333   148.15 | 2.333    10.09 |  3.33     5.74
               0.417     6.93 | 1.417    47.06 | 2.417     8.89 |  3.42     5.38
               0.500     6.93 | 1.500    47.06 | 2.500     8.89 |  3.50     5.38
               0.583     8.42 | 1.583    25.72 | 2.583     7.96 |  3.58     5.08
               0.667     8.42 | 1.667    25.72 | 2.667     7.96 |  3.67     5.08
               0.750    10.91 | 1.750    18.11 | 2.750     7.24 |  3.75     4.80
               0.833    10.91 | 1.833    18.11 | 2.833     7.24 |  3.83     4.80
               0.917    16.13 | 1.917    14.17 | 2.917     6.65 |  3.92     4.57
               1.000    16.13 | 2.000    14.17 | 3.000     6.65 |  4.00     4.57

     Unit Hyd Qpeak  (cms)=  14.732

     PEAK FLOW       (cms)=   3.895 (i)
     TIME TO PEAK    (hrs)=   1.750
     RUNOFF VOLUME    (mm)=  14.818
     TOTAL RAINFALL   (mm)=  71.237
     RUNOFF COEFFICIENT   =   0.208

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| NASHYD   ( 0106)|   Area     (ha)=  29.21   Curve Number   (CN)= 53.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   6.01   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.61

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
               0.083     5.22 | 1.083    36.37 | 2.083    11.74 |  3.08     6.15
               0.167     5.22 | 1.167    36.37 | 2.167    11.74 |  3.17     6.15
               0.250     5.94 | 1.250   148.15 | 2.250    10.09 |  3.25     5.74
               0.333     5.94 | 1.333   148.15 | 2.333    10.09 |  3.33     5.74
               0.417     6.93 | 1.417    47.06 | 2.417     8.89 |  3.42     5.38
               0.500     6.93 | 1.500    47.06 | 2.500     8.89 |  3.50     5.38
               0.583     8.42 | 1.583    25.72 | 2.583     7.96 |  3.58     5.08
               0.667     8.42 | 1.667    25.72 | 2.667     7.96 |  3.67     5.08
               0.750    10.91 | 1.750    18.11 | 2.750     7.24 |  3.75     4.80
               0.833    10.91 | 1.833    18.11 | 2.833     7.24 |  3.83     4.80
               0.917    16.13 | 1.917    14.17 | 2.917     6.65 |  3.92     4.57
               1.000    16.13 | 2.000    14.17 | 3.000     6.65 |  4.00     4.57

     Unit Hyd Qpeak  (cms)=   1.829

     PEAK FLOW       (cms)=   0.597 (i)
     TIME TO PEAK    (hrs)=   2.083
     RUNOFF VOLUME    (mm)=  14.821
     TOTAL RAINFALL   (mm)=  71.237
     RUNOFF COEFFICIENT   =   0.208

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| NASHYD   ( 0107)|   Area     (ha)=  59.60   Curve Number   (CN)= 53.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   6.01   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.93

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
               0.083     5.22 | 1.083    36.37 | 2.083    11.74 |  3.08     6.15
               0.167     5.22 | 1.167    36.37 | 2.167    11.74 |  3.17     6.15
               0.250     5.94 | 1.250   148.15 | 2.250    10.09 |  3.25     5.74
               0.333     5.94 | 1.333   148.15 | 2.333    10.09 |  3.33     5.74
               0.417     6.93 | 1.417    47.06 | 2.417     8.89 |  3.42     5.38
               0.500     6.93 | 1.500    47.06 | 2.500     8.89 |  3.50     5.38
               0.583     8.42 | 1.583    25.72 | 2.583     7.96 |  3.58     5.08
               0.667     8.42 | 1.667    25.72 | 2.667     7.96 |  3.67     5.08
               0.750    10.91 | 1.750    18.11 | 2.750     7.24 |  3.75     4.80
               0.833    10.91 | 1.833    18.11 | 2.833     7.24 |  3.83     4.80
               0.917    16.13 | 1.917    14.17 | 2.917     6.65 |  3.92     4.57
               1.000    16.13 | 2.000    14.17 | 3.000     6.65 |  4.00     4.57

     Unit Hyd Qpeak  (cms)=   2.448

     PEAK FLOW       (cms)=   0.927 (i)
     TIME TO PEAK    (hrs)=   2.583
     RUNOFF VOLUME    (mm)=  14.821
     TOTAL RAINFALL   (mm)=  71.237
     RUNOFF COEFFICIENT   =   0.208

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| NASHYD   ( 0108)|   Area     (ha)= 207.00   Curve Number   (CN)= 51.3
|ID= 1 DT= 5.0 min |   Ia       (mm)=   7.05   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   1.86

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
               0.083     5.22 | 1.083    36.37 | 2.083    11.74 |  3.08     6.15
               0.167     5.22 | 1.167    36.37 | 2.167    11.74 |  3.17     6.15
               0.250     5.94 | 1.250   148.15 | 2.250    10.09 |  3.25     5.74
               0.333     5.94 | 1.333   148.15 | 2.333    10.09 |  3.33     5.74
               0.417     6.93 | 1.417    47.06 | 2.417     8.89 |  3.42     5.38
               0.500     6.93 | 1.500    47.06 | 2.500     8.89 |  3.50     5.38
               0.583     8.42 | 1.583    25.72 | 2.583     7.96 |  3.58     5.08
               0.667     8.42 | 1.667    25.72 | 2.667     7.96 |  3.67     5.08
               0.750    10.91 | 1.750    18.11 | 2.750     7.24 |  3.75     4.80
               0.833    10.91 | 1.833    18.11 | 2.833     7.24 |  3.83     4.80
               0.917    16.13 | 1.917    14.17 | 2.917     6.65 |  3.92     4.57
               1.000    16.13 | 2.000    14.17 | 3.000     6.65 |  4.00     4.57

     Unit Hyd Qpeak  (cms)=   4.251

     PEAK FLOW       (cms)=   1.852 (i)
     TIME TO PEAK    (hrs)=   3.917
     RUNOFF VOLUME    (mm)=  13.490
     TOTAL RAINFALL   (mm)=  71.237
     RUNOFF COEFFICIENT   =   0.189

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| NASHYD   ( 0111)|   Area     (ha)= 192.00   Curve Number   (CN)= 63.3
|ID= 1 DT= 5.0 min |   Ia       (mm)=   7.15   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   2.72

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
               0.083     5.22 | 1.083    36.37 | 2.083    11.74 |  3.08     6.15
               0.167     5.22 | 1.167    36.37 | 2.167    11.74 |  3.17     6.15
               0.250     5.94 | 1.250   148.15 | 2.250    10.09 |  3.25     5.74
               0.333     5.94 | 1.333   148.15 | 2.333    10.09 |  3.33     5.74
               0.417     6.93 | 1.417    47.06 | 2.417     8.89 |  3.42     5.38
               0.500     6.93 | 1.500    47.06 | 2.500     8.89 |  3.50     5.38
               0.583     8.42 | 1.583    25.72 | 2.583     7.96 |  3.58     5.08
               0.667     8.42 | 1.667    25.72 | 2.667     7.96 |  3.67     5.08
               0.750    10.91 | 1.750    18.11 | 2.750     7.24 |  3.75     4.80
               0.833    10.91 | 1.833    18.11 | 2.833     7.24 |  3.83     4.80
               0.917    16.13 | 1.917    14.17 | 2.917     6.65 |  3.92     4.57
               1.000    16.13 | 2.000    14.17 | 3.000     6.65 |  4.00     4.57

     Unit Hyd Qpeak  (cms)=   2.696

     PEAK FLOW       (cms)=   1.878 (i)
     TIME TO PEAK    (hrs)=   4.833
     RUNOFF VOLUME    (mm)=  19.421
     TOTAL RAINFALL   (mm)=  71.237
     RUNOFF COEFFICIENT   =   0.273

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 1011)|   Area     (ha)=  41.60
|ID= 1 DT= 5.0 min |   Total Imp(%)=  35.00   Dir. Conn.(%)=  30.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area      (ha)=     14.56        27.04
     Dep. Storage      (mm)=      6.27         3.67
     Average Slope      (%)=      0.70         2.00
     Length             (m)=    526.62      1082.00
     Mannings n            =     0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
               0.083     5.22 | 1.083    36.37 | 2.083    11.74 |  3.08     6.15
               0.167     5.22 | 1.167    36.37 | 2.167    11.74 |  3.17     6.15
               0.250     5.94 | 1.250   148.15 | 2.250    10.09 |  3.25     5.74
               0.333     5.94 | 1.333   148.15 | 2.333    10.09 |  3.33     5.74
               0.417     6.93 | 1.417    47.06 | 2.417     8.89 |  3.42     5.38
               0.500     6.93 | 1.500    47.06 | 2.500     8.89 |  3.50     5.38
               0.583     8.42 | 1.583    25.72 | 2.583     7.96 |  3.58     5.08
               0.667     8.42 | 1.667    25.72 | 2.667     7.96 |  3.67     5.08
               0.750    10.91 | 1.750    18.11 | 2.750     7.24 |  3.75     4.80
               0.833    10.91 | 1.833    18.11 | 2.833     7.24 |  3.83     4.80
               0.917    16.13 | 1.917    14.17 | 2.917     6.65 |  3.92     4.57
               1.000    16.13 | 2.000    14.17 | 3.000     6.65 |  4.00     4.57

     Max.Eff.Inten.(mm/hr)=      148.15        16.54
                over (min)         5.00       115.00
     Storage Coeff.  (min)=        6.58 (ii)  111.43 (ii)
     Unit Hyd. Tpeak (min)=        5.00       115.00
     Unit Hyd. peak  (cms)=        0.18         0.01
                                                         *TOTALS*
     PEAK FLOW       (cms)=        4.25         0.46        4.264 (iii)
     TIME TO PEAK    (hrs)=        1.33         3.42         1.33
     RUNOFF VOLUME    (mm)=       64.97        22.66        35.35
     TOTAL RAINFALL   (mm)=       71.24        71.24        71.24
     RUNOFF COEFFICIENT   =        0.91         0.32         0.50


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  63.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 0102)|   Area     (ha)=  43.00
|ID= 1 DT= 5.0 min |   Total Imp(%)=  39.00   Dir. Conn.(%)=  31.00
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                          IMPERVIOUS    PERVIOUS (i)
     Surface Area      (ha)=     16.77        26.23
     Dep. Storage      (mm)=      6.27         3.49
     Average Slope      (%)=      1.00         0.87
     Length             (m)=    535.41      1000.00
     Mannings n            =     0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
                 hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
               0.083     5.22 | 1.083    36.37 | 2.083    11.74 |  3.08     6.15
               0.167     5.22 | 1.167    36.37 | 2.167    11.74 |  3.17     6.15
               0.250     5.94 | 1.250   148.15 | 2.250    10.09 |  3.25     5.74
               0.333     5.94 | 1.333   148.15 | 2.333    10.09 |  3.33     5.74
               0.417     6.93 | 1.417    47.06 | 2.417     8.89 |  3.42     5.38
               0.500     6.93 | 1.500    47.06 | 2.500     8.89 |  3.50     5.38
               0.583     8.42 | 1.583    25.72 | 2.583     7.96 |  3.58     5.08
               0.667     8.42 | 1.667    25.72 | 2.667     7.96 |  3.67     5.08
               0.750    10.91 | 1.750    18.11 | 2.750     7.24 |  3.75     4.80
               0.833    10.91 | 1.833    18.11 | 2.833     7.24 |  3.83     4.80
               0.917    16.13 | 1.917    14.17 | 2.917     6.65 |  3.92     4.57
               1.000    16.13 | 2.000    14.17 | 3.000     6.65 |  4.00     4.57

     Max.Eff.Inten.(mm/hr)=      148.15        19.55
                over (min)         5.00       130.00
     Storage Coeff.  (min)=        5.97 (ii)  126.05 (ii)
     Unit Hyd. Tpeak (min)=        5.00       130.00
     Unit Hyd. peak  (cms)=        0.19         0.01
                                                         *TOTALS*
     PEAK FLOW       (cms)=        4.68         0.49        4.695 (iii)
     TIME TO PEAK    (hrs)=        1.33         3.67         1.33
     RUNOFF VOLUME    (mm)=       64.97        25.39        37.66
     TOTAL RAINFALL   (mm)=       71.24        71.24        71.24
     RUNOFF COEFFICIENT   =        0.91         0.36         0.53


       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  66.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
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     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| NASHYD   (  0103)|   Area    (ha)= 384.00   Curve Number   (CN)= 65.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.50   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   1.87

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Unit Hyd Qpeak  (cms)=   7.843

     PEAK FLOW       (cms)=   5.442 (i)
     TIME TO PEAK    (hrs)=   3.833
     RUNOFF VOLUME    (mm)=  21.339
     TOTAL RAINFALL   (mm)=  71.237
     RUNOFF COEFFICIENT   =   0.300

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| NASHYD   (  0104)|   Area    (ha)= 242.00   Curve Number   (CN)= 59.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.90   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   1.66

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Unit Hyd Qpeak  (cms)=   5.568

     PEAK FLOW       (cms)=   3.066 (i)
     TIME TO PEAK    (hrs)=   3.583
     RUNOFF VOLUME    (mm)=  17.651
     TOTAL RAINFALL   (mm)=  71.237
     RUNOFF COEFFICIENT   =   0.248

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  0101)|   Area    (ha)= 182.00
|ID= 1 DT= 5.0 min |   Total Imp(%)=  21.00   Dir. Conn.(%)=  18.00
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                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     38.22       143.78
     Dep. Storage     (mm)=      6.27         6.50
     Average Slope     (%)=      0.70         2.00
     Length            (m)=   1101.51      1082.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        11.09
                over (min)      10.00       135.00
     Storage Coeff.  (min)=      10.25 (ii)  133.27 (ii)
     Unit Hyd. Tpeak (min)=      10.00       135.00
     Unit Hyd. peak  (cms)=       0.11         0.01
                                                         *TOTALS*
     PEAK FLOW       (cms)=       8.49         1.45        8.554 (iii)
     TIME TO PEAK    (hrs)=       1.42         3.83         1.42
     RUNOFF VOLUME    (mm)=      64.97        15.92        24.75
     TOTAL RAINFALL   (mm)=      71.24        71.24        71.24
     RUNOFF COEFFICIENT   =       0.91         0.22         0.35

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
          YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  55.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  0109)|   Area    (ha)=   6.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  30.00
--------------------

                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      2.26         3.84
     Dep. Storage     (mm)=      6.05         3.92
     Average Slope     (%)=      1.00         2.40
     Length            (m)=    201.66       296.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        29.10
                over (min)       5.00        40.00
     Storage Coeff.  (min)=       3.33 (ii)   39.71 (ii)
     Unit Hyd. Tpeak (min)=       5.00        40.00
     Unit Hyd. peak  (cms)=       0.26         0.03
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.72         0.18        0.752 (iii)
     TIME TO PEAK    (hrs)=       1.33         2.00         1.33
     RUNOFF VOLUME    (mm)=      65.19        29.27        40.04
     TOTAL RAINFALL   (mm)=      71.24        71.24        71.24
     RUNOFF COEFFICIENT   =       0.92         0.41         0.56

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  72.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (  0110)|   Area    (ha)= 287.00
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  30.00
--------------------

                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=    106.19       180.81
     Dep. Storage     (mm)=      6.31         3.90
     Average Slope     (%)=      1.00         2.00
     Length            (m)=   1383.23      1103.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        22.34
                over (min)      10.00       105.00
     Storage Coeff.  (min)=      10.56 (ii)  104.61 (ii)
     Unit Hyd. Tpeak (min)=      10.00       105.00
     Unit Hyd. peak  (cms)=       0.11         0.01
                                                         *TOTALS*
     PEAK FLOW       (cms)=      22.06         4.36       22.375 (iii)
     TIME TO PEAK    (hrs)=       1.42         3.17         1.42
     RUNOFF VOLUME    (mm)=      64.93        29.29        39.98
     TOTAL RAINFALL   (mm)=      71.24        71.24        71.24
     RUNOFF COEFFICIENT   =       0.91         0.41         0.56

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  72.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 FINISH
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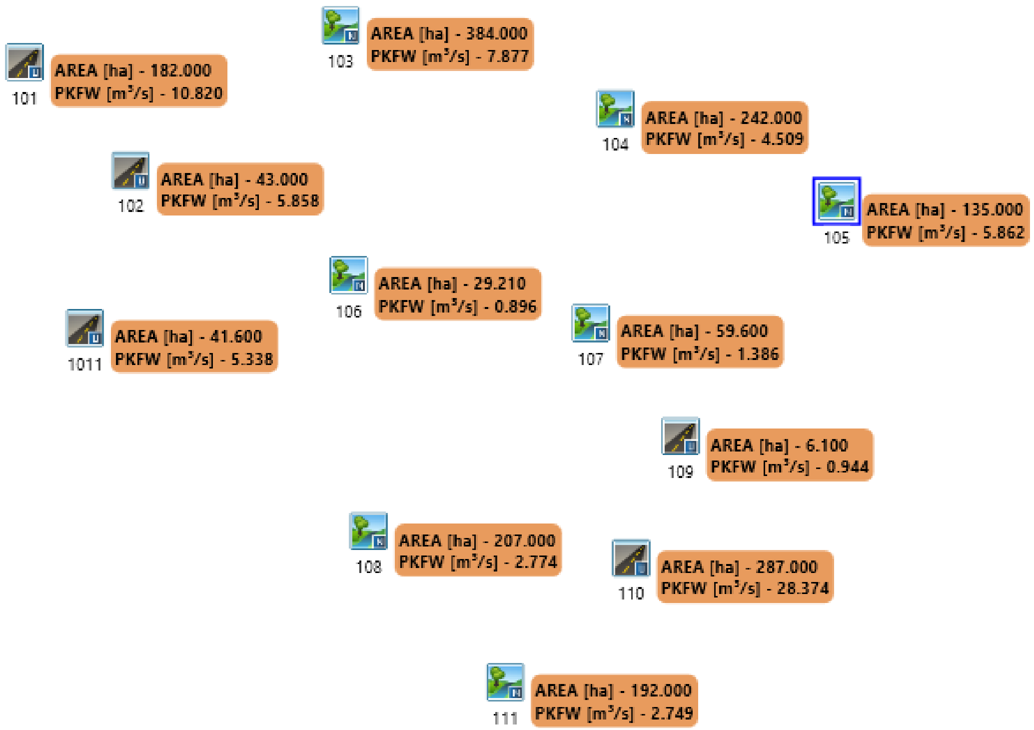
100-year 4 hour Chicago storm existing conditions



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==========================================================================================================

      V    V   I   SSSSS  U   U   A    L            (v 6.1.2002)
      V    V   I   SS     U   U  A A   L
       V  V    I    SS    U   U  AAAAA L
       V  V    I     SS   U   U  A   A L
        VV     I   SSSSS  UUUUU  A   A LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\cf1f105e
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\cf1f105e

DATE: 09-14-2021                         TIME: 08:43:00

USER:


COMMENTS: ____________________________________________________________


----------------------------------------------------------------------------------------------------------
  **********************************************
  ** SIMULATION : Run 06                      **
  **********************************************


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|    READ STORM    |    Filename: C:\Users\caef070146\AppD
|                  |              ata\Local\Temp\
|                  |              ba1c97d1-3fce-403b-892b-c79a1f826375\4c83eb39
| Ptotal= 87.58 mm |    Comments: 100-year, 4 hr-Chicago, City of Barrie
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.17    6.41 |  1.17   45.22 |   2.17   14.50 |  3.17    7.56
               0.33    7.29 |  1.33  180.15 |   2.33   12.44 |  3.33    7.04
               0.50    8.52 |  1.50   58.54 |   2.50   10.94 |  3.50    6.60
               0.67   10.36 |  1.67   31.96 |   2.67    9.80 |  3.67    6.22
               0.83   13.45 |  1.83   22.45 |   2.83    8.90 |  3.83    5.89
               1.00   19.96 |  2.00   17.52 |   3.00    8.16 |  4.00    5.59

--------------------------------------------------------------------------------

--------------------
| CALIB            |
| NASHYD   (  0105)|   Area    (ha)= 135.00   Curve Number   (CN)= 53.4
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.01   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.35

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Unit Hyd Qpeak  (cms)=  14.732
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     PEAK FLOW       (cms)=   5.862 (i)
     TIME TO PEAK    (hrs)=   1.750
     RUNOFF VOLUME    (mm)=  21.925
     TOTAL RAINFALL   (mm)=  87.578
     RUNOFF COEFFICIENT   =   0.250

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| NASHYD   (  0106)|   Area    (ha)=  29.21   Curve Number   (CN)= 53.4
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.01   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.61

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Unit Hyd Qpeak  (cms)=   1.829

     PEAK FLOW       (cms)=   0.896 (i)
     TIME TO PEAK    (hrs)=   2.083
     RUNOFF VOLUME    (mm)=  21.929
     TOTAL RAINFALL   (mm)=  87.578
     RUNOFF COEFFICIENT   =   0.250

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0107)|   Area    (ha)=  59.60   Curve Number   (CN)= 53.4
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.01   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   0.93

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Unit Hyd Qpeak  (cms)=   2.448

     PEAK FLOW       (cms)=   1.386 (i)
     TIME TO PEAK    (hrs)=   2.583
     RUNOFF VOLUME    (mm)=  21.929
     TOTAL RAINFALL   (mm)=  87.578
     RUNOFF COEFFICIENT   =   0.250

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0108)|   Area    (ha)= 207.00   Curve Number   (CN)= 51.3
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|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.05   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   1.86

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Unit Hyd Qpeak  (cms)=   4.251

     PEAK FLOW       (cms)=   2.774 (i)
     TIME TO PEAK    (hrs)=   3.917
     RUNOFF VOLUME    (mm)=  20.155
     TOTAL RAINFALL   (mm)=  87.578
     RUNOFF COEFFICIENT   =   0.230

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| NASHYD   (  0111)|   Area    (ha)= 192.00   Curve Number   (CN)= 63.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.15   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   2.72

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Unit Hyd Qpeak  (cms)=   2.696

     PEAK FLOW       (cms)=   2.749 (i)
     TIME TO PEAK    (hrs)=   4.750
     RUNOFF VOLUME    (mm)=  28.394
     TOTAL RAINFALL   (mm)=  87.578
     RUNOFF COEFFICIENT   =   0.324

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  1011)|   Area    (ha)=  41.60
|ID= 1 DT= 5.0 min |   Total Imp(%)=  35.00   Dir. Conn.(%)=  30.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     14.56        27.04
     Dep. Storage     (mm)=      6.27         3.67
     Average Slope     (%)=      0.70         2.00
     Length            (m)=    526.62      1082.00
     Mannings n          =      0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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```
                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        23.66
                over (min)        5.00       100.00
     Storage Coeff.  (min)=       6.09 (ii)   96.94 (ii)
     Unit Hyd. Tpeak (min)=       5.00       100.00
     Unit Hyd. peak  (cms)=       0.19         0.01
                                                           *TOTALS*
     PEAK FLOW       (cms)=       5.30         0.73          5.338 (iii)
     TIME TO PEAK    (hrs)=       1.33         3.08           1.33
     RUNOFF VOLUME    (mm)=      81.31        32.30          47.00
     TOTAL RAINFALL   (mm)=      87.58        87.58          87.58
     RUNOFF COEFFICIENT   =       0.93         0.37           0.54

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  63.6    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  0102)|   Area    (ha)=  43.00
|ID= 1 DT= 5.0 min |   Total Imp(%)=  39.00   Dir. Conn.(%)=  31.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     16.77        26.23
     Dep. Storage     (mm)=      6.27         3.49
     Average Slope     (%)=      1.00         0.87
     Length            (m)=    535.41      1000.00
     Mannings n          =      0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        27.69
                over (min)        5.00       110.00
     Storage Coeff.  (min)=       5.52 (ii)  109.98 (ii)
     Unit Hyd. Tpeak (min)=       5.00       110.00
     Unit Hyd. peak  (cms)=       0.20         0.01
                                                           *TOTALS*
     PEAK FLOW       (cms)=       5.83         0.76          5.858 (iii)
     TIME TO PEAK    (hrs)=       1.33         3.25           1.33
     RUNOFF VOLUME    (mm)=      81.31        35.83          49.93
     TOTAL RAINFALL   (mm)=      87.58        87.58          87.58
     RUNOFF COEFFICIENT   =       0.93         0.41           0.57

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  66.2    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
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     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0103)|   Area    (ha)= 384.00   Curve Number   (CN)= 65.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.50   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   1.87

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Unit Hyd Qpeak  (cms)=   7.843

     PEAK FLOW        (cms)=   7.877 (i)
     TIME TO PEAK     (hrs)=   3.833
     RUNOFF VOLUME     (mm)=  30.783
     TOTAL RAINFALL    (mm)=  87.578
     RUNOFF COEFFICIENT   =    0.351

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   (  0104)|   Area    (ha)= 242.00   Curve Number   (CN)= 59.0
|ID= 1 DT= 5.0 min |   Ia      (mm)=   5.90   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   1.66

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Unit Hyd Qpeak  (cms)=   5.568

     PEAK FLOW        (cms)=   4.509 (i)
     TIME TO PEAK     (hrs)=   3.583
     RUNOFF VOLUME     (mm)=  25.839
     TOTAL RAINFALL    (mm)=  87.578
     RUNOFF COEFFICIENT   =    0.295

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  0101)|   Area    (ha)= 182.00
|ID= 1 DT= 5.0 min |   Total Imp(%)=  21.00   Dir. Conn.(%)=  18.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     38.22        143.78
     Dep. Storage     (mm)=      6.27          6.50
     Average Slope     (%)=      0.70          2.00
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     Length           (m)=    1101.51      1082.00
     Mannings n          =      0.013        0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15         16.46
                over (min)      10.00        115.00
     Storage Coeff.  (min)=      9.48 (ii)  114.54 (ii)
     Unit Hyd. Tpeak (min)=     10.00        115.00
     Unit Hyd. peak  (cms)=      0.12          0.01
                                                          *TOTALS*
     PEAK FLOW        (cms)=    10.69          2.39         10.820 (iii)
     TIME TO PEAK     (hrs)=     1.42          3.50          1.42
     RUNOFF VOLUME     (mm)=    81.31         23.49         33.89
     TOTAL RAINFALL    (mm)=    87.58         87.58         87.58
     RUNOFF COEFFICIENT   =      0.93          0.27          0.39

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
          YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  55.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  0109)|   Area    (ha)=   6.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  30.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      2.26          3.84
     Dep. Storage     (mm)=      6.05          3.92
     Average Slope     (%)=      1.00          2.40
     Length            (m)=    201.66        296.00
     Mannings n          =      0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15         49.08
                over (min)       5.00         35.00
     Storage Coeff.  (min)=      3.08 (ii)    32.59 (ii)
     Unit Hyd. Tpeak (min)=      5.00         35.00
     Unit Hyd. peak  (cms)=      0.27          0.03
                                                          *TOTALS*
     PEAK FLOW        (cms)=     0.89          0.29          0.944 (iii)
     TIME TO PEAK     (hrs)=     1.33          1.83          1.33
     RUNOFF VOLUME     (mm)=    81.53         40.85         53.05
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     TOTAL RAINFALL    (mm)=    87.58         87.58         87.58
     RUNOFF COEFFICIENT   =      0.93          0.47          0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  72.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  0110)|   Area    (ha)= 287.00
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  30.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=    106.19        180.81
     Dep. Storage     (mm)=      6.31          3.90
     Average Slope     (%)=      1.00          2.00
     Length            (m)=   1383.23       1103.00
     Mannings n          =      0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15         31.34
                over (min)      10.00         95.00
     Storage Coeff.  (min)=      9.76 (ii)    91.90 (ii)
     Unit Hyd. Tpeak (min)=     10.00         95.00
     Unit Hyd. peak  (cms)=      0.11          0.01
                                                          *TOTALS*
     PEAK FLOW        (cms)=    27.80          6.70         28.374 (iii)
     TIME TO PEAK     (hrs)=     1.42          3.00          1.42
     RUNOFF VOLUME     (mm)=    81.27         40.86         52.98
     TOTAL RAINFALL    (mm)=    87.58         87.58         87.58
     RUNOFF COEFFICIENT   =      0.93          0.47          0.60

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  72.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 FINISH
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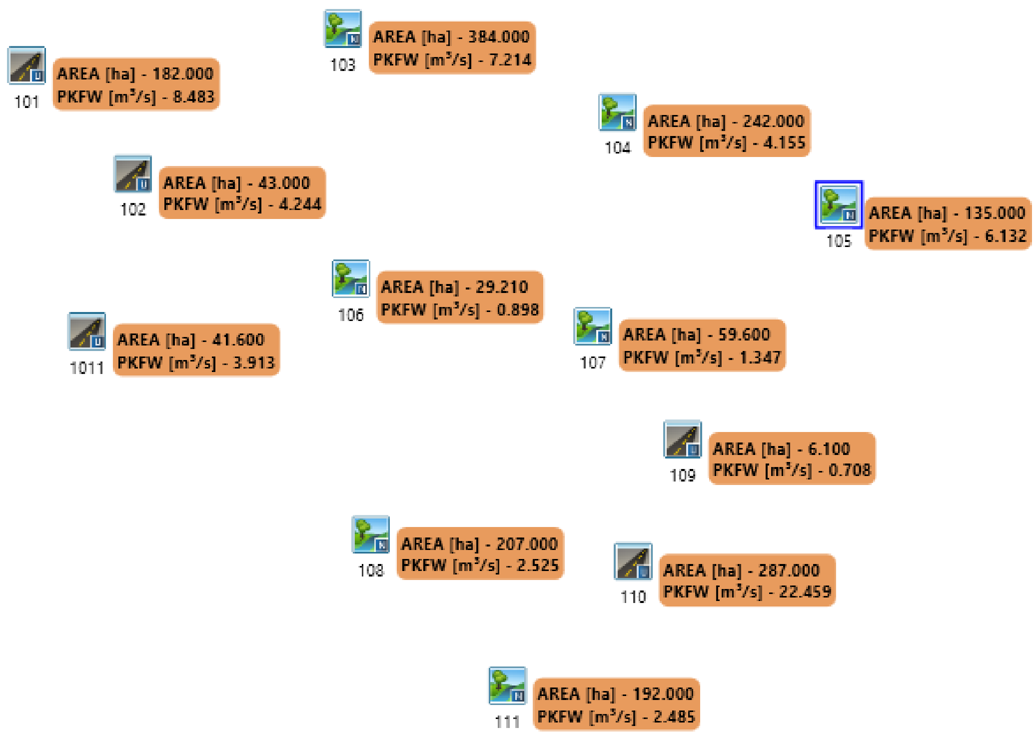
25 hour 12 hour SCS Type II Existing Conditions



```
=====================================================================================================

      V   V   I    SSSSS  U   U    A    L              (v 6.1.2002)
      V   V   I    SS     U   U   A A   L
       V V    I     SS    U   U  AAAAA  L
       V V    I      SS   U   U  A   A  L
        VV    I    SSSSS  UUUUU  A   A  LLLLL

      OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
     O   O    T      T    H   H   Y Y   MM MM  O   O
     O   O    T      T    H   H    Y    M   M  O   O
      OOO     T      T    H   H    Y    M   M   OOO
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                    ***** D E T A I L E D   O U T P U T *****

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\804f9f4d
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\804f9f4d

DATE: 09-14-2021                           TIME: 08:44:16

USER:

COMMENTS: ____________________________________________________________

-----------------------------------------------------------------------------------------------------
  **************************************************
  ** SIMULATION : Run 16                          **
  **************************************************

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|    READ STORM    |     Filename: C:\Users\caef070146\AppD
|                  |               ata\Local\Temp\
|                  |               74df3ab6-df94-43e0-ab28-f5e8d861d5ee\2d33b8b1
| Ptotal= 90.70 mm |     Comments: 25-Yr,12-hr SCS, City of Barrie
-------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    2.27 |  3.25    3.63 |  6.25   16.33 |  9.25    3.17
                0.50    2.27 |  3.50    3.63 |  6.50   16.33 |  9.50    3.17
                0.75    2.27 |  3.75    3.63 |  6.75    7.26 |  9.75    3.17
                1.00    2.27 |  4.00    3.63 |  7.00    7.26 | 10.00    3.17
                1.25    2.27 |  4.25    5.44 |  7.25    5.44 | 10.25    1.81
                1.50    2.27 |  4.50    5.44 |  7.50    5.44 | 10.50    1.81
                1.75    2.27 |  4.75    7.26 |  7.75    5.44 | 10.75    1.81
                2.00    2.27 |  5.00    7.26 |  8.00    5.44 | 11.00    1.81
                2.25    2.72 |  5.25   10.88 |  8.25    3.17 | 11.25    1.81
                2.50    2.72 |  5.50   10.88 |  8.50    3.17 | 11.50    1.81
                2.75    2.72 |  5.75   43.54 |  8.75    3.17 | 11.75    1.81
                3.00    2.72 |  6.00  119.72 |  9.00    3.17 | 12.00    1.81

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| CALIB            |
| NASHYD   ( 0105)|   Area    (ha)= 135.00   Curve Number   (CN)= 53.4
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.01   # of Linear Res.(N)= 3.00
-------------------    U.H. Tp(hrs)=   0.35

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
               0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
               0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
               0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
               0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
               0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
               0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
               0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
               0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
               0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
               0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
               1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
               1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
               1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
               1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
               1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
               1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
               1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
               1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
               1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
               1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
               1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
               1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
               2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
               2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
               2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
               2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
               2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
               2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
               2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
               2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
               2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
               2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
               2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
               2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
               3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Unit Hyd Qpeak  (cms)=  14.732

     PEAK FLOW       (cms)=   6.132 (i)
     TIME TO PEAK    (hrs)=   6.250
     RUNOFF VOLUME    (mm)=  23.394
     TOTAL RAINFALL   (mm)=  90.700
     RUNOFF COEFFICIENT   =   0.258

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| CALIB            |
| NASHYD   ( 0106)|   Area    (ha)=  29.21   Curve Number   (CN)= 53.4
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.01   # of Linear Res.(N)= 3.00
-------------------    U.H. Tp(hrs)=   0.61

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
               0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
               0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
               0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
               0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
               0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
               0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
               0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
               0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
               0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
               0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
               1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
               1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
               1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
               1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
               1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
               1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
               1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
               1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
               1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
               1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
               1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
               1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
               2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
               2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
               2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
               2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
               2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
               2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
               2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
               2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
               2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
               2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
               2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
               2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
               3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Unit Hyd Qpeak  (cms)=   1.829

     PEAK FLOW       (cms)=   0.898 (i)
     TIME TO PEAK    (hrs)=   6.583
     RUNOFF VOLUME    (mm)=  23.399
     TOTAL RAINFALL   (mm)=  90.700
     RUNOFF COEFFICIENT   =   0.258

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   ( 0107)|   Area    (ha)=  59.60   Curve Number   (CN)= 53.4
|ID= 1 DT= 5.0 min |   Ia      (mm)=   6.01   # of Linear Res.(N)= 3.00
-------------------    U.H. Tp(hrs)=   0.93

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
               0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
               0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
               0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
               0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
               0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
               0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
               0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
               0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
               0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
               0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
               1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
               1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
               1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
               1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
               1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
               1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
               1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
               1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
               1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
               1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
               1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
               1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
               2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
               2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
               2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
               2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
               2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
               2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
               2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
               2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
               2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
               2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
               2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
               2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
               3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Unit Hyd Qpeak  (cms)=   2.448

     PEAK FLOW       (cms)=   1.347 (i)
     TIME TO PEAK    (hrs)=   6.917
     RUNOFF VOLUME    (mm)=  23.399
     TOTAL RAINFALL   (mm)=  90.700
     RUNOFF COEFFICIENT   =   0.258

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   ( 0108)|   Area    (ha)= 207.00   Curve Number   (CN)= 51.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.05   # of Linear Res.(N)= 3.00
-------------------    U.H. Tp(hrs)=   1.86

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
               0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
               0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
               0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
               0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
               0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
               0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
               0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
               0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
               0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
               0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
               1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
               1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
               1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
               1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
               1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
               1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
               1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
               1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
               1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
               1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
               1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
               1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
               2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
               2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
               2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
               2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
               2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
               2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
               2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
               2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
               2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
               2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
               2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
               2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
               3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Unit Hyd Qpeak  (cms)=   4.251

     PEAK FLOW       (cms)=   2.525 (i)
     TIME TO PEAK    (hrs)=   8.083
     RUNOFF VOLUME    (mm)=  21.539
     TOTAL RAINFALL   (mm)=  90.700
     RUNOFF COEFFICIENT   =   0.237

     (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   ( 0111)|   Area    (ha)= 192.00   Curve Number   (CN)= 63.3
|ID= 1 DT= 5.0 min |   Ia      (mm)=   7.15   # of Linear Res.(N)= 3.00
-------------------    U.H. Tp(hrs)=   2.72

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
               0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
               0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
               0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
               0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
               0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
               0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
               0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
               0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
               0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
               0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
               1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
               1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
               1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
               1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
               1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
               1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
               1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
               1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
               1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
               1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
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         1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
         1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
         2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
         2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
         2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
         2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
         2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
         2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
         2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
         2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
         2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
         2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
         2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
         2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
         3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

    Unit Hyd Qpeak  (cms)=   2.696

    PEAK FLOW       (cms)=   2.485 (i)
    TIME TO PEAK    (hrs)=   9.167
    RUNOFF VOLUME    (mm)=  30.227
    TOTAL RAINFALL   (mm)=  90.700
    RUNOFF COEFFICIENT   =   0.333

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (  1011)|   Area     (ha)=  41.60
|ID= 1 DT= 5.0 min |   Total Imp(%)=  35.00   Dir. Conn.(%)=  30.00
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                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=    14.56        27.04
    Dep. Storage     (mm)=     6.27         3.67
    Average Slope     (%)=     0.70         2.00
    Length            (m)=   526.62      1082.00
    Mannings n           =    0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
          TIME     RAIN |  TIME     RAIN |' TIME     RAIN |  TIME     RAIN
           hrs    mm/hr |   hrs    mm/hr |'  hrs    mm/hr |   hrs    mm/hr
         0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
         0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
         0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
         0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
         0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
         0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
         0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
         0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
         0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
         0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
         0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
         1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
         1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
         1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
         1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
         1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
         1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
         1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
         1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
         1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
         1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
         1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
         1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
         2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
         2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
         2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
         2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
         2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
         2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
         2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
         2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
         2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
         2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
         2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
         2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
         3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

    Max.Eff.Inten.(mm/hr)=     119.72        22.07
               over (min)        5.00       105.00
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    Storage Coeff.  (min)=       7.17 (ii)  100.59 (ii)
    Unit Hyd. Tpeak (min)=       5.00       105.00
    Unit Hyd. peak  (cms)=       0.17         0.01
                                                      *TOTALS*
    PEAK FLOW       (cms)=       3.81         0.68         3.913 (iii)
    TIME TO PEAK    (hrs)=       6.00         7.67          6.00
    RUNOFF VOLUME    (mm)=      84.43        34.25         49.31
    TOTAL RAINFALL   (mm)=      90.70        90.70         90.70
    RUNOFF COEFFICIENT   =       0.93         0.38          0.54

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  63.6    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (  0102)|   Area     (ha)=  43.00
|ID= 1 DT= 5.0 min |   Total Imp(%)=  39.00   Dir. Conn.(%)=  31.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=    16.77        26.23
    Dep. Storage     (mm)=     6.27         3.49
    Average Slope     (%)=     1.00         0.87
    Length            (m)=   535.41      1000.00
    Mannings n           =    0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
          TIME     RAIN |  TIME     RAIN |' TIME     RAIN |  TIME     RAIN
           hrs    mm/hr |   hrs    mm/hr |'  hrs    mm/hr |   hrs    mm/hr
         0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
         0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
         0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
         0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
         0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
         0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
         0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
         0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
         0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
         0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
         0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
         1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
         1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
         1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
         1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
         1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
         1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
         1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
         1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
         1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
         1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
         1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
         1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
         2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
         2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
         2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
         2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
         2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
         2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
         2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
         2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
         2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
         2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
         2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
         2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
         3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

    Max.Eff.Inten.(mm/hr)=     119.72        25.78
               over (min)        5.00       115.00
    Storage Coeff.  (min)=       6.51 (ii)  114.00 (ii)
    Unit Hyd. Tpeak (min)=       5.00       115.00
    Unit Hyd. peak  (cms)=       0.18         0.01
                                                      *TOTALS*
    PEAK FLOW       (cms)=       4.14         0.71         4.244 (iii)
    TIME TO PEAK    (hrs)=       6.00         7.83          6.00
    RUNOFF VOLUME    (mm)=      84.43        37.93         52.35
    TOTAL RAINFALL   (mm)=      90.70        90.70         90.70
    RUNOFF COEFFICIENT   =       0.93         0.42          0.58
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        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  66.2    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| NASHYD   (  0103)|   Area     (ha)= 384.00   Curve Number   (CN)= 65.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   5.50   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=    1.87

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
          TIME     RAIN |  TIME     RAIN |' TIME     RAIN |  TIME     RAIN
           hrs    mm/hr |   hrs    mm/hr |'  hrs    mm/hr |   hrs    mm/hr
         0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
         0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
         0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
         0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
         0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
         0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
         0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
         0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
         0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
         0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
         0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
         1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
         1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
         1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
         1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
         1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
         1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
         1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
         1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
         1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
         1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
         1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
         1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
         2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
         2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
         2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
         2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
         2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
         2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
         2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
         2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
         2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
         2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
         2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
         2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
         3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

    Unit Hyd Qpeak  (cms)=   7.843

    PEAK FLOW       (cms)=   7.214 (i)
    TIME TO PEAK    (hrs)=   8.083
    RUNOFF VOLUME    (mm)=  32.703
    TOTAL RAINFALL   (mm)=  90.700
    RUNOFF COEFFICIENT   =   0.361

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| NASHYD   (  0104)|   Area     (ha)= 242.00   Curve Number   (CN)= 59.0
|ID= 1 DT= 5.0 min |   Ia       (mm)=   5.90   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=    1.66

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
          TIME     RAIN |  TIME     RAIN |' TIME     RAIN |  TIME     RAIN
           hrs    mm/hr |   hrs    mm/hr |'  hrs    mm/hr |   hrs    mm/hr
         0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
         0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
         0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
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         0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
         0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
         0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
         0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
         0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
         0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
         0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
         0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
         1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
         1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
         1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
         1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
         1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
         1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
         1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
         1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
         1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
         1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
         1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
         1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
         2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
         2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
         2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
         2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
         2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
         2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
         2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
         2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
         2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
         2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
         2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
         2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
         3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

    Unit Hyd Qpeak  (cms)=   5.568

    PEAK FLOW       (cms)=   4.155 (i)
    TIME TO PEAK    (hrs)=   7.833
    RUNOFF VOLUME    (mm)=  27.519
    TOTAL RAINFALL   (mm)=  90.700
    RUNOFF COEFFICIENT   =   0.303

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  0101)|   Area     (ha)= 182.00
|ID= 1 DT= 5.0 min |   Total Imp(%)=  21.00   Dir. Conn.(%)=  18.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=    38.22       143.78
    Dep. Storage     (mm)=     6.27         6.50
    Average Slope     (%)=     0.70         2.00
    Length            (m)=  1101.51      1082.00
    Mannings n           =    0.013        0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
          TIME     RAIN |  TIME     RAIN |' TIME     RAIN |  TIME     RAIN
           hrs    mm/hr |   hrs    mm/hr |'  hrs    mm/hr |   hrs    mm/hr
         0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
         0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
         0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
         0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
         0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
         0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
         0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
         0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
         0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
         0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
         0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
         1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
         1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
         1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
         1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
         1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
         1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
         1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
         1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
         1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
         1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
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               1.833    2.27 | 4.833    7.26 | 7.833     5.44 | 10.83    1.81
               1.917    2.27 | 4.917    7.26 | 7.917     5.44 | 10.92    1.81
               2.000    2.27 | 5.000    7.26 | 8.000     5.44 | 11.00    1.81
               2.083    2.72 | 5.083   10.88 | 8.083     3.17 | 11.08    1.81
               2.167    2.72 | 5.167   10.88 | 8.167     3.17 | 11.17    1.81
               2.250    2.72 | 5.250   10.88 | 8.250     3.17 | 11.25    1.81
               2.333    2.72 | 5.333   10.88 | 8.333     3.17 | 11.33    1.81
               2.417    2.72 | 5.417   10.88 | 8.417     3.17 | 11.42    1.81
               2.500    2.72 | 5.500   10.88 | 8.500     3.17 | 11.50    1.81
               2.583    2.72 | 5.583   43.54 | 8.583     3.17 | 11.58    1.81
               2.667    2.72 | 5.667   43.54 | 8.667     3.17 | 11.67    1.81
               2.750    2.72 | 5.750   43.54 | 8.750     3.17 | 11.75    1.81
               2.833    2.72 | 5.833  119.72 | 8.833     3.17 | 11.83    1.81
               2.917    2.72 | 5.917  119.72 | 8.917     3.17 | 11.92    1.81
               3.000    2.72 | 6.000  119.72 | 9.000     3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72         15.42
               over (min)        10.00        120.00
     Storage Coeff.  (min)=      11.16 (ii)   118.99 (ii)
     Unit Hyd. Tpeak (min)=      10.00        120.00
     Unit Hyd. peak  (cms)=       0.10          0.01
                                                          *TOTALS*
     PEAK FLOW       (cms)=       8.23          2.22         8.483 (iii)
     TIME TO PEAK    (hrs)=       6.00          7.92          6.00
     RUNOFF VOLUME    (mm)=      84.43         25.05         35.74
     TOTAL RAINFALL   (mm)=      90.70         90.70         90.70
     RUNOFF COEFFICIENT   =       0.93          0.28          0.39

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  55.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 0109)|   Area    (ha)=    6.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  30.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26          3.84
     Dep. Storage     (mm)=       6.05          3.92
     Average Slope     (%)=       1.00          2.40
     Length            (m)=     201.66        296.00
     Mannings n           =      0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
               0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
               0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
               0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
               0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
               0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
               0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
               0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
               0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
               0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
               0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
               1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
               1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
               1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
               1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
               1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
               1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
               1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
               1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
               1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
               1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
               1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
               1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
               2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
               2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
               2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
               2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
               2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
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               2.417    2.72 | 5.417   10.88 | 8.417     3.17 | 11.42    1.81
               2.500    2.72 | 5.500   10.88 | 8.500     3.17 | 11.50    1.81
               2.583    2.72 | 5.583   43.54 | 8.583     3.17 | 11.58    1.81
               2.667    2.72 | 5.667   43.54 | 8.667     3.17 | 11.67    1.81
               2.750    2.72 | 5.750   43.54 | 8.750     3.17 | 11.75    1.81
               2.833    2.72 | 5.833  119.72 | 8.833     3.17 | 11.83    1.81
               2.917    2.72 | 5.917  119.72 | 8.917     3.17 | 11.92    1.81
               3.000    2.72 | 6.000  119.72 | 9.000     3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72         41.22
               over (min)         5.00         40.00
     Storage Coeff.  (min)=       3.62 (ii)    35.27 (ii)
     Unit Hyd. Tpeak (min)=       5.00         40.00
     Unit Hyd. peak  (cms)=       0.25          0.03
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.60          0.27         0.708 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.50          6.00
     RUNOFF VOLUME    (mm)=      84.65         43.16         55.60
     TOTAL RAINFALL   (mm)=      90.70         90.70         90.70
     RUNOFF COEFFICIENT   =       0.93          0.48          0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  72.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 0110)|   Area    (ha)= 287.00
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  30.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     106.19        180.81
     Dep. Storage     (mm)=       6.31          3.90
     Average Slope     (%)=       1.00          2.00
     Length            (m)=    1383.23       1103.00
     Mannings n           =      0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
               0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
               0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
               0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
               0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
               0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
               0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
               0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
               0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
               0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
               0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
               1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
               1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
               1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
               1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
               1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
               1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
               1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
               1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
               1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
               1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
               1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
               1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
               2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
               2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
               2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
               2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
               2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
               2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
               2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
               2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
               2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
               2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
               2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
               2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
               3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81
```

```
     Max.Eff.Inten.(mm/hr)=     119.72         29.08
               over (min)        10.00        100.00
     Storage Coeff.  (min)=      11.50 (ii)    96.13 (ii)
     Unit Hyd. Tpeak (min)=      10.00        100.00
     Unit Hyd. peak  (cms)=       0.10          0.01
                                                          *TOTALS*
     PEAK FLOW       (cms)=      21.38          6.21        22.459 (iii)
     TIME TO PEAK    (hrs)=       6.00          7.58          6.00
     RUNOFF VOLUME    (mm)=      84.39         43.17         55.54
     TOTAL RAINFALL   (mm)=      90.70         90.70         90.70
     RUNOFF COEFFICIENT   =       0.93          0.48          0.61

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  72.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 FINISH
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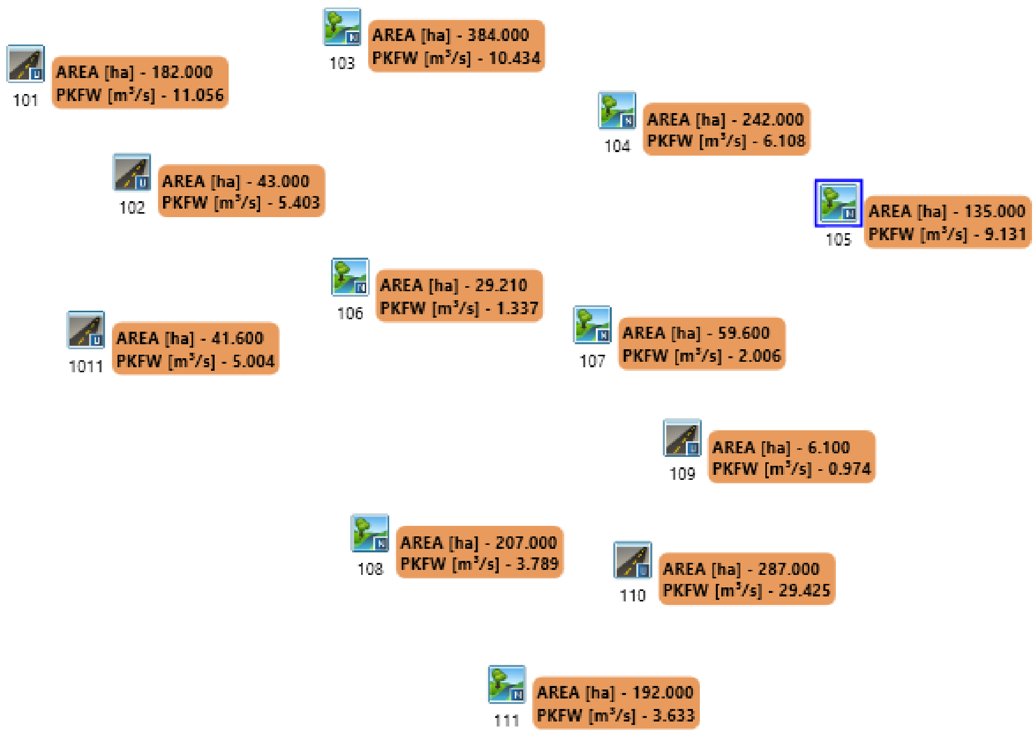
100-year 12 hour SCS Type II Existing Conditions



```
===========================================================================================================

      V    V   I    SSSSS  U   U    A    L                 (v 6.1.2002)
       V   V   I    SS     U   U   A A   L
        V  V   I     SS    U   U  AAAAA  L
        V V    I      SS   U   U  A   A  L
         VV    I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO     TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
Developed and Distributed by Smart City Water Inc
```



```
                  *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\d6628499
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\d6628499


DATE: 09-14-2021                          TIME: 08:46:10

USER:


COMMENTS: ____________________________________________________________


----------------------------------------------------------------------------------------------------------
  ************************************************
  ** SIMULATION : Run 18                        **
  ************************************************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|    READ STORM    |    Filename: C:\Users\caef070146\AppD
|                  |              ata\Local\Temp\
|                  |              a4e409ba-eeac-43ae-9fce-204e21648351\13bf36c4
| Ptotal=112.50 mm |    Comments: 100-Yr,12-hr SCS, City of Barrie
-------------------
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.25    2.81 |  3.25    4.50 |  6.25   20.25 |  9.25    3.94
              0.50    2.81 |  3.50    4.50 |  6.50   20.25 |  9.50    3.94
              0.75    2.81 |  3.75    4.50 |  6.75    9.00 |  9.75    3.94
              1.00    2.81 |  4.00    4.50 |  7.00    9.00 | 10.00    3.94
              1.25    2.81 |  4.25    6.75 |  7.25    6.75 | 10.25    2.25
              1.50    2.81 |  4.50    6.75 |  7.50    6.75 | 10.50    2.25
              1.75    2.81 |  4.75    9.00 |  7.75    6.75 | 10.75    2.25
              2.00    2.81 |  5.00    9.00 |  8.00    6.75 | 11.00    2.25
              2.25    3.37 |  5.25   13.50 |  8.25    3.94 | 11.25    2.25
              2.50    3.37 |  5.50   13.50 |  8.50    3.94 | 11.50    2.25
              2.75    3.37 |  5.75   54.00 |  8.75    3.94 | 11.75    2.25
              3.00    3.37 |  6.00  148.50 |  9.00    3.94 | 12.00    2.25
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-------------------
| CALIB            |
| NASHYD   ( 0105)|   Area     (ha)= 135.00   Curve Number   (CN)= 53.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   6.01   # of Linear Res.(N)= 3.00
-------------------    U.H. Tp(hrs)=   0.35

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

    Unit Hyd Qpeak  (cms)=  14.732

    PEAK FLOW       (cms)=   9.131 (i)
    TIME TO PEAK    (hrs)=   6.250
    RUNOFF VOLUME    (mm)=  34.532
    TOTAL RAINFALL   (mm)= 112.500
    RUNOFF COEFFICIENT   =   0.307

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| CALIB            |
| NASHYD   ( 0106)|   Area     (ha)=  29.21   Curve Number   (CN)= 53.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   6.01   # of Linear Res.(N)= 3.00
-------------------    U.H. Tp(hrs)=   0.61

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

    Unit Hyd Qpeak  (cms)=   1.829

    PEAK FLOW       (cms)=   1.337 (i)
    TIME TO PEAK    (hrs)=   6.583
    RUNOFF VOLUME    (mm)=  34.539
    TOTAL RAINFALL   (mm)= 112.500
    RUNOFF COEFFICIENT   =   0.307

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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-------------------
| CALIB            |
| NASHYD   ( 0107)|   Area     (ha)=  59.60   Curve Number   (CN)= 53.4
|ID= 1 DT= 5.0 min |   Ia       (mm)=   6.01   # of Linear Res.(N)= 3.00
-------------------    U.H. Tp(hrs)=   0.93

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

    Unit Hyd Qpeak  (cms)=   2.448

    PEAK FLOW       (cms)=   2.006 (i)
    TIME TO PEAK    (hrs)=   6.917
    RUNOFF VOLUME    (mm)=  34.539
    TOTAL RAINFALL   (mm)= 112.500
    RUNOFF COEFFICIENT   =   0.307

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   ( 0108)|   Area     (ha)= 207.00   Curve Number   (CN)= 51.3
|ID= 1 DT= 5.0 min |   Ia       (mm)=   7.05   # of Linear Res.(N)= 3.00
-------------------    U.H. Tp(hrs)=   1.86

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

    Unit Hyd Qpeak  (cms)=   4.251

    PEAK FLOW       (cms)=   3.789 (i)
    TIME TO PEAK    (hrs)=   8.083
    RUNOFF VOLUME    (mm)=  32.075
    TOTAL RAINFALL   (mm)= 112.500
    RUNOFF COEFFICIENT   =   0.285

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| NASHYD   ( 0111)|   Area     (ha)= 192.00   Curve Number   (CN)= 63.3
|ID= 1 DT= 5.0 min |   Ia       (mm)=   7.15   # of Linear Res.(N)= 3.00
-------------------    U.H. Tp(hrs)=   2.72

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
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          1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
          1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
          2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
          2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
          2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
          2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
          2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
          2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
          2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
          2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
          2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
          2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
          2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
          2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
          3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

    Unit Hyd Qpeak  (cms)=   2.696

    PEAK FLOW       (cms)=   3.633 (i)
    TIME TO PEAK    (hrs)=   9.083
    RUNOFF VOLUME    (mm)=  43.913
    TOTAL RAINFALL   (mm)= 112.500
    RUNOFF COEFFICIENT   =   0.390

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 1011)|    Area     (ha)=  41.60
|ID= 1 DT= 5.0 min |    Total Imp(%)=  35.00   Dir. Conn.(%)=  30.00
--------------------
                           IMPERVIOUS     PERVIOUS (i)
    Surface Area      (ha)=     14.56          27.04
    Dep. Storage      (mm)=      6.27           3.67
    Average Slope      (%)=      0.70           2.00
    Length             (m)=    526.62        1082.00
    Mannings n            =     0.013          0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME     RAIN
            hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs    mm/hr
          0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
          0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
          0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
          0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
          0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
          0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
          0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
          0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
          0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
          0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
          0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
          1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
          1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
          1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
          1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
          1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
          1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
          1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
          1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
          1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
          1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
          1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
          1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
          2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
          2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
          2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
          2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
          2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
          2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
          2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
          2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
          2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
          2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
          2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
          2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
          3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

    Max.Eff.Inten.(mm/hr)=      148.50         31.54
               over (min)        5.00          90.00
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    Storage Coeff.  (min)=       6.58 (ii)    87.57 (ii)
    Unit Hyd. Tpeak (min)=       5.00         90.00
    Unit Hyd. peak  (cms)=       0.18          0.01
                                                          *TOTALS*
    PEAK FLOW       (cms)=       4.80          1.08          5.004 (iii)
    TIME TO PEAK    (hrs)=       6.00          7.42           6.00
    RUNOFF VOLUME    (mm)=     106.23         48.72          65.97
    TOTAL RAINFALL   (mm)=     112.50        112.50         112.50
    RUNOFF COEFFICIENT   =       0.94          0.43           0.59

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  63.6    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 0102)|    Area     (ha)=  43.00
|ID= 1 DT= 5.0 min |    Total Imp(%)=  39.00   Dir. Conn.(%)=  31.00
--------------------
                           IMPERVIOUS     PERVIOUS (i)
    Surface Area      (ha)=     16.77          26.23
    Dep. Storage      (mm)=      6.27           3.49
    Average Slope      (%)=      1.00           0.87
    Length             (m)=    535.41        1000.00
    Mannings n            =     0.013          0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME     RAIN
            hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs    mm/hr
          0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
          0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
          0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
          0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
          0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
          0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
          0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
          0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
          0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
          0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
          0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
          1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
          1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
          1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
          1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
          1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
          1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
          1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
          1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
          1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
          1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
          1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
          1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
          2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
          2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
          2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
          2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
          2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
          2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
          2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
          2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
          2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
          2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
          2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
          2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
          3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

    Max.Eff.Inten.(mm/hr)=      148.50         36.44
               over (min)        5.00         100.00
    Storage Coeff.  (min)=       5.97 (ii)    99.56 (ii)
    Unit Hyd. Tpeak (min)=       5.00        100.00
    Unit Hyd. peak  (cms)=       0.19          0.01
                                                          *TOTALS*
    PEAK FLOW       (cms)=       5.21          1.11          5.403 (iii)
    TIME TO PEAK    (hrs)=       6.00          7.58           6.00
    RUNOFF VOLUME    (mm)=     106.23         53.40          69.78
    TOTAL RAINFALL   (mm)=     112.50        112.50         112.50
    RUNOFF COEFFICIENT   =       0.94          0.47           0.62
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      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  66.2    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| NASHYD   ( 0103)|    Area     (ha)= 384.00    Curve Number   (CN)= 65.0
|ID= 1 DT= 5.0 min |    Ia       (mm)=   5.50    # of Linear Res.(N)= 3.00
--------------------    U.H. Tp(hrs)=    1.87

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME     RAIN
            hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs    mm/hr
          0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
          0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
          0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
          0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
          0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
          0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
          0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
          0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
          0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
          0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
          0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
          1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
          1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
          1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
          1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
          1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
          1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
          1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
          1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
          1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
          1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
          1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
          1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
          2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
          2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
          2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
          2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
          2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
          2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
          2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
          2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
          2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
          2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
          2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
          2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
          3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

    Unit Hyd Qpeak  (cms)=   7.843

    PEAK FLOW       (cms)=  10.434 (i)
    TIME TO PEAK    (hrs)=   8.000
    RUNOFF VOLUME    (mm)=  46.967
    TOTAL RAINFALL   (mm)= 112.500
    RUNOFF COEFFICIENT   =   0.417

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| NASHYD   ( 0104)|    Area     (ha)= 242.00    Curve Number   (CN)= 59.0
|ID= 1 DT= 5.0 min |    Ia       (mm)=   5.90    # of Linear Res.(N)= 3.00
--------------------    U.H. Tp(hrs)=    1.66

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME     RAIN
            hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs    mm/hr
          0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
          0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
          0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
```

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          0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
          0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
          0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
          0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
          0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
          0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
          0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
          0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
          1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
          1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
          1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
          1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
          1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
          1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
          1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
          1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
          1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
          1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
          1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
          1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
          2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
          2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
          2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
          2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
          2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
          2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
          2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
          2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
          2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
          2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
          2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
          2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
          3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

    Unit Hyd Qpeak  (cms)=   5.568

    PEAK FLOW       (cms)=   6.108 (i)
    TIME TO PEAK    (hrs)=   7.750
    RUNOFF VOLUME    (mm)=  40.139
    TOTAL RAINFALL   (mm)= 112.500
    RUNOFF COEFFICIENT   =   0.357

    (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 0101)|    Area     (ha)= 182.00
|ID= 1 DT= 5.0 min |    Total Imp(%)=  21.00   Dir. Conn.(%)=  18.00
--------------------
                           IMPERVIOUS     PERVIOUS (i)
    Surface Area      (ha)=     38.22         143.78
    Dep. Storage      (mm)=      6.27           6.50
    Average Slope      (%)=      0.70           2.00
    Length             (m)=   1101.51        1082.00
    Mannings n            =     0.013          0.250

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME     RAIN
            hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs    mm/hr
          0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
          0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
          0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
          0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
          0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
          0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
          0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
          0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
          0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
          0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
          0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
          1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
          1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
          1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
          1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
          1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
          1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
          1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
          1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
          1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
          1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
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              1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
              1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
              2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
              2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
              2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
              2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
              2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
              2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
              2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
              2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
              2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
              2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
              2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
              2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
              3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        22.81
              over (min)         10.00       105.00
     Storage Coeff.  (min)=      10.24 (ii)  102.43 (ii)
     Unit Hyd. Tpeak (min)=      10.00       105.00
     Unit Hyd. peak  (cms)=       0.11         0.01
                                                           *TOTALS*
     PEAK FLOW       (cms)=      10.53         3.68         11.056 (iii)
     TIME TO PEAK    (hrs)=       6.00         7.67           6.00
     RUNOFF VOLUME    (mm)=     106.23        36.83          49.32
     TOTAL RAINFALL   (mm)=     112.50       112.50         112.50
     RUNOFF COEFFICIENT   =       0.94         0.33           0.44

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
              YOU SHOULD CONSIDER SPLITTING THE AREA.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  55.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  0109)|   Area    (ha)=   6.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  30.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       2.26          3.84
     Dep. Storage     (mm)=       6.05          3.92
     Average Slope     (%)=       1.00          2.40
     Length            (m)=     201.66        296.00
     Mannings n          =       0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
              0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
              0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
              0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
              0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
              0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
              0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
              0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
              0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
              0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
              0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
              1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
              1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
              1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
              1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
              1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
              1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
              1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
              1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
              1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
              1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
              1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
              1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
              2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
              2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
              2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
              2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
              2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
```

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              2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
              2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
              2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
              2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
              2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
              2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
              2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
              3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        64.77
              over (min)          5.00        30.00
     Storage Coeff.  (min)=       3.32 (ii)   29.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00        30.00
     Unit Hyd. peak  (cms)=       0.26         0.04
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.75         0.43          0.974 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.33           6.00
     RUNOFF VOLUME    (mm)=     106.45        60.01          73.94
     TOTAL RAINFALL   (mm)=     112.50       112.50         112.50
     RUNOFF COEFFICIENT   =       0.95         0.53           0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  72.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  0110)|   Area    (ha)= 287.00
|ID= 1 DT= 5.0 min |   Total Imp(%)=  37.00   Dir. Conn.(%)=  30.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     106.19        180.81
     Dep. Storage     (mm)=       6.31          3.90
     Average Slope     (%)=       1.00          2.00
     Length            (m)=    1383.23       1103.00
     Mannings n          =       0.013         0.250

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
              0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
              0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
              0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
              0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
              0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
              0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
              0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
              0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
              0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
              0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
              1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
              1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
              1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
              1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
              1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
              1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
              1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
              1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
              1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
              1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
              1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
              1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
              2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
              2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
              2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
              2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
              2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
              2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
              2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
              2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
              2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
              2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
              2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
              2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
              3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25
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```
     Max.Eff.Inten.(mm/hr)=     148.50        40.53
              over (min)         10.00        85.00
     Storage Coeff.  (min)=      10.55 (ii)   84.65 (ii)
     Unit Hyd. Tpeak (min)=      10.00        85.00
     Unit Hyd. peak  (cms)=       0.11         0.01
                                                           *TOTALS*
     PEAK FLOW       (cms)=      27.38         9.64         29.425 (iii)
     TIME TO PEAK    (hrs)=       6.00         7.25           6.00
     RUNOFF VOLUME    (mm)=     106.19        60.03          73.88
     TOTAL RAINFALL   (mm)=     112.50       112.50         112.50
     RUNOFF COEFFICIENT   =       0.94         0.53           0.66

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  72.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 FINISH
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100-Yr Pre-Developmet Roadway Drainage Area Flows (12-hr SCSII)

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      V    V   I    SSSSS  U    U    A    L              (v 6.1.2002)
      V    V   I    SS     U    U   A A   L
       V  V    I     SS    U    U  AAAAA  L
       V  V    I      SS   U    U  A   A  L
        VV     I    SSSSS  UUUUU  A    A  LLLLL

      OOO    TTTTT  TTTTT  H    H  Y    Y  M    M   OOO     TM
     O   O     T      T    H    H   Y  Y   MM MM  O   O
     O   O     T      T    H    H    Y     M   M  O   O
      OOO      T      T    H    H    Y     M   M   OOO
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                    ***** D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\0f390bea
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\0f390bea


DATE: 05-18-2022                         TIME: 12:41:42

USER:



COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------------------------
  **********************************************
  ** SIMULATION : Run 13                       **
  **********************************************


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|    READ STORM     |     Filename: C:\Users\caef070146\AppD
|                   |               ata\Local\Temp\
|                   |               b414f864-f56d-471c-a2fc-7a8c6cfa5585\39b42806
| Ptotal= 46.70 mm  |     Comments: 2-Yr,12-hr SCS, City of Barrie
--------------------
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.25    1.17 |  3.25    1.87 |  6.25    8.41 |  9.25    1.63
                 0.50    1.17 |  3.50    1.87 |  6.50    8.41 |  9.50    1.63
                 0.75    1.17 |  3.75    1.87 |  6.75    3.74 |  9.75    1.63
                 1.00    1.17 |  4.00    1.87 |  7.00    3.74 | 10.00    1.63
                 1.25    1.17 |  4.25    2.80 |  7.25    2.80 | 10.25    0.93
                 1.50    1.17 |  4.50    2.80 |  7.50    2.80 | 10.50    0.93
                 1.75    1.17 |  4.75    3.74 |  7.75    2.80 | 10.75    0.93
                 2.00    1.17 |  5.00    3.74 |  8.00    2.80 | 11.00    0.93
                 2.25    1.40 |  5.25    5.60 |  8.25    1.63 | 11.25    0.93
                 2.50    1.40 |  5.50    5.60 |  8.50    1.63 | 11.50    0.93
                 2.75    1.40 |  5.75   22.42 |  8.75    1.63 | 11.75    0.93
                 3.00    1.40 |  6.00   61.64 |  9.00    1.63 | 12.00    0.93

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| CALIB             |
| STANDHYD ( 10011) |   Area    (ha)=   0.21
|ID= 1 DT= 5.0 min  |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.17          0.04
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       37.42         40.00
     Mannings n          =        0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
                0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
                0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
                0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
                0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
                0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
                0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
                0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
                0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
                0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
                0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
                1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
                1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
                1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
                1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
                1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
                1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
                1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
                1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
                1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
                1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
                1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
                1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
                2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
                2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
                2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
                2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
                2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
                2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
                2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
                2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
                2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
                2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
                2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
                2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
                3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=       61.64         41.44
                over (min)        5.00         15.00
     Storage Coeff.  (min)=        1.72 (ii)    12.69 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.32          0.08
                                                             *TOTALS*
     PEAK FLOW        (cms)=        0.03          0.00           0.031 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.08            6.00
     RUNOFF VOLUME     (mm)=       45.70         27.09           41.76
     TOTAL RAINFALL    (mm)=       46.70         46.70           46.70
     RUNOFF COEFFICIENT   =         0.98          0.58            0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 10022) |   Area    (ha)=   0.83
|ID= 1 DT= 5.0 min  |   Total Imp(%)=  75.00   Dir. Conn.(%)=  75.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.62          0.21
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       74.39         40.00
     Mannings n          =        0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
                0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
                0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
                0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
                0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
                0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
                0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
                0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
                0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
                0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
                0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
                1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
                1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
                1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
                1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
                1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
                1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
                1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
                1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
                1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
                1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
                1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
                1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
                2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
                2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
                2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
                2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
                2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
                2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
                2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
                2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
                2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
                2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
                2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
                2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
                3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=       61.64         41.44
                over (min)        5.00         15.00
     Storage Coeff.  (min)=        2.60 (ii)    13.57 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.29          0.08
                                                             *TOTALS*
     PEAK FLOW        (cms)=        0.11          0.02           0.120 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.08            6.00
     RUNOFF VOLUME     (mm)=       45.70         27.09           41.04
     TOTAL RAINFALL    (mm)=       46.70         46.70           46.70
     RUNOFF COEFFICIENT   =         0.98          0.58            0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 10021) |   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min  |   Total Imp(%)=  71.00   Dir. Conn.(%)=  71.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.52          0.21
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       69.76         40.00
     Mannings n          =        0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
                0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
                0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
                0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
                0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
                0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
                0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
                0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
                0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
                0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
                0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
                1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
                1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
                1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
                1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
                1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
                1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
                1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
                1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
                1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
                1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
                1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
                1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
                2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
                2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
                2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
                2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
                2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
                2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
                2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
                2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
                2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
                2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
                2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
                2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
                3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=       61.64         41.44
                over (min)        5.00         15.00
     Storage Coeff.  (min)=        2.50 (ii)    13.47 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.29          0.08
                                                             *TOTALS*
     PEAK FLOW        (cms)=        0.09          0.02           0.102 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.08            6.00
     RUNOFF VOLUME     (mm)=       45.70         27.09           40.29
     TOTAL RAINFALL    (mm)=       46.70         46.70           46.70
     RUNOFF COEFFICIENT   =         0.98          0.58            0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 10031) |   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min  |   Total Imp(%)=  66.00   Dir. Conn.(%)=  66.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.25          0.13
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       50.33         40.00
     Mannings n          =        0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
                0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
                0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
                0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
                0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
                0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
                0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
                0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
                0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
                0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
                0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
                1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
                1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
                1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
                1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
                1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
                1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
                1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
                1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
                1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
                1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
                1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
                1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
                2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
                2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
                2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
                2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
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        2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
        2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
        2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
        2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
        2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
        2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
        2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
        2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
        3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64          41.44
               over (min)          5.00          15.00
     Storage Coeff.  (min)=        2.05 (ii)     13.03 (ii)
     Unit Hyd. Tpeak (min)=        5.00          15.00
     Unit Hyd. peak  (cms)=        0.31           0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.04           0.01          0.052 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.08           6.00
     RUNOFF VOLUME    (mm)=       45.70          27.09          39.35
     TOTAL RAINFALL   (mm)=       46.70          46.70          46.70
     RUNOFF COEFFICIENT   =        0.98           0.58           0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10032)|   Area     (ha)=    0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.31          0.08
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     50.99         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO    5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
           0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
           0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
           0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
           0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
           0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
           0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
           0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
           0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
           0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
           0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
           0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
           1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
           1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
           1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
           1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
           1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
           1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
           1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
           1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
           1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
           1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
           1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
           1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
           2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
           2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
           2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
           2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
           2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
           2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
           2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
           2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
           2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
           2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
           2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
           2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
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           3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64          41.44
               over (min)          5.00          15.00
     Storage Coeff.  (min)=        2.07 (ii)     13.04 (ii)
     Unit Hyd. Tpeak (min)=        5.00          15.00
     Unit Hyd. peak  (cms)=        0.31           0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.05           0.01          0.058 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.08           6.00
     RUNOFF VOLUME    (mm)=       45.70          27.09          41.77
     TOTAL RAINFALL   (mm)=       46.70          46.70          46.70
     RUNOFF COEFFICIENT   =        0.98           0.58           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10041)|   Area     (ha)=    0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.00   Dir. Conn.(%)=  69.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.24          0.11
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     48.30         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO    5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
           0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
           0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
           0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
           0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
           0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
           0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
           0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
           0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
           0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
           0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
           0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
           1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
           1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
           1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
           1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
           1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
           1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
           1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
           1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
           1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
           1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
           1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
           1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
           2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
           2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
           2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
           2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
           2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
           2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
           2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
           2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
           2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
           2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
           2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
           2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
           3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64          41.44
               over (min)          5.00          15.00
     Storage Coeff.  (min)=        2.00 (ii)     12.98 (ii)
     Unit Hyd. Tpeak (min)=        5.00          15.00
     Unit Hyd. peak  (cms)=        0.31           0.08
                                                          *TOTALS*
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     PEAK FLOW       (cms)=        0.04           0.01          0.049 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.08           6.00
     RUNOFF VOLUME    (mm)=       45.70          27.09          39.91
     TOTAL RAINFALL   (mm)=       46.70          46.70          46.70
     RUNOFF COEFFICIENT   =        0.98           0.58           0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10042)|   Area     (ha)=    0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.28          0.10
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     50.33         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO    5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
           0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
           0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
           0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
           0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
           0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
           0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
           0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
           0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
           0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
           0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
           0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
           1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
           1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
           1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
           1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
           1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
           1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
           1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
           1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
           1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
           1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
           1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
           1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
           2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
           2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
           2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
           2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
           2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
           2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
           2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
           2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
           2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
           2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
           2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
           2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
           3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64          41.44
               over (min)          5.00          15.00
     Storage Coeff.  (min)=        2.05 (ii)     13.03 (ii)
     Unit Hyd. Tpeak (min)=        5.00          15.00
     Unit Hyd. peak  (cms)=        0.31           0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.05           0.01          0.055 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.08           6.00
     RUNOFF VOLUME    (mm)=       45.70          27.09          40.84
     TOTAL RAINFALL   (mm)=       46.70          46.70          46.70
     RUNOFF COEFFICIENT   =        0.98           0.58           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
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```
       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10012)|   Area     (ha)=    0.23
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.18          0.05
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     39.16         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO    5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
           0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
           0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
           0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
           0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
           0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
           0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
           0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
           0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
           0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
           0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
           0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
           1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
           1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
           1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
           1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
           1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
           1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
           1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
           1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
           1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
           1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
           1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
           1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
           2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
           2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
           2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
           2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
           2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
           2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
           2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
           2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
           2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
           2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
           2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
           2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
           3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64          41.44
               over (min)          5.00          15.00
     Storage Coeff.  (min)=        1.77 (ii)     12.74 (ii)
     Unit Hyd. Tpeak (min)=        5.00          15.00
     Unit Hyd. peak  (cms)=        0.32           0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.03           0.00          0.034 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.08           6.00
     RUNOFF VOLUME    (mm)=       45.70          27.09          41.57
     TOTAL RAINFALL   (mm)=       46.70          46.70          46.70
     RUNOFF COEFFICIENT   =        0.98           0.58           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10051)|   Area    (ha)=   0.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  66.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.24          0.13
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      49.67         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
                0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
                0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
                0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
                0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
                0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
                0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
                0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
                0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
                0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
                0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
                1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
                1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
                1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
                1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
                1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
                1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
                1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
                1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
                1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
                1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
                1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
                1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
                2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
                2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
                2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
                2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
                2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
                2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
                2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
                2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
                2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
                2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
                2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
                2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
                3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)         5.00         15.00
     Storage Coeff.  (min)=       2.04 (ii)    13.01 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.31          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.04          0.01         0.050 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         39.35
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10052)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  62.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.22          0.14
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      48.99         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
                0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
                0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
                0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
                0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
                0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
                0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
                0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
                0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
                0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
                0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
                1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
                1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
                1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
                1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
                1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
                1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
                1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
                1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
                1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
                1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
                1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
                1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
                2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
                2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
                2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
                2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
                2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
                2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
                2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
                2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
                2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
                2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
                2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
                2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
                3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)         5.00         15.00
     Storage Coeff.  (min)=       2.02 (ii)    12.99 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.31          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.04          0.01         0.047 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         38.61
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10062)|   Area    (ha)=   0.66
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  62.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.41          0.25
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      66.33         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
                0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
                0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
                0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
                0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
                0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
                0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
                0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
                0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
                0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
                0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
                1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
                1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
                1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
                1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
                1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
                1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
                1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
                1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
                1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
                1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
                1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
                1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
                2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
                2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
                2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
                2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
                2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
                2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
                2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
                2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
                2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
                2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
                2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
                2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
                3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)         5.00         15.00
     Storage Coeff.  (min)=       2.42 (ii)    13.40 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.30          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.07          0.02         0.086 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         38.61
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  65.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.42          0.23
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.83         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
                0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
                0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
                0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
                0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
                0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
                0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
                0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
                0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
                0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
                0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
                1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
                1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
                1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
                1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
                1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
                1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
                1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
                1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
                1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
                1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
                1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
                1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
                2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
                2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
                2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
                2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
                2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
                2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
                2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
                2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
                2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
                2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
                2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
                2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
                3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)         5.00         15.00
     Storage Coeff.  (min)=       2.41 (ii)    13.39 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.30          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.07          0.02         0.087 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         39.17
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10072)|   Area    (ha)=   0.74
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  71.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.53          0.21
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      70.24         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
                0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
                0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
                0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
                0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
                0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
                0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
                0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
                0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
                0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
                0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
                1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
                1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
                1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
                1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
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          1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
          1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
          1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
          1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
          1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
          1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
          1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
          1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
          2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
          2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
          2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
          2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
          2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
          2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
          2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
          2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
          2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
          2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
          2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
          2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
          3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       2.51 (ii)    13.48 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.29          0.08
                                                       *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.02       0.104 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09       40.29
     TOTAL RAINFALL   (mm)=      46.70         46.70       46.70
     RUNOFF COEFFICIENT   =       0.98          0.58        0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10071)|   Area     (ha)=   0.72
|ID= 1 DT= 5.0 min |   Total Imp(%)=  60.00   Dir. Conn.(%)=  60.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.43          0.29
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      69.28         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
           TIME     RAIN | TIME     RAIN |' TIME     RAIN | TIME     RAIN
            hrs    mm/hr |  hrs    mm/hr |'  hrs    mm/hr |  hrs    mm/hr
          0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
          0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
          0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
          0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
          0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
          0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
          0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
          0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
          0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
          0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
          0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
          1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
          1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
          1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
          1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
          1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
          1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
          1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
          1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
          1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
          1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
          1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
          1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
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          2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
          2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
          2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
          2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
          2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
          2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
          2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
          2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
          2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
          2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
          2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
          2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
          3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       2.49 (ii)    13.46 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.29          0.08
                                                       *TOTALS*
     PEAK FLOW       (cms)=       0.07          0.02       0.093 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09       38.25
     TOTAL RAINFALL   (mm)=      46.70         46.70       46.70
     RUNOFF COEFFICIENT   =       0.98          0.58        0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10081)|   Area     (ha)=   0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  52.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.11          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      37.42         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
           TIME     RAIN | TIME     RAIN |' TIME     RAIN | TIME     RAIN
            hrs    mm/hr |  hrs    mm/hr |'  hrs    mm/hr |  hrs    mm/hr
          0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
          0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
          0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
          0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
          0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
          0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
          0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
          0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
          0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
          0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
          0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
          1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
          1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
          1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
          1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
          1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
          1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
          1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
          1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
          1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
          1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
          1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
          1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
          2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
          2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
          2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
          2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
          2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
          2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
          2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
          2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
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          2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
          2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
          2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
          2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
          3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       1.72 (ii)    12.69 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.32          0.08
                                                       *TOTALS*
     PEAK FLOW       (cms)=       0.02          0.01       0.025 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09       36.73
     TOTAL RAINFALL   (mm)=      46.70         46.70       46.70
     RUNOFF COEFFICIENT   =       0.98          0.58        0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10082)|   Area     (ha)=   0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.18          0.03
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      37.42         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
           TIME     RAIN | TIME     RAIN |' TIME     RAIN | TIME     RAIN
            hrs    mm/hr |  hrs    mm/hr |'  hrs    mm/hr |  hrs    mm/hr
          0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
          0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
          0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
          0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
          0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
          0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
          0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
          0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
          0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
          0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
          0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
          1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
          1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
          1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
          1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
          1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
          1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
          1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
          1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
          1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
          1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
          1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
          1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
          2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
          2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
          2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
          2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
          2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
          2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
          2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
          2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
          2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
          2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
          2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
          2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
          3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         43.41
                over (min)        5.00         10.00
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     Storage Coeff.  (min)=       1.72 (ii)     6.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.15
                                                       *TOTALS*
     PEAK FLOW       (cms)=       0.03          0.00       0.034 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09       43.27
     TOTAL RAINFALL   (mm)=      46.70         46.70       46.70
     RUNOFF COEFFICIENT   =       0.98          0.58        0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10092)|   Area     (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.51          0.12
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      64.81         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
           TIME     RAIN | TIME     RAIN |' TIME     RAIN | TIME     RAIN
            hrs    mm/hr |  hrs    mm/hr |'  hrs    mm/hr |  hrs    mm/hr
          0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
          0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
          0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
          0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
          0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
          0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
          0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
          0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
          0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
          0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
          0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
          1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
          1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
          1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
          1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
          1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
          1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
          1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
          1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
          1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
          1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
          1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
          1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
          2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
          2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
          2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
          2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
          2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
          2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
          2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
          2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
          2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
          2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
          2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
          2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
          3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       2.39 (ii)    13.36 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.30          0.08
                                                       *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.01       0.095 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09       42.15
     TOTAL RAINFALL   (mm)=      46.70         46.70       46.70
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     RUNOFF COEFFICIENT   =       0.98         0.58           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10091)|   Area    (ha)=   0.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.37          0.13
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    57.74         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08   1.63
            0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17   1.63
            0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25   1.63
            0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33   1.63
            0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42   1.63
            0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50   1.63
            0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58   1.63
            0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67   1.63
            0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75   1.63
            0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83   1.63
            0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92   1.63
            1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00   1.63
            1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08   0.93
            1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17   0.93
            1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25   0.93
            1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33   0.93
            1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42   0.93
            1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50   0.93
            1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58   0.93
            1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67   0.93
            1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75   0.93
            1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83   0.93
            1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92   0.93
            2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00   0.93
            2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08   0.93
            2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17   0.93
            2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25   0.93
            2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33   0.93
            2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42   0.93
            2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50   0.93
            2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58   0.93
            2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67   0.93
            2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75   0.93
            2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83   0.93
            2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92   0.93
            3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00   0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       2.23 (ii)    13.20 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.30          0.08
                                                          *TOTALS*
     PEAK FLOW        (cms)=      0.06          0.01          0.072 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09          40.85
     TOTAL RAINFALL   (mm)=      46.70         46.70          46.70
     RUNOFF COEFFICIENT   =       0.98          0.58           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
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     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  1101)|   Area    (ha)=   0.91
|ID= 1 DT= 5.0 min |   Total Imp(%)=  55.00   Dir. Conn.(%)=  55.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.50          0.41
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    77.89         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                         ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08   1.63
            0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17   1.63
            0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25   1.63
            0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33   1.63
            0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42   1.63
            0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50   1.63
            0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58   1.63
            0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67   1.63
            0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75   1.63
            0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83   1.63
            0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92   1.63
            1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00   1.63
            1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08   0.93
            1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17   0.93
            1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25   0.93
            1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33   0.93
            1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42   0.93
            1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50   0.93
            1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58   0.93
            1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67   0.93
            1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75   0.93
            1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83   0.93
            1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92   0.93
            2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00   0.93
            2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08   0.93
            2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17   0.93
            2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25   0.93
            2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33   0.93
            2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42   0.93
            2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50   0.93
            2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58   0.93
            2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67   0.93
            2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75   0.93
            2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83   0.93
            2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92   0.93
            3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00   0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       2.67 (ii)    13.64 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.29          0.08
                                                          *TOTALS*
     PEAK FLOW        (cms)=      0.09          0.03          0.112 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09          37.32
     TOTAL RAINFALL   (mm)=      46.70         46.70          46.70
     RUNOFF COEFFICIENT   =       0.98          0.58           0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  1102)|   Area    (ha)=   0.88
|ID= 1 DT= 5.0 min |   Total Imp(%)=  72.00   Dir. Conn.(%)=  72.00
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                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.63          0.25
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    76.59         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                         ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08   1.63
            0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17   1.63
            0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25   1.63
            0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33   1.63
            0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42   1.63
            0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50   1.63
            0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58   1.63
            0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67   1.63
            0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75   1.63
            0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83   1.63
            0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92   1.63
            1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00   1.63
            1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08   0.93
            1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17   0.93
            1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25   0.93
            1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33   0.93
            1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42   0.93
            1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50   0.93
            1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58   0.93
            1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67   0.93
            1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75   0.93
            1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83   0.93
            1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92   0.93
            2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00   0.93
            2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08   0.93
            2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17   0.93
            2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25   0.93
            2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33   0.93
            2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42   0.93
            2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50   0.93
            2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58   0.93
            2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67   0.93
            2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75   0.93
            2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83   0.93
            2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92   0.93
            3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00   0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       2.64 (ii)    13.62 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.29          0.08
                                                          *TOTALS*
     PEAK FLOW        (cms)=      0.11          0.02          0.124 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09          40.48
     TOTAL RAINFALL   (mm)=      46.70         46.70          46.70
     RUNOFF COEFFICIENT   =       0.98          0.58           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  1111)|   Area    (ha)=   1.06
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.63          0.43
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    84.06         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                         ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08   1.63
            0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17   1.63
            0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25   1.63
            0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33   1.63
            0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42   1.63
            0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50   1.63
            0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58   1.63
            0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67   1.63
            0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75   1.63
            0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83   1.63
            0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92   1.63
            1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00   1.63
            1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08   0.93
            1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17   0.93
            1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25   0.93
            1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33   0.93
            1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42   0.93
            1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50   0.93
            1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58   0.93
            1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67   0.93
            1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75   0.93
            1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83   0.93
            1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92   0.93
            2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00   0.93
            2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08   0.93
            2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17   0.93
            2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25   0.93
            2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33   0.93
            2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42   0.93
            2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50   0.93
            2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58   0.93
            2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67   0.93
            2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75   0.93
            2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83   0.93
            2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92   0.93
            3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00   0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       2.79 (ii)    13.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.28          0.08
                                                          *TOTALS*
     PEAK FLOW        (cms)=      0.11          0.03          0.135 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09          38.06
     TOTAL RAINFALL   (mm)=      46.70         46.70          46.70
     RUNOFF COEFFICIENT   =       0.98          0.58           0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (  1112)|   Area    (ha)=   0.97
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.76          0.21
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    80.42         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                         ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08   1.63
            0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17   1.63
            0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25   1.63
```

```
            0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
            0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
            0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
            0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
            0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
            0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
            0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
            0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
            1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
            1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
            1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
            1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
            1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
            1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
            1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
            1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
            1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
            1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
            1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
            1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
            2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
            2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
            2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
            2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
            2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
            2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
            2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
            2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
            2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
            2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
            2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
            2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
            3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64          41.44
                over (min)        5.00          15.00
     Storage Coeff.  (min)=       2.72 (ii)     13.69 (ii)
     Unit Hyd. Tpeak (min)=       5.00          15.00
     Unit Hyd. peak  (cms)=       0.29           0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.13           0.02        0.143 (iii)
     TIME TO PEAK    (hrs)=       6.00           6.08        6.00
     RUNOFF VOLUME    (mm)=      45.70          27.09       41.60
     TOTAL RAINFALL   (mm)=      46.70          46.70       46.70
     RUNOFF COEFFICIENT   =       0.98           0.58        0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (  1122)|   Area    (ha)=   1.22
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.00   Dir. Conn.(%)=  69.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.84          0.38
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      90.18         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
            0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
            0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
            0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
            0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
            0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
            0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
            0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
            0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
            0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
            0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
```

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            1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
            1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
            1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
            1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
            1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
            1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
            1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
            1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
            1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
            1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
            1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
            1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
            2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
            2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
            2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
            2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
            2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
            2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
            2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
            2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
            2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
            2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
            2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
            2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
            3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64          41.44
                over (min)        5.00          15.00
     Storage Coeff.  (min)=       2.91 (ii)     13.89 (ii)
     Unit Hyd. Tpeak (min)=       5.00          15.00
     Unit Hyd. peak  (cms)=       0.28           0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.14           0.03        0.168 (iii)
     TIME TO PEAK    (hrs)=       6.00           6.08        6.00
     RUNOFF VOLUME    (mm)=      45.70          27.09       39.93
     TOTAL RAINFALL   (mm)=      46.70          46.70       46.70
     RUNOFF COEFFICIENT   =       0.98           0.58        0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (  1121)|   Area    (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.00   Dir. Conn.(%)=  68.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.82          0.39
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      89.81         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
            0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
            0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
            0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
            0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
            0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
            0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
            0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
            0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
            0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
            0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
            1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
            1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
            1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
            1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
            1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
            1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
            1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
            1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
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            1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
            1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
            1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
            1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
            2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
            2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
            2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
            2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
            2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
            2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
            2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
            2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
            2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
            2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
            2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
            2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
            3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64          41.44
                over (min)        5.00          15.00
     Storage Coeff.  (min)=       2.91 (ii)     13.88 (ii)
     Unit Hyd. Tpeak (min)=       5.00          15.00
     Unit Hyd. peak  (cms)=       0.28           0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.14           0.03        0.165 (iii)
     TIME TO PEAK    (hrs)=       6.00           6.08        6.00
     RUNOFF VOLUME    (mm)=      45.70          27.09       39.74
     TOTAL RAINFALL   (mm)=      46.70          46.70       46.70
     RUNOFF COEFFICIENT   =       0.98           0.58        0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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===============================================================================================

       V    V   I    SSSSS  U    U     A     L                  (v 6.1.2002)
       V    V   I    SS     U    U    A A    L
        V  V    I     SS    U    U   AAAAA   L
        V  V    I      SS   U    U   A   A   L
         VV     I    SSSSS  UUUUU   A     A  LLLLL

        OOO    TTTTT  TTTTT  H    H  Y    Y  M    M   OOO     TM
       O   O     T      T    H    H   Y  Y   MM MM   O   O
       O   O     T      T    H    H    Y     M    M  O   O
        OOO      T      T    H    H    Y     M    M   OOO
```



```
                       *****  D E T A I L E D    O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\c8b77928
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\c8b77928


DATE: 05-18-2022                                TIME: 12:41:43

USER:



COMMENTS: _____________________________________________________________


-----------------------------------------------------------------------------------------------
  ************************************************
  ** SIMULATION : Run 14                        **
  ************************************************


--------------------
|    READ STORM      |     Filename: C:\Users\caef070146\AppD
|                    |               ata\Local\Temp\
|                    |               b414f864-f56d-471c-a2fc-7a8c6cfa5585\5b7ccddc
| Ptotal= 64.30 mm |     Comments: 2-Yr,12-hr SCS, City of Barrie
```

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--------------------
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.25    1.61 |  3.25    2.57 |  6.25   11.57 |  9.25    2.25
             0.50    1.61 |  3.50    2.57 |  6.50   11.57 |  9.50    2.25
             0.75    1.61 |  3.75    2.57 |  6.75    5.14 |  9.75    2.25
             1.00    1.61 |  4.00    2.57 |  7.00    5.14 | 10.00    2.25
             1.25    1.61 |  4.25    3.86 |  7.25    3.86 | 10.25    1.29
             1.50    1.61 |  4.50    3.86 |  7.50    3.86 | 10.50    1.29
             1.75    1.61 |  4.75    5.14 |  7.75    3.86 | 10.75    1.29
             2.00    1.61 |  5.00    5.14 |  8.00    3.86 | 11.00    1.29
             2.25    1.93 |  5.25    7.72 |  8.25    2.25 | 11.25    1.29
             2.50    1.93 |  5.50    7.72 |  8.50    2.25 | 11.50    1.29
             2.75    1.93 |  5.75   30.86 |  8.75    2.25 | 11.75    1.29
             3.00    1.93 |  6.00   84.88 |  9.00    2.25 | 12.00    1.29

-------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD ( 10011)|   Area    (ha)=   0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.17          0.04
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      37.42         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
            0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
            0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
            0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
            0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
            0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
            0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
            0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
            0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
            0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
            0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
            1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
            1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
            1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
            1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
            1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
            1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
            1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
            1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
            1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
            1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
            1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
            1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
            2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
            2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
            2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
            2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
            2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
            2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
            2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
            2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
            2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
            2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
            2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
            2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
            3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88          66.77
                over (min)        5.00          10.00
     Storage Coeff.  (min)=       1.51 (ii)      6.36 (ii)
     Unit Hyd. Tpeak (min)=       5.00          10.00
     Unit Hyd. peak  (cms)=       0.33           0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.04           0.01        0.046 (iii)
     TIME TO PEAK    (hrs)=       6.00           6.00        6.00
     RUNOFF VOLUME    (mm)=      63.30          42.31       58.88
     TOTAL RAINFALL   (mm)=      64.30          64.30       64.30
     RUNOFF COEFFICIENT   =       0.98           0.66        0.92
```

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-----------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 10022)|   Area    (ha)=   0.83
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.00   Dir. Conn.(%)=  75.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62          0.21
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      74.39         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                 0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                 0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                 0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                 0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
                 0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                 0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                 0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                 1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                 1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                 1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                 1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                 1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
                 1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                 1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                 1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                 1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                 1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                 1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                 1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                 2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
                 2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
                 2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
                 2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
                 2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
                 2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
                 2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
                 2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
                 2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
                 2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
                 2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
                 2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
                 3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)         5.00         15.00
     Storage Coeff.  (min)=       2.28 (ii)    11.35 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.30          0.09
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.15          0.03          0.170 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31          58.05
     TOTAL RAINFALL   (mm)=      64.30         64.30          64.30
     RUNOFF COEFFICIENT   =       0.98          0.66           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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--------------------
| CALIB              |
| STANDHYD ( 10021)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  71.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.52          0.21
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      69.76         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                 0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                 0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                 0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                 0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
                 0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                 0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                 0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                 1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                 1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                 1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                 1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                 1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
                 1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                 1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                 1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                 1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                 1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                 1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                 1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                 2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
                 2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
                 2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
                 2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
                 2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
                 2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
                 2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
                 2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
                 2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
                 2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
                 2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
                 2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
                 3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)         5.00         15.00
     Storage Coeff.  (min)=       2.20 (ii)    11.27 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.30          0.09
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.12          0.03          0.146 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31          57.20
     TOTAL RAINFALL   (mm)=      64.30         64.30          64.30
     RUNOFF COEFFICIENT   =       0.98          0.66           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10031)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  66.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
```

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     Surface Area     (ha)=       0.25          0.13
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      50.33         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                 0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                 0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                 0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                 0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
                 0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                 0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                 0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                 1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                 1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                 1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                 1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                 1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
                 1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                 1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                 1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                 1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                 1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                 1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                 1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                 2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
                 2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
                 2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
                 2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
                 2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
                 2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
                 2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
                 2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
                 2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
                 2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
                 2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
                 2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
                 3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)         5.00         15.00
     Storage Coeff.  (min)=       1.81 (ii)    10.87 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.32          0.09
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.06          0.02          0.074 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31          56.15
     TOTAL RAINFALL   (mm)=      64.30         64.30          64.30
     RUNOFF COEFFICIENT   =       0.98          0.66           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10032)|   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31          0.08
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      50.99         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                          ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                 0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                 0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                 0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                 0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
                 0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                 0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                 0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                 1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                 1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                 1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                 1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                 1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
                 1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                 1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                 1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                 1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                 1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                 1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                 1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                 2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
                 2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
                 2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
                 2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
                 2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
                 2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
                 2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
                 2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
                 2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
                 2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
                 2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
                 2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
                 3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       1.82 (ii)     6.67 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.14
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.07          0.01          0.085 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31          58.89
     TOTAL RAINFALL   (mm)=      64.30         64.30          64.30
     RUNOFF COEFFICIENT   =       0.98          0.66           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.00   Dir. Conn.(%)=  69.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.24          0.11
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      48.30         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
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    0.417   1.61 | 3.417   2.57 | 6.417  11.57 |  9.42   2.25
    0.500   1.61 | 3.500   2.57 | 6.500  11.57 |  9.50   2.25
    0.583   1.61 | 3.583   2.57 | 6.583   5.14 |  9.58   2.25
    0.667   1.61 | 3.667   2.57 | 6.667   5.14 |  9.67   2.25
    0.750   1.61 | 3.750   2.57 | 6.750   5.14 |  9.75   2.25
    0.833   1.61 | 3.833   2.57 | 6.833   5.14 |  9.83   2.25
    0.917   1.61 | 3.917   2.57 | 6.917   5.14 |  9.92   2.25
    1.000   1.61 | 4.000   2.57 | 7.000   5.14 | 10.00   2.25
    1.083   1.61 | 4.083   3.86 | 7.083   3.86 | 10.08   1.29
    1.167   1.61 | 4.167   3.86 | 7.167   3.86 | 10.17   1.29
    1.250   1.61 | 4.250   3.86 | 7.250   3.86 | 10.25   1.29
    1.333   1.61 | 4.333   3.86 | 7.333   3.86 | 10.33   1.29
    1.417   1.61 | 4.417   3.86 | 7.417   3.86 | 10.42   1.29
    1.500   1.61 | 4.500   3.86 | 7.500   3.86 | 10.50   1.29
    1.583   1.61 | 4.583   5.14 | 7.583   3.86 | 10.58   1.29
    1.667   1.61 | 4.667   5.14 | 7.667   3.86 | 10.67   1.29
    1.750   1.61 | 4.750   5.14 | 7.750   3.86 | 10.75   1.29
    1.833   1.61 | 4.833   5.14 | 7.833   3.86 | 10.83   1.29
    1.917   1.61 | 4.917   5.14 | 7.917   3.86 | 10.92   1.29
    2.000   1.61 | 5.000   5.14 | 8.000   3.86 | 11.00   1.29
    2.083   1.93 | 5.083   7.72 | 8.083   2.25 | 11.08   1.29
    2.167   1.93 | 5.167   7.72 | 8.167   2.25 | 11.17   1.29
    2.250   1.93 | 5.250   7.72 | 8.250   2.25 | 11.25   1.29
    2.333   1.93 | 5.333   7.72 | 8.333   2.25 | 11.33   1.29
    2.417   1.93 | 5.417   7.72 | 8.417   2.25 | 11.42   1.29
    2.500   1.93 | 5.500   7.72 | 8.500   2.25 | 11.50   1.29
    2.583   1.93 | 5.583  30.86 | 8.583   2.25 | 11.58   1.29
    2.667   1.93 | 5.667  30.86 | 8.667   2.25 | 11.67   1.29
    2.750   1.93 | 5.750  30.86 | 8.750   2.25 | 11.75   1.29
    2.833   1.93 | 5.833  84.88 | 8.833   2.25 | 11.83   1.29
    2.917   1.93 | 5.917  84.88 | 8.917   2.25 | 11.92   1.29
    3.000   1.93 | 6.000  84.87 | 9.000   2.25 | 12.00   1.29

 Max.Eff.Inten.(mm/hr)=      84.88         66.77
            over (min)        5.00         15.00
 Storage Coeff.  (min)=       1.76 (ii)    10.83 (ii)
 Unit Hyd. Tpeak (min)=       5.00         15.00
 Unit Hyd. peak  (cms)=       0.32          0.09
                                                      *TOTALS*
 PEAK FLOW       (cms)=       0.06          0.01        0.069 (iii)
 TIME TO PEAK    (hrs)=       6.00          6.08        6.00
 RUNOFF VOLUME    (mm)=      63.30         42.31       56.78
 TOTAL RAINFALL   (mm)=      64.30         64.30       64.30
 RUNOFF COEFFICIENT   =       0.98          0.66        0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10042)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
 Surface Area     (ha)=       0.28          0.10
 Dep. Storage     (mm)=       1.00          1.00
 Average Slope     (%)=       1.00          2.00
 Length            (m)=      50.33         40.00
 Mannings n           =      0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                     ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083   1.61 | 3.083   2.57 | 6.083  11.57 |  9.08   2.25
    0.167   1.61 | 3.167   2.57 | 6.167  11.57 |  9.17   2.25
    0.250   1.61 | 3.250   2.57 | 6.250  11.57 |  9.25   2.25
    0.333   1.61 | 3.333   2.57 | 6.333  11.57 |  9.33   2.25
    0.417   1.61 | 3.417   2.57 | 6.417  11.57 |  9.42   2.25
    0.500   1.61 | 3.500   2.57 | 6.500  11.57 |  9.50   2.25
    0.583   1.61 | 3.583   2.57 | 6.583   5.14 |  9.58   2.25
    0.667   1.61 | 3.667   2.57 | 6.667   5.14 |  9.67   2.25
    0.750   1.61 | 3.750   2.57 | 6.750   5.14 |  9.75   2.25
    0.833   1.61 | 3.833   2.57 | 6.833   5.14 |  9.83   2.25
    0.917   1.61 | 3.917   2.57 | 6.917   5.14 |  9.92   2.25
    1.000   1.61 | 4.000   2.57 | 7.000   5.14 | 10.00   2.25
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    1.083   1.61 | 4.083   3.86 | 7.083   3.86 | 10.08   1.29
    1.167   1.61 | 4.167   3.86 | 7.167   3.86 | 10.17   1.29
    1.250   1.61 | 4.250   3.86 | 7.250   3.86 | 10.25   1.29
    1.333   1.61 | 4.333   3.86 | 7.333   3.86 | 10.33   1.29
    1.417   1.61 | 4.417   3.86 | 7.417   3.86 | 10.42   1.29
    1.500   1.61 | 4.500   3.86 | 7.500   3.86 | 10.50   1.29
    1.583   1.61 | 4.583   5.14 | 7.583   3.86 | 10.58   1.29
    1.667   1.61 | 4.667   5.14 | 7.667   3.86 | 10.67   1.29
    1.750   1.61 | 4.750   5.14 | 7.750   3.86 | 10.75   1.29
    1.833   1.61 | 4.833   5.14 | 7.833   3.86 | 10.83   1.29
    1.917   1.61 | 4.917   5.14 | 7.917   3.86 | 10.92   1.29
    2.000   1.61 | 5.000   5.14 | 8.000   3.86 | 11.00   1.29
    2.083   1.93 | 5.083   7.72 | 8.083   2.25 | 11.08   1.29
    2.167   1.93 | 5.167   7.72 | 8.167   2.25 | 11.17   1.29
    2.250   1.93 | 5.250   7.72 | 8.250   2.25 | 11.25   1.29
    2.333   1.93 | 5.333   7.72 | 8.333   2.25 | 11.33   1.29
    2.417   1.93 | 5.417   7.72 | 8.417   2.25 | 11.42   1.29
    2.500   1.93 | 5.500   7.72 | 8.500   2.25 | 11.50   1.29
    2.583   1.93 | 5.583  30.86 | 8.583   2.25 | 11.58   1.29
    2.667   1.93 | 5.667  30.86 | 8.667   2.25 | 11.67   1.29
    2.750   1.93 | 5.750  30.86 | 8.750   2.25 | 11.75   1.29
    2.833   1.93 | 5.833  84.88 | 8.833   2.25 | 11.83   1.29
    2.917   1.93 | 5.917  84.88 | 8.917   2.25 | 11.92   1.29
    3.000   1.93 | 6.000  84.87 | 9.000   2.25 | 12.00   1.29

 Max.Eff.Inten.(mm/hr)=      84.88         66.77
            over (min)        5.00         15.00
 Storage Coeff.  (min)=       1.81 (ii)    10.87 (ii)
 Unit Hyd. Tpeak (min)=       5.00         15.00
 Unit Hyd. peak  (cms)=       0.32          0.09
                                                      *TOTALS*
 PEAK FLOW       (cms)=       0.07          0.01        0.078 (iii)
 TIME TO PEAK    (hrs)=       6.00          6.08        6.00
 RUNOFF VOLUME    (mm)=      63.30         42.31       57.82
 TOTAL RAINFALL   (mm)=      64.30         64.30       64.30
 RUNOFF COEFFICIENT   =       0.98          0.66        0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10012)|   Area    (ha)=   0.23
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
 Surface Area     (ha)=       0.18          0.05
 Dep. Storage     (mm)=       1.00          1.00
 Average Slope     (%)=       1.00          2.00
 Length            (m)=      39.16         40.00
 Mannings n           =      0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                     ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083   1.61 | 3.083   2.57 | 6.083  11.57 |  9.08   2.25
    0.167   1.61 | 3.167   2.57 | 6.167  11.57 |  9.17   2.25
    0.250   1.61 | 3.250   2.57 | 6.250  11.57 |  9.25   2.25
    0.333   1.61 | 3.333   2.57 | 6.333  11.57 |  9.33   2.25
    0.417   1.61 | 3.417   2.57 | 6.417  11.57 |  9.42   2.25
    0.500   1.61 | 3.500   2.57 | 6.500  11.57 |  9.50   2.25
    0.583   1.61 | 3.583   2.57 | 6.583   5.14 |  9.58   2.25
    0.667   1.61 | 3.667   2.57 | 6.667   5.14 |  9.67   2.25
    0.750   1.61 | 3.750   2.57 | 6.750   5.14 |  9.75   2.25
    0.833   1.61 | 3.833   2.57 | 6.833   5.14 |  9.83   2.25
    0.917   1.61 | 3.917   2.57 | 6.917   5.14 |  9.92   2.25
    1.000   1.61 | 4.000   2.57 | 7.000   5.14 | 10.00   2.25
    1.083   1.61 | 4.083   3.86 | 7.083   3.86 | 10.08   1.29
    1.167   1.61 | 4.167   3.86 | 7.167   3.86 | 10.17   1.29
    1.250   1.61 | 4.250   3.86 | 7.250   3.86 | 10.25   1.29
    1.333   1.61 | 4.333   3.86 | 7.333   3.86 | 10.33   1.29
    1.417   1.61 | 4.417   3.86 | 7.417   3.86 | 10.42   1.29
    1.500   1.61 | 4.500   3.86 | 7.500   3.86 | 10.50   1.29
    1.583   1.61 | 4.583   5.14 | 7.583   3.86 | 10.58   1.29
    1.667   1.61 | 4.667   5.14 | 7.667   3.86 | 10.67   1.29
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    1.750   1.61 | 4.750   5.14 | 7.750   3.86 | 10.75   1.29
    1.833   1.61 | 4.833   5.14 | 7.833   3.86 | 10.83   1.29
    1.917   1.61 | 4.917   5.14 | 7.917   3.86 | 10.92   1.29
    2.000   1.61 | 5.000   5.14 | 8.000   3.86 | 11.00   1.29
    2.083   1.93 | 5.083   7.72 | 8.083   2.25 | 11.08   1.29
    2.167   1.93 | 5.167   7.72 | 8.167   2.25 | 11.17   1.29
    2.250   1.93 | 5.250   7.72 | 8.250   2.25 | 11.25   1.29
    2.333   1.93 | 5.333   7.72 | 8.333   2.25 | 11.33   1.29
    2.417   1.93 | 5.417   7.72 | 8.417   2.25 | 11.42   1.29
    2.500   1.93 | 5.500   7.72 | 8.500   2.25 | 11.50   1.29
    2.583   1.93 | 5.583  30.86 | 8.583   2.25 | 11.58   1.29
    2.667   1.93 | 5.667  30.86 | 8.667   2.25 | 11.67   1.29
    2.750   1.93 | 5.750  30.86 | 8.750   2.25 | 11.75   1.29
    2.833   1.93 | 5.833  84.88 | 8.833   2.25 | 11.83   1.29
    2.917   1.93 | 5.917  84.88 | 8.917   2.25 | 11.92   1.29
    3.000   1.93 | 6.000  84.87 | 9.000   2.25 | 12.00   1.29

 Max.Eff.Inten.(mm/hr)=      84.88         66.77
            over (min)        5.00         10.00
 Storage Coeff.  (min)=       1.55 (ii)     6.52 (ii)
 Unit Hyd. Tpeak (min)=       5.00         10.00
 Unit Hyd. peak  (cms)=       0.33          0.14
                                                      *TOTALS*
 PEAK FLOW       (cms)=       0.04          0.01        0.050 (iii)
 TIME TO PEAK    (hrs)=       6.00          6.00        6.00
 RUNOFF VOLUME    (mm)=      63.30         42.31       58.67
 TOTAL RAINFALL   (mm)=      64.30         64.30       64.30
 RUNOFF COEFFICIENT   =       0.98          0.66        0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10051)|   Area    (ha)=   0.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  66.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
 Surface Area     (ha)=       0.24          0.13
 Dep. Storage     (mm)=       1.00          1.00
 Average Slope     (%)=       1.00          2.00
 Length            (m)=      49.67         40.00
 Mannings n           =      0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                     ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083   1.61 | 3.083   2.57 | 6.083  11.57 |  9.08   2.25
    0.167   1.61 | 3.167   2.57 | 6.167  11.57 |  9.17   2.25
    0.250   1.61 | 3.250   2.57 | 6.250  11.57 |  9.25   2.25
    0.333   1.61 | 3.333   2.57 | 6.333  11.57 |  9.33   2.25
    0.417   1.61 | 3.417   2.57 | 6.417  11.57 |  9.42   2.25
    0.500   1.61 | 3.500   2.57 | 6.500  11.57 |  9.50   2.25
    0.583   1.61 | 3.583   2.57 | 6.583   5.14 |  9.58   2.25
    0.667   1.61 | 3.667   2.57 | 6.667   5.14 |  9.67   2.25
    0.750   1.61 | 3.750   2.57 | 6.750   5.14 |  9.75   2.25
    0.833   1.61 | 3.833   2.57 | 6.833   5.14 |  9.83   2.25
    0.917   1.61 | 3.917   2.57 | 6.917   5.14 |  9.92   2.25
    1.000   1.61 | 4.000   2.57 | 7.000   5.14 | 10.00   2.25
    1.083   1.61 | 4.083   3.86 | 7.083   3.86 | 10.08   1.29
    1.167   1.61 | 4.167   3.86 | 7.167   3.86 | 10.17   1.29
    1.250   1.61 | 4.250   3.86 | 7.250   3.86 | 10.25   1.29
    1.333   1.61 | 4.333   3.86 | 7.333   3.86 | 10.33   1.29
    1.417   1.61 | 4.417   3.86 | 7.417   3.86 | 10.42   1.29
    1.500   1.61 | 4.500   3.86 | 7.500   3.86 | 10.50   1.29
    1.583   1.61 | 4.583   5.14 | 7.583   3.86 | 10.58   1.29
    1.667   1.61 | 4.667   5.14 | 7.667   3.86 | 10.67   1.29
    1.750   1.61 | 4.750   5.14 | 7.750   3.86 | 10.75   1.29
    1.833   1.61 | 4.833   5.14 | 7.833   3.86 | 10.83   1.29
    1.917   1.61 | 4.917   5.14 | 7.917   3.86 | 10.92   1.29
    2.000   1.61 | 5.000   5.14 | 8.000   3.86 | 11.00   1.29
    2.083   1.93 | 5.083   7.72 | 8.083   2.25 | 11.08   1.29
    2.167   1.93 | 5.167   7.72 | 8.167   2.25 | 11.17   1.29
    2.250   1.93 | 5.250   7.72 | 8.250   2.25 | 11.25   1.29
    2.333   1.93 | 5.333   7.72 | 8.333   2.25 | 11.33   1.29
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    2.417   1.93 | 5.417   7.72 | 8.417   2.25 | 11.42   1.29
    2.500   1.93 | 5.500   7.72 | 8.500   2.25 | 11.50   1.29
    2.583   1.93 | 5.583  30.86 | 8.583   2.25 | 11.58   1.29
    2.667   1.93 | 5.667  30.86 | 8.667   2.25 | 11.67   1.29
    2.750   1.93 | 5.750  30.86 | 8.750   2.25 | 11.75   1.29
    2.833   1.93 | 5.833  84.88 | 8.833   2.25 | 11.83   1.29
    2.917   1.93 | 5.917  84.88 | 8.917   2.25 | 11.92   1.29
    3.000   1.93 | 6.000  84.87 | 9.000   2.25 | 12.00   1.29

 Max.Eff.Inten.(mm/hr)=      84.88         66.77
            over (min)        5.00         15.00
 Storage Coeff.  (min)=       1.79 (ii)    10.86 (ii)
 Unit Hyd. Tpeak (min)=       5.00         15.00
 Unit Hyd. peak  (cms)=       0.32          0.09
                                                      *TOTALS*
 PEAK FLOW       (cms)=       0.06          0.02        0.072 (iii)
 TIME TO PEAK    (hrs)=       6.00          6.08        6.00
 RUNOFF VOLUME    (mm)=      63.30         42.31       56.15
 TOTAL RAINFALL   (mm)=      64.30         64.30       64.30
 RUNOFF COEFFICIENT   =       0.98          0.66        0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10052)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  62.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
 Surface Area     (ha)=       0.22          0.14
 Dep. Storage     (mm)=       1.00          1.00
 Average Slope     (%)=       1.00          2.00
 Length            (m)=      48.99         40.00
 Mannings n           =      0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                     ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083   1.61 | 3.083   2.57 | 6.083  11.57 |  9.08   2.25
    0.167   1.61 | 3.167   2.57 | 6.167  11.57 |  9.17   2.25
    0.250   1.61 | 3.250   2.57 | 6.250  11.57 |  9.25   2.25
    0.333   1.61 | 3.333   2.57 | 6.333  11.57 |  9.33   2.25
    0.417   1.61 | 3.417   2.57 | 6.417  11.57 |  9.42   2.25
    0.500   1.61 | 3.500   2.57 | 6.500  11.57 |  9.50   2.25
    0.583   1.61 | 3.583   2.57 | 6.583   5.14 |  9.58   2.25
    0.667   1.61 | 3.667   2.57 | 6.667   5.14 |  9.67   2.25
    0.750   1.61 | 3.750   2.57 | 6.750   5.14 |  9.75   2.25
    0.833   1.61 | 3.833   2.57 | 6.833   5.14 |  9.83   2.25
    0.917   1.61 | 3.917   2.57 | 6.917   5.14 |  9.92   2.25
    1.000   1.61 | 4.000   2.57 | 7.000   5.14 | 10.00   2.25
    1.083   1.61 | 4.083   3.86 | 7.083   3.86 | 10.08   1.29
    1.167   1.61 | 4.167   3.86 | 7.167   3.86 | 10.17   1.29
    1.250   1.61 | 4.250   3.86 | 7.250   3.86 | 10.25   1.29
    1.333   1.61 | 4.333   3.86 | 7.333   3.86 | 10.33   1.29
    1.417   1.61 | 4.417   3.86 | 7.417   3.86 | 10.42   1.29
    1.500   1.61 | 4.500   3.86 | 7.500   3.86 | 10.50   1.29
    1.583   1.61 | 4.583   5.14 | 7.583   3.86 | 10.58   1.29
    1.667   1.61 | 4.667   5.14 | 7.667   3.86 | 10.67   1.29
    1.750   1.61 | 4.750   5.14 | 7.750   3.86 | 10.75   1.29
    1.833   1.61 | 4.833   5.14 | 7.833   3.86 | 10.83   1.29
    1.917   1.61 | 4.917   5.14 | 7.917   3.86 | 10.92   1.29
    2.000   1.61 | 5.000   5.14 | 8.000   3.86 | 11.00   1.29
    2.083   1.93 | 5.083   7.72 | 8.083   2.25 | 11.08   1.29
    2.167   1.93 | 5.167   7.72 | 8.167   2.25 | 11.17   1.29
    2.250   1.93 | 5.250   7.72 | 8.250   2.25 | 11.25   1.29
    2.333   1.93 | 5.333   7.72 | 8.333   2.25 | 11.33   1.29
    2.417   1.93 | 5.417   7.72 | 8.417   2.25 | 11.42   1.29
    2.500   1.93 | 5.500   7.72 | 8.500   2.25 | 11.50   1.29
    2.583   1.93 | 5.583  30.86 | 8.583   2.25 | 11.58   1.29
    2.667   1.93 | 5.667  30.86 | 8.667   2.25 | 11.67   1.29
    2.750   1.93 | 5.750  30.86 | 8.750   2.25 | 11.75   1.29
    2.833   1.93 | 5.833  84.88 | 8.833   2.25 | 11.83   1.29
    2.917   1.93 | 5.917  84.88 | 8.917   2.25 | 11.92   1.29
    3.000   1.93 | 6.000  84.87 | 9.000   2.25 | 12.00   1.29
```

```
     Max.Eff.Inten.(mm/hr)=      84.88        66.77
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       1.78 (ii)   10.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.32         0.09
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.05         0.02          0.068 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      63.30        42.31          55.31
     TOTAL RAINFALL   (mm)=      64.30        64.30          64.30
     RUNOFF COEFFICIENT   =       0.98         0.66           0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 10062)|   Area    (ha)=   0.66
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  62.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.41         0.25
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      66.33        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
               0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
               0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
               0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
               0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
               0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
               0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
               0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
               0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
               0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
               0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
               1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
               1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
               1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
               1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
               1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
               1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
               1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
               1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
               1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
               1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
               1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
               1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
               2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
               2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
               2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
               2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
               2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
               2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
               2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
               2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
               2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
               2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
               2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
               2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
               3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88        66.77
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.13 (ii)   11.20 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.31         0.09
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.10         0.03          0.125 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      63.30        42.31          55.31
     TOTAL RAINFALL   (mm)=      64.30        64.30          64.30
     RUNOFF COEFFICIENT   =       0.98         0.66           0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 10061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  65.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.42         0.23
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      65.83        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
               0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
               0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
               0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
               0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
               0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
               0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
               0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
               0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
               0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
               0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
               1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
               1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
               1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
               1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
               1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
               1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
               1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
               1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
               1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
               1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
               1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
               1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
               2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
               2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
               2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
               2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
               2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
               2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
               2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
               2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
               2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
               2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
               2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
               2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
               3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88        66.77
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.12 (ii)   11.19 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.31         0.09
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.10         0.03          0.125 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      63.30        42.31          55.94
     TOTAL RAINFALL   (mm)=      64.30        64.30          64.30
     RUNOFF COEFFICIENT   =       0.98         0.66           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 10072)|   Area    (ha)=   0.74
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  71.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.53         0.21
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      70.24        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
               0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
               0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
               0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
               0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
               0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
               0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
               0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
               0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
               0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
               0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
               1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
               1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
               1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
               1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
               1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
               1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
               1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
               1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
               1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
               1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
               1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
               1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
               2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
               2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
               2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
               2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
               2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
               2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
               2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
               2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
               2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
               2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
               2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
               2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
               3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88        66.77
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.21 (ii)   11.28 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.30         0.09
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.12         0.03          0.148 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      63.30        42.31          57.20
     TOTAL RAINFALL   (mm)=      64.30        64.30          64.30
     RUNOFF COEFFICIENT   =       0.98         0.66           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 10071)|   Area    (ha)=   0.72
|ID= 1 DT= 5.0 min |   Total Imp(%)=  60.00   Dir. Conn.(%)=  60.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.43         0.29
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      69.28        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
               0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
               0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
               0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
               0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
               0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
               0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
               0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
               0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
               0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
               0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
               1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
               1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
               1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
               1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
               1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
               1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
               1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
               1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
               1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
               1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
               1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
               1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
               2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
               2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
               2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
               2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
               2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
               2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
               2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
               2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
               2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
               2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
               2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
               2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
               3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88        66.77
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.19 (ii)   11.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.31         0.09
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.10         0.04          0.134 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      63.30        42.31          54.90
     TOTAL RAINFALL   (mm)=      64.30        64.30          64.30
     RUNOFF COEFFICIENT   =       0.98         0.66           0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD ( 10081)|   Area    (ha)=   0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  52.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.11         0.10
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      37.42        40.00
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     Mannings n           =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
                    hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
                  0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                  0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                  0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                  0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                  0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                  0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                  0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                  0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
                  0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                  0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                  0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                  1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                  1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                  1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                  1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                  1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
                  1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                  1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                  1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                  1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                  1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                  1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                  1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                  2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
                  2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
                  2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
                  2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
                  2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
                  2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
                  2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
                  2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
                  2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
                  2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
                  2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
                  2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
                  3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88        66.77
               over (min)         5.00        15.00
     Storage Coeff.  (min)=       1.51 (ii)   10.58 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.33         0.09
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.03         0.01          0.037 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      63.30        42.31          53.19
     TOTAL RAINFALL   (mm)=      64.30        64.30          64.30
     RUNOFF COEFFICIENT   =       0.98         0.66           0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10082)|   Area    (ha)=   0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.18         0.03
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      37.42        40.00
     Mannings n           =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
                    hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
```

```
                  0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                  0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                  0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                  0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                  0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                  0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                  0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                  0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
                  0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                  0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                  0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                  1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                  1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                  1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                  1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                  1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
                  1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                  1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                  1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                  1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                  1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                  1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                  1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                  2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
                  2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
                  2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
                  2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
                  2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
                  2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
                  2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
                  2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
                  2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
                  2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
                  2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
                  2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
                  3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88        66.77
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       1.51 (ii)    5.36 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.16
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.04         0.00          0.048 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      63.30        42.31          60.55
     TOTAL RAINFALL   (mm)=      64.30        64.30          64.30
     RUNOFF COEFFICIENT   =       0.98         0.66           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.51         0.12
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      64.81        40.00
     Mannings n           =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
                    hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
                  0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                  0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                  0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                  0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                  0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                  0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                  0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                  0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
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                  0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                  0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                  0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                  1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                  1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                  1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                  1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                  1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
                  1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                  1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                  1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                  1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                  1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                  1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                  1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                  2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
                  2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
                  2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
                  2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
                  2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
                  2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
                  2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
                  2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
                  2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
                  2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
                  2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
                  2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
                  3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88        66.77
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       2.10 (ii)    6.72 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.31         0.14
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.12         0.02          0.139 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=      63.30        42.31          59.31
     TOTAL RAINFALL   (mm)=      64.30        64.30          64.30
     RUNOFF COEFFICIENT   =       0.98         0.66           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10091)|   Area    (ha)=   0.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.37         0.13
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      57.74        40.00
     Mannings n           =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
                    hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
                  0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                  0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                  0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                  0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                  0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                  0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                  0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                  0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
                  0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                  0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                  0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                  1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                  1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                  1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                  1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                  1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
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                  1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                  1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                  1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                  1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                  1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                  1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                  1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                  2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
                  2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
                  2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
                  2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
                  2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
                  2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
                  2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
                  2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
                  2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
                  2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
                  2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
                  2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
                  3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88        66.77
               over (min)         5.00        15.00
     Storage Coeff.  (min)=       1.96 (ii)   11.03 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.31         0.09
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.09         0.02          0.102 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08           6.00
     RUNOFF VOLUME    (mm)=      63.30        42.31          57.83
     TOTAL RAINFALL   (mm)=      64.30        64.30          64.30
     RUNOFF COEFFICIENT   =       0.98         0.66           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (  1101)|   Area    (ha)=   0.91
|ID= 1 DT= 5.0 min |   Total Imp(%)=  55.00   Dir. Conn.(%)=  55.00
--------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.50         0.41
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      77.89        40.00
     Mannings n           =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
                    hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
                  0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                  0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                  0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                  0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                  0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                  0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                  0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                  0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
                  0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                  0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                  0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                  1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                  1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                  1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                  1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                  1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
                  1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                  1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                  1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                  1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                  1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                  1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                  1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                  2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
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           2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
           2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
           2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
           2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
           2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
           2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
           2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
           2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
           2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
           2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
           2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
           3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=       84.88         66.77
                over (min)         5.00         15.00
     Storage Coeff.  (min)=        2.35 (ii)    11.42 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.30          0.09
                                                         *TOTALS*
     PEAK FLOW       (cms)=        0.12          0.05       0.163 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=       63.30         42.31       53.85
     TOTAL RAINFALL   (mm)=       64.30         64.30       64.30
     RUNOFF COEFFICIENT   =        0.98          0.66        0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 1102)|   Area    (ha)=   0.88
|ID= 1 DT= 5.0 min |   Total Imp(%)=  72.00   Dir. Conn.(%)=  72.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.63          0.25
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      76.59         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
           0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
           0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
           0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
           0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
           0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
           0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
           0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
           0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
           0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
           0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
           1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
           1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
           1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
           1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
           1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
           1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
           1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
           1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
           1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
           1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
           1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
           1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
           2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
           2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
           2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
           2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
           2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
           2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
           2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
           2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
           2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
           2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
           2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
           2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
           3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=       84.88         66.77
                over (min)         5.00         15.00
     Storage Coeff.  (min)=        2.32 (ii)    11.39 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.30          0.09
                                                         *TOTALS*
     PEAK FLOW       (cms)=        0.15          0.03       0.177 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=       63.30         42.31       57.41
     TOTAL RAINFALL   (mm)=       64.30         64.30       64.30
     RUNOFF COEFFICIENT   =        0.98          0.66        0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 1111)|   Area    (ha)=   1.06
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.63          0.43
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      84.06         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
           0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
           0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
           0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
           0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
           0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
           0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
           0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
           0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
           0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
           0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
           1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
           1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
           1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
           1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
           1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
           1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
           1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
           1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
           1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
           1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
           1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
           1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
           2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
           2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
           2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
           2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
           2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
           2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
           2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
           2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
           2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
           2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
           2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
           2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
           3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=       84.88         66.77
                over (min)         5.00         15.00
     Storage Coeff.  (min)=        2.46 (ii)    11.53 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.30          0.09
                                                         *TOTALS*
     PEAK FLOW       (cms)=        0.15          0.05       0.195 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=       63.30         42.31       54.69
     TOTAL RAINFALL   (mm)=       64.30         64.30       64.30
     RUNOFF COEFFICIENT   =        0.98          0.66        0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 1112)|   Area    (ha)=   0.97
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.76          0.21
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      80.42         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
           0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
           0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
           0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
           0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
           0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
           0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
           0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
           0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
           0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
           0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
           1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
           1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
           1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
           1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
           1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
           1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
           1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
           1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
           1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
           1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
           1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
           1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
           2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
           2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
           2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
           2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
           2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
           2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
           2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
           2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
           2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
           2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
           2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
           2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
           3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=       84.88         66.77
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        2.39 (ii)     7.36 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.30          0.13
                                                         *TOTALS*
     PEAK FLOW       (cms)=        0.18          0.03       0.211 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=       63.30         42.31       58.68
     TOTAL RAINFALL   (mm)=       64.30         64.30       64.30
     RUNOFF COEFFICIENT   =        0.98          0.66        0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 1122)|   Area    (ha)=   1.22
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.00   Dir. Conn.(%)=  69.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.84          0.38
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      90.18         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
           0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
           0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
           0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
           0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
           0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
           0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
           0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
           0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
           0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
           0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
           1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
           1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
           1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
           1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
           1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
           1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
           1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
           1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
           1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
           1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
           1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
           1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
           2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
           2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
           2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
           2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
           2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
           2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
           2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
           2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
           2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
           2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
           2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
           2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
           3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=       84.88         66.77
                over (min)         5.00         15.00
     Storage Coeff.  (min)=        2.56 (ii)    11.63 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.29          0.09
                                                         *TOTALS*
     PEAK FLOW       (cms)=        0.20          0.05       0.240 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=       63.30         42.31       56.79
     TOTAL RAINFALL   (mm)=       64.30         64.30       64.30
     RUNOFF COEFFICIENT   =        0.98          0.66        0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB              |
| STANDHYD (  1121)|   Area    (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.00   Dir. Conn.(%)=  68.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.82          0.39
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     89.81         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
                0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
                1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
                2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
                2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
                2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
                2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
                2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
                2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
                2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
                2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
                2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
                2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
                2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
                3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=     84.88         66.77
                over (min)       5.00         15.00
     Storage Coeff.  (min)=      2.56 (ii)    11.63 (ii)
     Unit Hyd. Tpeak (min)=      5.00         15.00
     Unit Hyd. peak  (cms)=      0.29          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=      0.19          0.05         0.236 (iii)
     TIME TO PEAK    (hrs)=      6.00          6.08          6.00
     RUNOFF VOLUME     (mm)=    63.30         42.31         56.58
     TOTAL RAINFALL    (mm)=    64.30         64.30         64.30
     RUNOFF COEFFICIENT   =      0.98          0.66          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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       V    V   I    SSSSS  U    U     A     L              (v 6.1.2002)
       V    V   I    SS     U    U    A A    L
        V  V    I     SS    U    U   AAAAA   L
        V  V    I      SS   U    U   A    A  L
         VV     I    SSSSS  UUUUU   A    A  LLLLL

        OOO    TTTTT  TTTTT  H    H  Y    Y  M    M   OOO     TM
       O   O     T      T    H    H   Y Y    MM MM   O   O
       O   O     T      T    H    H    Y     M   M   O   O
        OOO      T      T    H    H    Y     M   M    OOO
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                   *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\c5677e56
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\c5677e56


DATE: 05-18-2022                          TIME: 12:41:44

USER:



COMMENTS: ____________________________________________________________


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  ***********************************************
  ** SIMULATION : Run 15                        **
  ***********************************************


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|    READ STORM    |     Filename: C:\Users\caef070146\AppD
|                  |               ata\Local\Temp\
|                  |               b414f864-f56d-471c-a2fc-7a8c6cfa5585\ba607aec
| Ptotal= 76.00 mm |     Comments: 10-Yr,12-hr SCS, City of Barrie
--------------------
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.25    1.90 |  3.25    3.04 |  6.25   13.68 |  9.25    2.66
                  0.50    1.90 |  3.50    3.04 |  6.50   13.68 |  9.50    2.66
                  0.75    1.90 |  3.75    3.04 |  6.75    6.08 |  9.75    2.66
                  1.00    1.90 |  4.00    3.04 |  7.00    6.08 | 10.00    2.66
                  1.25    1.90 |  4.25    4.56 |  7.25    4.56 | 10.25    1.52
                  1.50    1.90 |  4.50    4.56 |  7.50    4.56 | 10.50    1.52
                  1.75    1.90 |  4.75    6.08 |  7.75    4.56 | 10.75    1.52
                  2.00    1.90 |  5.00    6.08 |  8.00    4.56 | 11.00    1.52
                  2.25    2.28 |  5.25    9.12 |  8.25    2.66 | 11.25    1.52
                  2.50    2.28 |  5.50    9.12 |  8.50    2.66 | 11.50    1.52
                  2.75    2.28 |  5.75   36.48 |  8.75    2.66 | 11.75    1.52
                  3.00    2.28 |  6.00  100.32 |  9.00    2.66 | 12.00    1.52

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| CALIB              |
| STANDHYD ( 10011)|   Area    (ha)=   0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.17          0.04
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     37.42         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
                0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
                1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
                1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
                1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
                1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
                1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
                1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
                1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
                1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
                1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
                1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
                2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
                2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
                2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
                2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
                2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
                2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
                2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
                2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
                2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
                2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
                2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
                2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
                3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=    100.32         82.63
                over (min)       5.00         10.00
     Storage Coeff.  (min)=      1.41 (ii)     5.95 (ii)
     Unit Hyd. Tpeak (min)=      5.00         10.00
     Unit Hyd. peak  (cms)=      0.33          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=      0.05          0.01         0.055 (iii)
     TIME TO PEAK    (hrs)=      6.00          6.00          6.00
     RUNOFF VOLUME     (mm)=    75.00         52.87         70.34
     TOTAL RAINFALL    (mm)=    76.00         76.00         76.00
     RUNOFF COEFFICIENT   =      0.99          0.70          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10022)|   Area    (ha)=   0.83
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.00   Dir. Conn.(%)=  75.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.62          0.21
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     74.39         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
                0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
                1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
                1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
                1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
                1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
                1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
                1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
                1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
                1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
                1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
                1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
                2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
                2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
                2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
                2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
                2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
                2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
                2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
                2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
                2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
                2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
                2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
                2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
                3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=    100.32         82.63
                over (min)       5.00         10.00
     Storage Coeff.  (min)=      2.14 (ii)     7.10 (ii)
     Unit Hyd. Tpeak (min)=      5.00         10.00
     Unit Hyd. peak  (cms)=      0.31          0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=      0.17          0.04         0.213 (iii)
     TIME TO PEAK    (hrs)=      6.00          6.00          6.00
     RUNOFF VOLUME     (mm)=    75.00         52.87         69.46
     TOTAL RAINFALL    (mm)=    76.00         76.00         76.00
     RUNOFF COEFFICIENT   =      0.99          0.70          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10021)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  71.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.52          0.21
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     69.76         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
                0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
                1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
                1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
                1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
                1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
                1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
                1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
                1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
                1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
                1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
                1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
                2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
                2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
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             2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
             2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
             2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
             2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
             2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
             2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
             2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
             2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
             2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
             2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
             3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         15.00
     Storage Coeff.  (min)=        2.06 (ii)    10.38 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.31          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.14          0.03       0.175 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87       68.57
     TOTAL RAINFALL   (mm)=       76.00         76.00       76.00
     RUNOFF COEFFICIENT   =        0.99          0.70        0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10031)|   Area     (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  66.00
--------------------
                           IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=      0.25          0.13
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     50.33         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
             0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
             0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
             0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
             0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
             0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
             0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
             0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
             0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
             0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
             0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
             1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
             1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
             1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
             1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
             1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
             1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
             1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
             1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
             1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
             1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
             1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
             1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
             2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
             2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
             2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
             2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
             2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
             2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
             2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
             2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
             2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
             2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
             2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
             2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
             3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         15.00
     Storage Coeff.  (min)=        1.69 (ii)    10.02 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.32          0.10
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.07          0.02       0.089 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87       67.46
     TOTAL RAINFALL   (mm)=       76.00         76.00       76.00
     RUNOFF COEFFICIENT   =        0.99          0.70        0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10032)|   Area     (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                           IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=      0.31          0.08
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     50.99         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
             0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
             0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
             0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
             0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
             0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
             0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
             0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
             0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
             0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
             0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
             1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
             1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
             1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
             1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
             1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
             1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
             1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
             1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
             1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
             1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
             1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
             1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
             2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
             2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
             2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
             2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
             2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
             2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
             2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
             2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
             2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
             2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
             2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
             2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
             3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.70 (ii)     6.24 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.09          0.02       0.102 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87       70.35
     TOTAL RAINFALL   (mm)=       76.00         76.00       76.00
     RUNOFF COEFFICIENT   =        0.99          0.70        0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10041)|   Area     (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.00   Dir. Conn.(%)=  69.00
--------------------
                           IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=      0.24          0.11
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     48.30         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
             0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
             0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
             0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
             0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
             0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
             0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
             0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
             0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
             0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
             0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
             1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
             1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
             1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
             1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
             1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
             1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
             1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
             1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
             1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
             1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
             1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
             1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
             2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
             2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
             2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
             2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
             2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
             2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
             2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
             2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
             2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
             2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
             2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
             2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
             3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.65 (ii)     9.98 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.11
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.07          0.02       0.086 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87       68.12
     TOTAL RAINFALL   (mm)=       76.00         76.00       76.00
     RUNOFF COEFFICIENT   =        0.99          0.70        0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10042)|   Area     (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                           IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=      0.28          0.10
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     50.33         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
             0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
             0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
             0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
             0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
             0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
             0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
             0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
             0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
             0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
             0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
             1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
             1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
             1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
             1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
             1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
             1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
             1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
             1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
             1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
             1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
             1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
             1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
             2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
             2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
             2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
             2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
             2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
             2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
             2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
             2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
             2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
             2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
             2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
             2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
             3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         15.00
     Storage Coeff.  (min)=        1.69 (ii)    10.02 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.32          0.10
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.08          0.02       0.093 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87       69.23
     TOTAL RAINFALL   (mm)=       76.00         76.00       76.00
     RUNOFF COEFFICIENT   =        0.99          0.70        0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB              |
| STANDHYD ( 10012)|   Area    (ha)=   0.23
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.18          0.05
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     39.16         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
                0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
                1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
                1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
                1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
                1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
                1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
                1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
                1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
                1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
                1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
                1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
                2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
                2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
                2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
                2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
                2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
                2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
                2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
                2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
                2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
                2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
                2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
                2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
                3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       1.45 (ii)     6.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.05          0.01          0.060 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      75.00         52.87         70.12
     TOTAL RAINFALL   (mm)=      76.00         76.00         76.00
     RUNOFF COEFFICIENT   =       0.99          0.70          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10051)|   Area    (ha)=   0.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  66.00
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                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.24          0.13
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     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     49.67         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
                0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
                1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
                1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
                1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
                1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
                1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
                1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
                1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
                1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
                1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
                1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
                2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
                2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
                2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
                2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
                2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
                2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
                2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
                2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
                2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
                2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
                2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
                2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
                3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
               over (min)         5.00         15.00
     Storage Coeff.  (min)=       1.68 (ii)    10.00 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.32          0.10
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.07          0.02          0.087 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      75.00         52.87         67.46
     TOTAL RAINFALL   (mm)=      76.00         76.00         76.00
     RUNOFF COEFFICIENT   =       0.99          0.70          0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10052)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  62.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.22          0.14
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     48.99         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
                0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
                1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
                1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
                1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
                1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
                1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
                1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
                1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
                1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
                1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
                1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
                2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
                2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
                2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
                2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
                2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
                2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
                2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
                2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
                2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
                2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
                2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
                2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
                3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52
     Max.Eff.Inten.(mm/hr)=     100.32         82.63
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       1.66 (ii)     9.99 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.11
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.06          0.02          0.086 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      75.00         52.87         66.57
     TOTAL RAINFALL   (mm)=      76.00         76.00         76.00
     RUNOFF COEFFICIENT   =       0.99          0.70          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10062)|   Area    (ha)=   0.66
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  62.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.41          0.25
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     66.33         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
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                0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
                1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
                1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
                1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
                1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
                1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
                1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
                1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
                1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
                1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
                1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
                2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
                2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
                2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
                2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
                2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
                2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
                2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
                2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
                2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
                2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
                2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
                2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
                3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52
     Max.Eff.Inten.(mm/hr)=     100.32         82.63
               over (min)         5.00         15.00
     Storage Coeff.  (min)=       1.99 (ii)    10.32 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.31          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.11          0.04          0.151 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      75.00         52.87         66.58
     TOTAL RAINFALL   (mm)=      76.00         76.00         76.00
     RUNOFF COEFFICIENT   =       0.99          0.70          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  65.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.42          0.23
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     65.83         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
                0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
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     1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
     1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
     1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
     1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
     1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
     1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
     1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
     1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
     1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
     1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
     2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
     2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
     2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
     2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
     2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
     2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
     2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
     2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
     2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
     2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
     2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
     2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
     3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

Max.Eff.Inten.(mm/hr)=      100.32          82.63
           over (min)         5.00          15.00
Storage Coeff.   (min)=       1.99 (ii)     10.31 (ii)
Unit Hyd. Tpeak (min)=        5.00          15.00
Unit Hyd. peak  (cms)=        0.31           0.09
                                                          *TOTALS*
PEAK FLOW        (cms)=       0.12           0.04          0.151 (iii)
TIME TO PEAK     (hrs)=       6.00           6.08           6.00
RUNOFF VOLUME     (mm)=      75.00          52.87          67.24
TOTAL RAINFALL    (mm)=      76.00          76.00          76.00
RUNOFF COEFFICIENT    =       0.99           0.70           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10072)|   Area     (ha)=   0.74
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  71.00
--------------------
                            IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=      0.53          0.21
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     70.24         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
     0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
     0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
     0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
     0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
     0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
     0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
     0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
     0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
     0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
     0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
     1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
     1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
     1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
     1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
     1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
     1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
     1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
     1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
     1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
     1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
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     1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
     1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
     2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
     2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
     2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
     2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
     2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
     2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
     2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
     2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
     2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
     2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
     2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
     2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
     3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

Max.Eff.Inten.(mm/hr)=      100.32          82.63
           over (min)         5.00          15.00
Storage Coeff.   (min)=       2.06 (ii)     10.39 (ii)
Unit Hyd. Tpeak (min)=        5.00          15.00
Unit Hyd. peak  (cms)=        0.31           0.09
                                                          *TOTALS*
PEAK FLOW        (cms)=       0.15           0.03          0.178 (iii)
TIME TO PEAK     (hrs)=       6.00           6.08           6.00
RUNOFF VOLUME     (mm)=      75.00          52.87          68.57
TOTAL RAINFALL    (mm)=      76.00          76.00          76.00
RUNOFF COEFFICIENT    =       0.99           0.70           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10071)|   Area     (ha)=   0.72
|ID= 1 DT= 5.0 min |   Total Imp(%)=  60.00   Dir. Conn.(%)=  60.00
--------------------
                            IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=      0.43          0.29
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     69.28         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
     0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
     0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
     0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
     0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
     0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
     0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
     0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
     0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
     0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
     0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
     1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
     1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
     1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
     1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
     1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
     1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
     1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
     1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
     1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
     1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
     1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
     1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
     2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
     2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
     2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
     2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
     2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
     2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
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     2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
     2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
     2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
     2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
     2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
     2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
     3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

Max.Eff.Inten.(mm/hr)=      100.32          82.63
           over (min)         5.00          15.00
Storage Coeff.   (min)=       2.05 (ii)     10.37 (ii)
Unit Hyd. Tpeak (min)=        5.00          15.00
Unit Hyd. peak  (cms)=        0.31           0.09
                                                          *TOTALS*
PEAK FLOW        (cms)=       0.12           0.05          0.162 (iii)
TIME TO PEAK     (hrs)=       6.00           6.08           6.00
RUNOFF VOLUME     (mm)=      75.00          52.87          66.14
TOTAL RAINFALL    (mm)=      76.00          76.00          76.00
RUNOFF COEFFICIENT    =       0.99           0.70           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10081)|   Area     (ha)=   0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  52.00
--------------------
                            IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=      0.11          0.10
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     37.42         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
     0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
     0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
     0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
     0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
     0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
     0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
     0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
     0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
     0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
     0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
     1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
     1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
     1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
     1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
     1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
     1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
     1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
     1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
     1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
     1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
     1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
     1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
     2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
     2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
     2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
     2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
     2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
     2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
     2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
     2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
     2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
     2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
     2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
     2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
     3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52
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Max.Eff.Inten.(mm/hr)=      100.32          82.63
           over (min)         5.00          10.00
Storage Coeff.   (min)=       1.41 (ii)      9.74 (ii)
Unit Hyd. Tpeak (min)=        5.00          10.00
Unit Hyd. peak  (cms)=        0.33           0.11
                                                          *TOTALS*
PEAK FLOW        (cms)=       0.03           0.02          0.048 (iii)
TIME TO PEAK     (hrs)=       6.00           6.00           6.00
RUNOFF VOLUME     (mm)=      75.00          52.87          64.35
TOTAL RAINFALL    (mm)=      76.00          76.00          76.00
RUNOFF COEFFICIENT    =       0.99           0.70           0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10082)|   Area     (ha)=   0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                            IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=      0.18          0.03
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     37.42         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
      TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
       hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
     0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
     0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
     0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
     0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
     0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
     0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
     0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
     0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
     0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
     0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
     0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
     1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
     1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
     1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
     1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
     1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
     1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
     1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
     1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
     1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
     1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
     1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
     1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
     2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
     2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
     2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
     2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
     2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
     2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
     2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
     2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
     2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
     2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
     2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
     2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
     3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

Max.Eff.Inten.(mm/hr)=      100.32          82.63
           over (min)         5.00          10.00
Storage Coeff.   (min)=       1.41 (ii)      5.02 (ii)
Unit Hyd. Tpeak (min)=        5.00          10.00
Unit Hyd. peak  (cms)=        0.33           0.16
                                                          *TOTALS*
PEAK FLOW        (cms)=       0.05           0.01          0.057 (iii)
TIME TO PEAK     (hrs)=       6.00           6.00           6.00
```

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     RUNOFF VOLUME    (mm)=       75.00         52.87          72.12
     TOTAL RAINFALL   (mm)=       76.00         76.00          76.00
     RUNOFF COEFFICIENT   =        0.99          0.70           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.51          0.12
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     64.81         40.00
     Mannings n           =     0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME ' hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.90	3.083	3.04	6.083	13.68	9.08	2.66
0.167	1.90	3.167	3.04	6.167	13.68	9.17	2.66
0.250	1.90	3.250	3.04	6.250	13.68	9.25	2.66
0.333	1.90	3.333	3.04	6.333	13.68	9.33	2.66
0.417	1.90	3.417	3.04	6.417	13.68	9.42	2.66
0.500	1.90	3.500	3.04	6.500	13.68	9.50	2.66
0.583	1.90	3.583	3.04	6.583	6.08	9.58	2.66
0.667	1.90	3.667	3.04	6.667	6.08	9.67	2.66
0.750	1.90	3.750	3.04	6.750	6.08	9.75	2.66
0.833	1.90	3.833	3.04	6.833	6.08	9.83	2.66
0.917	1.90	3.917	3.04	6.917	6.08	9.92	2.66
1.000	1.90	4.000	3.04	7.000	6.08	10.00	2.66
1.083	1.90	4.083	4.56	7.083	4.56	10.08	1.52
1.167	1.90	4.167	4.56	7.167	4.56	10.17	1.52
1.250	1.90	4.250	4.56	7.250	4.56	10.25	1.52
1.333	1.90	4.333	4.56	7.333	4.56	10.33	1.52
1.417	1.90	4.417	4.56	7.417	4.56	10.42	1.52
1.500	1.90	4.500	4.56	7.500	4.56	10.50	1.52
1.583	1.90	4.583	6.08	7.583	4.56	10.58	1.52
1.667	1.90	4.667	6.08	7.667	4.56	10.67	1.52
1.750	1.90	4.750	6.08	7.750	4.56	10.75	1.52
1.833	1.90	4.833	6.08	7.833	4.56	10.83	1.52
1.917	1.90	4.917	6.08	7.917	4.56	10.92	1.52
2.000	1.90	5.000	6.08	8.000	4.56	11.00	1.52
2.083	2.28	5.083	9.12	8.083	2.66	11.08	1.52
2.167	2.28	5.167	9.12	8.167	2.66	11.17	1.52
2.250	2.28	5.250	9.12	8.250	2.66	11.25	1.52
2.333	2.28	5.333	9.12	8.333	2.66	11.33	1.52
2.417	2.28	5.417	9.12	8.417	2.66	11.42	1.52
2.500	2.28	5.500	9.12	8.500	2.66	11.50	1.52
2.583	2.28	5.583	36.48	8.583	2.66	11.58	1.52
2.667	2.28	5.667	36.48	8.667	2.66	11.67	1.52
2.750	2.28	5.750	36.48	8.750	2.66	11.75	1.52
2.833	2.28	5.833	100.32	8.833	2.66	11.83	1.52
2.917	2.28	5.917	100.32	8.917	2.66	11.92	1.52
3.000	2.28	6.000	100.32	9.000	2.66	12.00	1.52

```
     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.97 (ii)     6.28 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.15
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.14          0.02          0.166 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87          70.79
     TOTAL RAINFALL   (mm)=       76.00         76.00          76.00
     RUNOFF COEFFICIENT   =        0.99          0.70           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10091)|   Area    (ha)=   0.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.37          0.13
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     57.74         40.00
     Mannings n           =     0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME ' hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.90	3.083	3.04	6.083	13.68	9.08	2.66
0.167	1.90	3.167	3.04	6.167	13.68	9.17	2.66
0.250	1.90	3.250	3.04	6.250	13.68	9.25	2.66
0.333	1.90	3.333	3.04	6.333	13.68	9.33	2.66
0.417	1.90	3.417	3.04	6.417	13.68	9.42	2.66
0.500	1.90	3.500	3.04	6.500	13.68	9.50	2.66
0.583	1.90	3.583	3.04	6.583	6.08	9.58	2.66
0.667	1.90	3.667	3.04	6.667	6.08	9.67	2.66
0.750	1.90	3.750	3.04	6.750	6.08	9.75	2.66
0.833	1.90	3.833	3.04	6.833	6.08	9.83	2.66
0.917	1.90	3.917	3.04	6.917	6.08	9.92	2.66
1.000	1.90	4.000	3.04	7.000	6.08	10.00	2.66
1.083	1.90	4.083	4.56	7.083	4.56	10.08	1.52
1.167	1.90	4.167	4.56	7.167	4.56	10.17	1.52
1.250	1.90	4.250	4.56	7.250	4.56	10.25	1.52
1.333	1.90	4.333	4.56	7.333	4.56	10.33	1.52
1.417	1.90	4.417	4.56	7.417	4.56	10.42	1.52
1.500	1.90	4.500	4.56	7.500	4.56	10.50	1.52
1.583	1.90	4.583	6.08	7.583	4.56	10.58	1.52
1.667	1.90	4.667	6.08	7.667	4.56	10.67	1.52
1.750	1.90	4.750	6.08	7.750	4.56	10.75	1.52
1.833	1.90	4.833	6.08	7.833	4.56	10.83	1.52
1.917	1.90	4.917	6.08	7.917	4.56	10.92	1.52
2.000	1.90	5.000	6.08	8.000	4.56	11.00	1.52
2.083	2.28	5.083	9.12	8.083	2.66	11.08	1.52
2.167	2.28	5.167	9.12	8.167	2.66	11.17	1.52
2.250	2.28	5.250	9.12	8.250	2.66	11.25	1.52
2.333	2.28	5.333	9.12	8.333	2.66	11.33	1.52
2.417	2.28	5.417	9.12	8.417	2.66	11.42	1.52
2.500	2.28	5.500	9.12	8.500	2.66	11.50	1.52
2.583	2.28	5.583	36.48	8.583	2.66	11.58	1.52
2.667	2.28	5.667	36.48	8.667	2.66	11.67	1.52
2.750	2.28	5.750	36.48	8.750	2.66	11.75	1.52
2.833	2.28	5.833	100.32	8.833	2.66	11.83	1.52
2.917	2.28	5.917	100.32	8.917	2.66	11.92	1.52
3.000	2.28	6.000	100.32	9.000	2.66	12.00	1.52

```
     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         15.00
     Storage Coeff.  (min)=        1.84 (ii)    10.16 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.32          0.10
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.10          0.02          0.122 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87          69.23
     TOTAL RAINFALL   (mm)=       76.00         76.00          76.00
     RUNOFF COEFFICIENT   =        0.99          0.70           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (  1101)|   Area    (ha)=   0.91
|ID= 1 DT= 5.0 min |   Total Imp(%)=  55.00   Dir. Conn.(%)=  55.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.50          0.41
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     77.89         40.00
     Mannings n           =     0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME ' hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.90	3.083	3.04	6.083	13.68	9.08	2.66
0.167	1.90	3.167	3.04	6.167	13.68	9.17	2.66
0.250	1.90	3.250	3.04	6.250	13.68	9.25	2.66
0.333	1.90	3.333	3.04	6.333	13.68	9.33	2.66
0.417	1.90	3.417	3.04	6.417	13.68	9.42	2.66
0.500	1.90	3.500	3.04	6.500	13.68	9.50	2.66
0.583	1.90	3.583	3.04	6.583	6.08	9.58	2.66
0.667	1.90	3.667	3.04	6.667	6.08	9.67	2.66
0.750	1.90	3.750	3.04	6.750	6.08	9.75	2.66
0.833	1.90	3.833	3.04	6.833	6.08	9.83	2.66
0.917	1.90	3.917	3.04	6.917	6.08	9.92	2.66
1.000	1.90	4.000	3.04	7.000	6.08	10.00	2.66
1.083	1.90	4.083	4.56	7.083	4.56	10.08	1.52
1.167	1.90	4.167	4.56	7.167	4.56	10.17	1.52
1.250	1.90	4.250	4.56	7.250	4.56	10.25	1.52
1.333	1.90	4.333	4.56	7.333	4.56	10.33	1.52
1.417	1.90	4.417	4.56	7.417	4.56	10.42	1.52
1.500	1.90	4.500	4.56	7.500	4.56	10.50	1.52
1.583	1.90	4.583	6.08	7.583	4.56	10.58	1.52
1.667	1.90	4.667	6.08	7.667	4.56	10.67	1.52
1.750	1.90	4.750	6.08	7.750	4.56	10.75	1.52
1.833	1.90	4.833	6.08	7.833	4.56	10.83	1.52
1.917	1.90	4.917	6.08	7.917	4.56	10.92	1.52
2.000	1.90	5.000	6.08	8.000	4.56	11.00	1.52
2.083	2.28	5.083	9.12	8.083	2.66	11.08	1.52
2.167	2.28	5.167	9.12	8.167	2.66	11.17	1.52
2.250	2.28	5.250	9.12	8.250	2.66	11.25	1.52
2.333	2.28	5.333	9.12	8.333	2.66	11.33	1.52
2.417	2.28	5.417	9.12	8.417	2.66	11.42	1.52
2.500	2.28	5.500	9.12	8.500	2.66	11.50	1.52
2.583	2.28	5.583	36.48	8.583	2.66	11.58	1.52
2.667	2.28	5.667	36.48	8.667	2.66	11.67	1.52
2.750	2.28	5.750	36.48	8.750	2.66	11.75	1.52
2.833	2.28	5.833	100.32	8.833	2.66	11.83	1.52
2.917	2.28	5.917	100.32	8.917	2.66	11.92	1.52
3.000	2.28	6.000	100.32	9.000	2.66	12.00	1.52

```
     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         15.00
     Storage Coeff.  (min)=        2.20 (ii)    10.52 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.30          0.09
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.14          0.06          0.199 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87          65.04
     TOTAL RAINFALL   (mm)=       76.00         76.00          76.00
     RUNOFF COEFFICIENT   =        0.99          0.70           0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (  1102)|   Area    (ha)=   0.88
|ID= 1 DT= 5.0 min |   Total Imp(%)=  72.00   Dir. Conn.(%)=  72.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.63          0.25
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     76.59         40.00
     Mannings n           =     0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME ' hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.90	3.083	3.04	6.083	13.68	9.08	2.66
0.167	1.90	3.167	3.04	6.167	13.68	9.17	2.66
0.250	1.90	3.250	3.04	6.250	13.68	9.25	2.66
0.333	1.90	3.333	3.04	6.333	13.68	9.33	2.66
0.417	1.90	3.417	3.04	6.417	13.68	9.42	2.66
0.500	1.90	3.500	3.04	6.500	13.68	9.50	2.66
0.583	1.90	3.583	3.04	6.583	6.08	9.58	2.66
0.667	1.90	3.667	3.04	6.667	6.08	9.67	2.66
0.750	1.90	3.750	3.04	6.750	6.08	9.75	2.66
0.833	1.90	3.833	3.04	6.833	6.08	9.83	2.66
0.917	1.90	3.917	3.04	6.917	6.08	9.92	2.66
1.000	1.90	4.000	3.04	7.000	6.08	10.00	2.66
1.083	1.90	4.083	4.56	7.083	4.56	10.08	1.52
1.167	1.90	4.167	4.56	7.167	4.56	10.17	1.52
1.250	1.90	4.250	4.56	7.250	4.56	10.25	1.52
1.333	1.90	4.333	4.56	7.333	4.56	10.33	1.52
1.417	1.90	4.417	4.56	7.417	4.56	10.42	1.52
1.500	1.90	4.500	4.56	7.500	4.56	10.50	1.52
1.583	1.90	4.583	6.08	7.583	4.56	10.58	1.52
1.667	1.90	4.667	6.08	7.667	4.56	10.67	1.52
1.750	1.90	4.750	6.08	7.750	4.56	10.75	1.52
1.833	1.90	4.833	6.08	7.833	4.56	10.83	1.52
1.917	1.90	4.917	6.08	7.917	4.56	10.92	1.52
2.000	1.90	5.000	6.08	8.000	4.56	11.00	1.52
2.083	2.28	5.083	9.12	8.083	2.66	11.08	1.52
2.167	2.28	5.167	9.12	8.167	2.66	11.17	1.52
2.250	2.28	5.250	9.12	8.250	2.66	11.25	1.52
2.333	2.28	5.333	9.12	8.333	2.66	11.33	1.52
2.417	2.28	5.417	9.12	8.417	2.66	11.42	1.52
2.500	2.28	5.500	9.12	8.500	2.66	11.50	1.52
2.583	2.28	5.583	36.48	8.583	2.66	11.58	1.52
2.667	2.28	5.667	36.48	8.667	2.66	11.67	1.52
2.750	2.28	5.750	36.48	8.750	2.66	11.75	1.52
2.833	2.28	5.833	100.32	8.833	2.66	11.83	1.52
2.917	2.28	5.917	100.32	8.917	2.66	11.92	1.52
3.000	2.28	6.000	100.32	9.000	2.66	12.00	1.52

```
     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         15.00
     Storage Coeff.  (min)=        2.17 (ii)    10.50 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.31          0.09
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.18          0.04          0.212 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08           6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87          68.80
     TOTAL RAINFALL   (mm)=       76.00         76.00          76.00
     RUNOFF COEFFICIENT   =        0.99          0.70           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  1111)|   Area    (ha)=   1.06
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.63          0.43
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     84.06         40.00
     Mannings n           =     0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME ' hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.90	3.083	3.04	6.083	13.68	9.08	2.66

```
    0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
    0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
    0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
    0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
    0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
    0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
    0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
    0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
    0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
    0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
    1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
    1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
    1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
    1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
    1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
    1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
    1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
    1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
    1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
    1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
    1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
    1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
    2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
    2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
    2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
    2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
    2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
    2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
    2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
    2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
    2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
    2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
    2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
    2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
    3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
               over (min)          5.00         15.00
     Storage Coeff.  (min)=        2.30 (ii)    10.63 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.30          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.17          0.07        0.237 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08         6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87        65.92
     TOTAL RAINFALL   (mm)=       76.00         76.00        76.00
     RUNOFF COEFFICIENT   =        0.99          0.70         0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 1112)|   Area    (ha)=   0.97
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.76         0.21
     Dep. Storage     (mm)=     1.00         1.00
     Average Slope     (%)=     1.00         2.00
     Length            (m)=    80.42        40.00
     Mannings n           =    0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
              0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
              0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
              0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
              0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
              0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
              0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
              0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
              0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
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              0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
              0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
              1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
              1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
              1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
              1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
              1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
              1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
              1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
              1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
              1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
              1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
              1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
              1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
              2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
              2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
              2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
              2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
              2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
              2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
              2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
              2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
              2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
              2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
              2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
              2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
              3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
               over (min)          5.00         10.00
     Storage Coeff.  (min)=        2.24 (ii)     6.88 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.30          0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.21          0.04        0.252 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00         6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87        70.13
     TOTAL RAINFALL   (mm)=       76.00         76.00        76.00
     RUNOFF COEFFICIENT   =        0.99          0.70         0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 1122)|   Area    (ha)=   1.22
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.00   Dir. Conn.(%)=  69.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.84         0.38
     Dep. Storage     (mm)=     1.00         1.00
     Average Slope     (%)=     1.00         2.00
     Length            (m)=    90.18        40.00
     Mannings n           =    0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
              0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
              0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
              0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
              0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
              0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
              0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
              0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
              0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
              0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
              0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
              1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
              1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
              1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
              1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
              1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
              1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
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              1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
              1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
              1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
              1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
              1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
              1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
              2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
              2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
              2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
              2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
              2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
              2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
              2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
              2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
              2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
              2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
              2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
              2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
              3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
               over (min)          5.00         15.00
     Storage Coeff.  (min)=        2.40 (ii)    10.72 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.30          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.23          0.06        0.289 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08         6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87        68.14
     TOTAL RAINFALL   (mm)=       76.00         76.00        76.00
     RUNOFF COEFFICIENT   =        0.99          0.70         0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 1121)|   Area    (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.00   Dir. Conn.(%)=  68.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.82         0.39
     Dep. Storage     (mm)=     1.00         1.00
     Average Slope     (%)=     1.00         2.00
     Length            (m)=    89.81        40.00
     Mannings n           =    0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
              0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
              0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
              0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
              0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
              0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
              0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
              0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
              0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
              0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
              0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
              1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
              1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
              1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
              1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
              1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
              1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
              1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
              1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
              1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
              1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
              1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
              1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
              2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
              2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
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              2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
              2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
              2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
              2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
              2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
              2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
              2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
              2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
              2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
              2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
              3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
               over (min)          5.00         15.00
     Storage Coeff.  (min)=        2.39 (ii)    10.72 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.30          0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.23          0.06        0.285 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08         6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87        67.91
     TOTAL RAINFALL   (mm)=       76.00         76.00        76.00
     RUNOFF COEFFICIENT   =        0.99          0.70         0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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=============================================================================

      V    V   I    SSSSS  U    U    A     L                  (v 6.1.2002)
      V    V   I    SS     U    U   A A    L
       V  V    I     SS    U    U  AAAAA   L
       V  V    I      SS   U    U  A   A   L
        VV     I    SSSSS  UUUUU   A   A   LLLLL

       OOO    TTTTT  TTTTT  H    H  Y    Y  M    M   OOO     TM
      O   O     T      T    H    H   Y  Y   MM  MM  O   O
      O   O     T      T    H    H    Y     M    M  O   O
       OOO      T      T    H    H    Y     M    M   OOO
Developed and Distributed by Smart City Water Inc
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```
                     *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\213cd234
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\213cd234


DATE: 05-18-2022                         TIME: 12:41:45

USER:


COMMENTS: _____________________________________________________


-----------------------------------------------------------------------------
  **********************************************
  ** SIMULATION : Run 16                      **
  **********************************************


--------------------
|    READ STORM      |     Filename: C:\Users\caef070146\AppD
|                    |               ata\Local\Temp\
|                    |               b414f864-f56d-471c-a2fc-7a8c6cfa5585\2d33b8b1
| Ptotal= 90.70 mm   |     Comments: 25-Yr,12-hr SCS, City of Barrie
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.25    2.27 |  3.25    3.63 |  6.25   16.33 |  9.25    3.17
               0.50    2.27 |  3.50    3.63 |  6.50   16.33 |  9.50    3.17
               0.75    2.27 |  3.75    3.63 |  6.75    7.26 |  9.75    3.17
```

```
          1.00    2.27 |  4.00    3.63 |  7.00    7.26 | 10.00    3.17
          1.25    2.27 |  4.25    5.44 |  7.25    5.44 | 10.25    1.81
          1.50    2.27 |  4.50    5.44 |  7.50    5.44 | 10.50    1.81
          1.75    2.27 |  4.75    7.26 |  7.75    5.44 | 10.75    1.81
          2.00    2.27 |  5.00    7.26 |  8.00    5.44 | 11.00    1.81
          2.25    2.72 |  5.25   10.88 |  8.25    3.17 | 11.25    1.81
          2.50    2.72 |  5.50   10.88 |  8.50    3.17 | 11.50    1.81
          2.75    2.72 |  5.75   43.54 |  8.75    3.17 | 11.75    1.81
          3.00    2.72 |  6.00  119.72 |  9.00    3.17 | 12.00    1.81

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| CALIB              |
| STANDHYD ( 10011)|   Area     (ha)=    0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=      0.17          0.04
    Dep. Storage     (mm)=      1.00          1.00
    Average Slope     (%)=      1.00          2.00
    Length            (m)=     37.42         40.00
    Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
           0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
           0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
           0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
           0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
           0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
           0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
           0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
           0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
           0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
           0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
           1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
           1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
           1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
           1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
           1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
           1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
           1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
           1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
           1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
           1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
           1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
           1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
           2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
           2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
           2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
           2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
           2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
           2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
           2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
           2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
           2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
           2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
           2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
           2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
           3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

    Max.Eff.Inten.(mm/hr)=      119.72        102.72
               over (min)         5.00         10.00
    Storage Coeff.  (min)=        1.32 (ii)     5.54 (ii)
    Unit Hyd. Tpeak (min)=        5.00         10.00
    Unit Hyd. peak  (cms)=        0.33          0.16
                                                           *TOTALS*
    PEAK FLOW        (cms)=       0.06          0.01         0.066 (iii)
    TIME TO PEAK     (hrs)=       6.00          6.00          6.00
    RUNOFF VOLUME     (mm)=      89.70         66.45         84.80
    TOTAL RAINFALL    (mm)=      90.70         90.70         90.70
    RUNOFF COEFFICIENT   =        0.99          0.73          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0     Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10022)|   Area     (ha)=    0.83
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.00   Dir. Conn.(%)=  75.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=      0.62          0.21
    Dep. Storage     (mm)=      1.00          1.00
    Average Slope     (%)=      1.00          2.00
    Length            (m)=     74.39         40.00
    Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
           0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
           0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
           0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
           0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
           0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
           0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
           0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
           0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
           0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
           0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
           1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
           1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
           1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
           1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
           1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
           1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
           1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
           1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
           1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
           1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
           1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
           1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
           2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
           2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
           2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
           2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
           2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
           2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
           2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
           2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
           2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
           2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
           2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
           2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
           3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

    Max.Eff.Inten.(mm/hr)=      119.72        102.72
               over (min)         5.00         10.00
    Storage Coeff.  (min)=        1.99 (ii)     6.62 (ii)
    Unit Hyd. Tpeak (min)=        5.00         10.00
    Unit Hyd. peak  (cms)=        0.31          0.14
                                                           *TOTALS*
    PEAK FLOW        (cms)=       0.21          0.05         0.258 (iii)
    TIME TO PEAK     (hrs)=       6.00          6.00          6.00
    RUNOFF VOLUME     (mm)=      89.70         66.45         83.88
    TOTAL RAINFALL    (mm)=      90.70         90.70         90.70
    RUNOFF COEFFICIENT   =        0.99          0.73          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0     Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10021)|   Area     (ha)=    0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  71.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=      0.52          0.21
    Dep. Storage     (mm)=      1.00          1.00
    Average Slope     (%)=      1.00          2.00
    Length            (m)=     69.76         40.00
    Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
           0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
           0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
           0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
           0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
           0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
           0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
           0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
           0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
           0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
           0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
           1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
           1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
           1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
           1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
           1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
           1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
           1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
           1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
           1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
           1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
           1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
           1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
           2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
           2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
           2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
           2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
           2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
           2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
           2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
           2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
           2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
           2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
           2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
           2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
           3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

    Max.Eff.Inten.(mm/hr)=      119.72        102.72
               over (min)         5.00         10.00
    Storage Coeff.  (min)=        1.92 (ii)     9.55 (ii)
    Unit Hyd. Tpeak (min)=        5.00         10.00
    Unit Hyd. peak  (cms)=        0.31          0.12
                                                           *TOTALS*
    PEAK FLOW        (cms)=       0.17          0.05         0.218 (iii)
    TIME TO PEAK     (hrs)=       6.00          6.00          6.00
    RUNOFF VOLUME     (mm)=      89.70         66.45         82.95
    TOTAL RAINFALL    (mm)=      90.70         90.70         90.70
    RUNOFF COEFFICIENT   =        0.99          0.73          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0     Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10031)|   Area     (ha)=    0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  66.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=      0.25          0.13
    Dep. Storage     (mm)=      1.00          1.00
    Average Slope     (%)=      1.00          2.00
    Length            (m)=     50.33         40.00
    Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
           0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
           0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
           0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
           0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
           0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
           0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
           0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
           0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
           0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
           0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
           1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
           1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
           1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
           1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
           1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
           1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
           1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
           1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
           1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
           1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
           1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
           1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
           2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
           2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
           2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
           2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
           2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
           2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
           2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
           2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
           2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
           2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
           2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
           2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
           3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

    Max.Eff.Inten.(mm/hr)=      119.72        102.72
               over (min)         5.00         10.00
    Storage Coeff.  (min)=        1.57 (ii)     9.21 (ii)
    Unit Hyd. Tpeak (min)=        5.00         10.00
    Unit Hyd. peak  (cms)=        0.33          0.12
                                                           *TOTALS*
    PEAK FLOW        (cms)=       0.08          0.03         0.112 (iii)
    TIME TO PEAK     (hrs)=       6.00          6.00          6.00
    RUNOFF VOLUME     (mm)=      89.70         66.45         81.77
    TOTAL RAINFALL    (mm)=      90.70         90.70         90.70
    RUNOFF COEFFICIENT   =        0.99          0.73          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0     Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------

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| CALIB              |
| STANDHYD ( 10032)|   Area     (ha)=    0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=      0.31          0.08
    Dep. Storage     (mm)=      1.00          1.00
    Average Slope     (%)=      1.00          2.00
    Length            (m)=     50.99         40.00
    Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
           0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
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        0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
        0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
        0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
        0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
        0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
        0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
        0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
        0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
        0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
        1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
        1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
        1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
        1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
        1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
        1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
        1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
        1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
        1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
        1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
        1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
        1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
        2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
        2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
        2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
        2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
        2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
        2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
        2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
        2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
        2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
        2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
        2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
        2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
        3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.59 (ii)     5.81 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.10          0.02        0.123 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45       84.81
     TOTAL RAINFALL   (mm)=      90.70         90.70       90.70
     RUNOFF COEFFICIENT   =       0.99          0.73        0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.00   Dir. Conn.(%)=  69.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.24          0.11
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      48.30         40.00
     Mannings n           =      0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
          0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
          0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
          0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
          0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
          0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
          0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
          0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
          0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
          0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
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        0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
        1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
        1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
        1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
        1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
        1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
        1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
        1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
        1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
        1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
        1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
        1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
        1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
        2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
        2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
        2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
        2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
        2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
        2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
        2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
        2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
        2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
        2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
        2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
        2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
        3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.54 (ii)     9.17 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.12
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.08          0.02        0.104 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45       82.47
     TOTAL RAINFALL   (mm)=      90.70         90.70       90.70
     RUNOFF COEFFICIENT   =       0.99          0.73        0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10042)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.28          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      50.33         40.00
     Mannings n           =      0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
          0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
          0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
          0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
          0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
          0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
          0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
          0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
          0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
          0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
          0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
          1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
          1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
          1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
          1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
          1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
          1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
          1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
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        1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
        1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
        1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
        1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
        1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
        2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
        2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
        2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
        2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
        2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
        2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
        2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
        2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
        2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
        2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
        2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
        2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
        3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.57 (ii)     6.30 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.02        0.118 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45       83.64
     TOTAL RAINFALL   (mm)=      90.70         90.70       90.70
     RUNOFF COEFFICIENT   =       0.99          0.73        0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10012)|   Area    (ha)=   0.23
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.18          0.05
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      39.16         40.00
     Mannings n           =      0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
          0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
          0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
          0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
          0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
          0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
          0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
          0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
          0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
          0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
          0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
          1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
          1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
          1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
          1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
          1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
          1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
          1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
          1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
          1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
          1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
          1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
          1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
          2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
          2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
          2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
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        2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
        2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
        2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
        2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
        2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
        2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
        2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
        2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
        2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
        3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.35 (ii)     5.68 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.06          0.01        0.072 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45       84.57
     TOTAL RAINFALL   (mm)=      90.70         90.70       90.70
     RUNOFF COEFFICIENT   =       0.99          0.73        0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10051)|   Area    (ha)=   0.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  66.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.24          0.13
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      49.67         40.00
     Mannings n           =      0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
          0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
          0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
          0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
          0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
          0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
          0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
          0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
          0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
          0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
          0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
          1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
          1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
          1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
          1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
          1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
          1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
          1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
          1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
          1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
          1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
          1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
          1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
          2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
          2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
          2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
          2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
          2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
          2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
          2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
          2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
          2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
          2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
          2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
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             2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
             3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.56 (ii)     9.19 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.08          0.03       0.109 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45       81.77
     TOTAL RAINFALL   (mm)=      90.70         90.70       90.70
     RUNOFF COEFFICIENT   =       0.99          0.73        0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10052)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  62.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.22          0.14
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      48.99         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
             0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
             0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
             0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
             0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
             0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
             0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
             0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
             0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
             0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
             0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
             1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
             1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
             1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
             1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
             1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
             1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
             1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
             1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
             1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
             1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
             1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
             1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
             2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
             2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
             2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
             2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
             2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
             2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
             2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
             2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
             2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
             2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
             2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
             2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
             3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.55 (ii)     9.18 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.07          0.03       0.104 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45       80.85
     TOTAL RAINFALL   (mm)=      90.70         90.70       90.70
     RUNOFF COEFFICIENT   =       0.99          0.73        0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10062)|   Area    (ha)=   0.66
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  62.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.41          0.25
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      66.33         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
             0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
             0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
             0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
             0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
             0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
             0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
             0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
             0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
             0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
             0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
             1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
             1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
             1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
             1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
             1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
             1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
             1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
             1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
             1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
             1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
             1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
             1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
             2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
             2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
             2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
             2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
             2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
             2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
             2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
             2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
             2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
             2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
             2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
             2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
             3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.86 (ii)     9.49 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.14          0.05       0.191 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45       80.86
     TOTAL RAINFALL   (mm)=      90.70         90.70       90.70
     RUNOFF COEFFICIENT   =       0.99          0.73        0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  65.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.42          0.23
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.83         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
             0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
             0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
             0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
             0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
             0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
             0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
             0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
             0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
             0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
             0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
             1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
             1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
             1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
             1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
             1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
             1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
             1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
             1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
             1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
             1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
             1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
             1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
             2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
             2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
             2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
             2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
             2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
             2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
             2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
             2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
             2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
             2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
             2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
             2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
             3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.85 (ii)     9.48 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.14          0.05       0.190 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45       81.55
     TOTAL RAINFALL   (mm)=      90.70         90.70       90.70
     RUNOFF COEFFICIENT   =       0.99          0.73        0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10072)|   Area    (ha)=   0.74
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  71.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.53          0.21
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      70.24         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
             0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
             0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
             0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
             0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
             0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
             0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
             0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
             0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
             0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
             0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
             1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
             1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
             1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
             1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
             1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
             1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
             1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
             1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
             1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
             1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
             1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
             1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
             2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
             2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
             2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
             2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
             2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
             2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
             2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
             2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
             2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
             2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
             2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
             2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
             3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.92 (ii)     9.56 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.17          0.05       0.221 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45       82.95
     TOTAL RAINFALL   (mm)=      90.70         90.70       90.70
     RUNOFF COEFFICIENT   =       0.99          0.73        0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10071)|   Area    (ha)=   0.72
|ID= 1 DT= 5.0 min |   Total Imp(%)=  60.00   Dir. Conn.(%)=  60.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.43          0.29
     Dep. Storage     (mm)=       1.00          1.00
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     Average Slope     (%)=        1.00          2.00
     Length            (m)=       69.28         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
                 0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
                 0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
                 0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
                 0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
                 0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
                 0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
                 0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
                 0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
                 0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
                 0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
                 1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
                 1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
                 1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
                 1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
                 1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
                 1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
                 1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
                 1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
                 1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
                 1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
                 1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
                 1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
                 2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
                 2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
                 2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
                 2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
                 2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
                 2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
                 2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
                 2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
                 2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
                 2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
                 2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
                 2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
                 3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=      119.72        102.72
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         1.91 (ii)     9.54 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.32          0.12
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.14          0.06          0.206 (iii)
     TIME TO PEAK    (hrs)=         6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=        89.70         66.45          80.39
     TOTAL RAINFALL   (mm)=        90.70         90.70          90.70
     RUNOFF COEFFICIENT   =         0.99          0.73           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10081)|   Area    (ha)=    0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  52.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.11          0.10
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       37.42         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----

                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
                 0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
                 0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
                 0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
                 0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
                 0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
                 0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
                 0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
                 0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
                 0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
                 0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
                 1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
                 1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
                 1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
                 1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
                 1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
                 1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
                 1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
                 1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
                 1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
                 1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
                 1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
                 1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
                 2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
                 2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
                 2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
                 2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
                 2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
                 2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
                 2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
                 2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
                 2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
                 2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
                 2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
                 2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
                 3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=      119.72        102.72
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         1.32 (ii)     8.95 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.33          0.12
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.04          0.02          0.059 (iii)
     TIME TO PEAK    (hrs)=         6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=        89.70         66.45          78.51
     TOTAL RAINFALL   (mm)=        90.70         90.70          90.70
     RUNOFF COEFFICIENT   =         0.99          0.73           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10082)|   Area    (ha)=    0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.18          0.03
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       37.42         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
                 0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
                 0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
                 0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
                 0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
                 0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
                 0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
                 0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
                 0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
                 0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
                 0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
                 1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
                 1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
                 1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
                 1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
                 1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
                 1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
                 1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
                 1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
                 1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
                 1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
                 1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
                 1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
                 2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
                 2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
                 2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
                 2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
                 2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
                 2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
                 2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
                 2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
                 2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
                 2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
                 2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
                 2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
                 3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=      119.72        102.72
                over (min)          5.00          5.00
     Storage Coeff.  (min)=         1.32 (ii)     4.67 (ii)
     Unit Hyd. Tpeak (min)=         5.00          5.00
     Unit Hyd. peak  (cms)=         0.33          0.22
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.06          0.01          0.068 (iii)
     TIME TO PEAK    (hrs)=         6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=        89.70         66.45          86.66
     TOTAL RAINFALL   (mm)=        90.70         90.70          90.70
     RUNOFF COEFFICIENT   =         0.99          0.73           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10092)|   Area    (ha)=    0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.51          0.12
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       64.81         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
                 0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
                 0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
                 0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
                 0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
                 0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
                 0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
                 0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
                 0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
                 0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
                 0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
                 1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
                 1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
                 1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
                 1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
                 1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
                 1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
                 1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
                 1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
                 1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
                 1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
                 1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
                 1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
                 2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
                 2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
                 2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
                 2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
                 2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
                 2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
                 2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
                 2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
                 2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
                 2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
                 2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
                 2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
                 3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=      119.72        102.72
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         1.83 (ii)     5.85 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.32          0.15
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.17          0.03          0.200 (iii)
     TIME TO PEAK    (hrs)=         6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=        89.70         66.45          85.27
     TOTAL RAINFALL   (mm)=        90.70         90.70          90.70
     RUNOFF COEFFICIENT   =         0.99          0.73           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10091)|   Area    (ha)=    0.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.37          0.13
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       57.74         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
                 0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
                 0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
                 0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
                 0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
                 0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
                 0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
                 0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
                 0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
                 0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
                 0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
                 1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
                 1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
                 1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
                 1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
                 1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
                 1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
                 1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
                 1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
                 1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
                 1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
                 1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
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    1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
    2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
    2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
    2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
    2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
    2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
    2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
    2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
    2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
    2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
    2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
    2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
    2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
    3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

 Max.Eff.Inten.(mm/hr)=     119.72        102.72
            over (min)          5.00         10.00
 Storage Coeff.  (min)=         1.71 (ii)     6.43 (ii)
 Unit Hyd. Tpeak (min)=         5.00         10.00
 Unit Hyd. peak  (cms)=         0.32          0.14
                                                       *TOTALS*
 PEAK FLOW       (cms)=         0.12          0.03        0.155 (iii)
 TIME TO PEAK    (hrs)=         6.00          6.00         6.00
 RUNOFF VOLUME    (mm)=        89.70         66.45        83.65
 TOTAL RAINFALL   (mm)=        90.70         90.70        90.70
 RUNOFF COEFFICIENT  =          0.99          0.73         0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 1101)|   Area    (ha)=   0.91
|ID= 1 DT= 5.0 min |   Total Imp(%)=  55.00   Dir. Conn.(%)=  55.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
 Surface Area     (ha)=       0.50          0.41
 Dep. Storage     (mm)=       1.00          1.00
 Average Slope     (%)=       1.00          2.00
 Length            (m)=      77.89         40.00
 Mannings n          =       0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                     ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
      hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
    0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
    0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
    0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
    0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
    0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
    0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
    0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
    0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
    0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
    0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
    0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
    1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
    1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
    1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
    1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
    1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
    1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
    1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
    1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
    1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
    1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
    1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
    1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
    2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
    2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
    2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
    2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
    2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
    2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
    2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
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    2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
    2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
    2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
    2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
    2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
    3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

 Max.Eff.Inten.(mm/hr)=     119.72        102.72
            over (min)          5.00         10.00
 Storage Coeff.  (min)=         2.05 (ii)     9.68 (ii)
 Unit Hyd. Tpeak (min)=         5.00         10.00
 Unit Hyd. peak  (cms)=         0.31          0.11
                                                       *TOTALS*
 PEAK FLOW       (cms)=         0.17          0.09        0.255 (iii)
 TIME TO PEAK    (hrs)=         6.00          6.00         6.00
 RUNOFF VOLUME    (mm)=        89.70         66.45        79.23
 TOTAL RAINFALL   (mm)=        90.70         90.70        90.70
 RUNOFF COEFFICIENT  =          0.99          0.73         0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 1102)|   Area    (ha)=   0.88
|ID= 1 DT= 5.0 min |   Total Imp(%)=  72.00   Dir. Conn.(%)=  72.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
 Surface Area     (ha)=       0.63          0.25
 Dep. Storage     (mm)=       1.00          1.00
 Average Slope     (%)=       1.00          2.00
 Length            (m)=      76.59         40.00
 Mannings n          =       0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                     ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
      hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
    0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
    0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
    0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
    0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
    0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
    0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
    0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
    0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
    0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
    0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
    0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
    1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
    1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
    1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
    1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
    1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
    1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
    1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
    1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
    1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
    1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
    1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
    1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
    2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
    2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
    2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
    2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
    2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
    2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
    2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
    2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
    2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
    2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
    2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
    2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
    3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

 Max.Eff.Inten.(mm/hr)=     119.72        102.72
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            over (min)          5.00         10.00
 Storage Coeff.  (min)=         2.03 (ii)     6.95 (ii)
 Unit Hyd. Tpeak (min)=         5.00         10.00
 Unit Hyd. peak  (cms)=         0.31          0.14
                                                       *TOTALS*
 PEAK FLOW       (cms)=         0.21          0.06        0.270 (iii)
 TIME TO PEAK    (hrs)=         6.00          6.00         6.00
 RUNOFF VOLUME    (mm)=        89.70         66.45        83.19
 TOTAL RAINFALL   (mm)=        90.70         90.70        90.70
 RUNOFF COEFFICIENT  =          0.99          0.73         0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 1111)|   Area    (ha)=   1.06
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
 Surface Area     (ha)=       0.63          0.43
 Dep. Storage     (mm)=       1.00          1.00
 Average Slope     (%)=       1.00          2.00
 Length            (m)=      84.06         40.00
 Mannings n          =       0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                     ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
      hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
    0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
    0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
    0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
    0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
    0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
    0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
    0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
    0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
    0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
    0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
    0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
    1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
    1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
    1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
    1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
    1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
    1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
    1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
    1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
    1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
    1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
    1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
    1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
    2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
    2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
    2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
    2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
    2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
    2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
    2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
    2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
    2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
    2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
    2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
    2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
    3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

 Max.Eff.Inten.(mm/hr)=     119.72        102.72
            over (min)          5.00         10.00
 Storage Coeff.  (min)=         2.14 (ii)     9.77 (ii)
 Unit Hyd. Tpeak (min)=         5.00         10.00
 Unit Hyd. peak  (cms)=         0.31          0.11
                                                       *TOTALS*
 PEAK FLOW       (cms)=         0.21          0.09        0.302 (iii)
 TIME TO PEAK    (hrs)=         6.00          6.00         6.00
 RUNOFF VOLUME    (mm)=        89.70         66.45        80.16
```

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 TOTAL RAINFALL   (mm)=        90.70         90.70        90.70
 RUNOFF COEFFICIENT  =          0.99          0.73         0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 1112)|   Area    (ha)=   0.97
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
 Surface Area     (ha)=       0.76          0.21
 Dep. Storage     (mm)=       1.00          1.00
 Average Slope     (%)=       1.00          2.00
 Length            (m)=      80.42         40.00
 Mannings n          =       0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                     ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
      hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
    0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
    0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
    0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
    0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
    0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
    0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
    0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
    0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
    0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
    0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
    0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
    1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
    1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
    1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
    1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
    1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
    1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
    1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
    1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
    1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
    1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
    1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
    1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
    2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
    2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
    2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
    2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
    2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
    2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
    2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
    2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
    2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
    2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
    2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
    2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
    3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

 Max.Eff.Inten.(mm/hr)=     119.72        102.72
            over (min)          5.00         10.00
 Storage Coeff.  (min)=         2.09 (ii)     6.41 (ii)
 Unit Hyd. Tpeak (min)=         5.00         10.00
 Unit Hyd. peak  (cms)=         0.31          0.14
                                                       *TOTALS*
 PEAK FLOW       (cms)=         0.25          0.05        0.304 (iii)
 TIME TO PEAK    (hrs)=         6.00          6.00         6.00
 RUNOFF VOLUME    (mm)=        89.70         66.45        84.58
 TOTAL RAINFALL   (mm)=        90.70         90.70        90.70
 RUNOFF COEFFICIENT  =          0.99          0.73         0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
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```
        THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 1122)|   Area    (ha)=   1.22
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.00   Dir. Conn.(%)=  69.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.84          0.38
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       90.18         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08   3.17
                0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17   3.17
                0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25   3.17
                0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33   3.17
                0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42   3.17
                0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50   3.17
                0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58   3.17
                0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67   3.17
                0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75   3.17
                0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83   3.17
                0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92   3.17
                1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00   3.17
                1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08   1.81
                1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17   1.81
                1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25   1.81
                1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33   1.81
                1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42   1.81
                1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50   1.81
                1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58   1.81
                1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67   1.81
                1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75   1.81
                1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83   1.81
                1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92   1.81
                2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00   1.81
                2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08   1.81
                2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17   1.81
                2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25   1.81
                2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33   1.81
                2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42   1.81
                2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50   1.81
                2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58   1.81
                2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67   1.81
                2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75   1.81
                2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83   1.81
                2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92   1.81
                3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00   1.81

     Max.Eff.Inten.(mm/hr)=      119.72        102.72
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         2.23 (ii)     9.87 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.30          0.11
                                                             *TOTALS*
     PEAK FLOW        (cms)=        0.28          0.08         0.361 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00          6.00
     RUNOFF VOLUME     (mm)=       89.70         66.45         82.49
     TOTAL RAINFALL    (mm)=       90.70         90.70         90.70
     RUNOFF COEFFICIENT   =         0.99          0.73          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 1121)|   Area    (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.00   Dir. Conn.(%)=  68.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.82          0.39
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       89.81         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08   3.17
                0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17   3.17
                0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25   3.17
                0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33   3.17
                0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42   3.17
                0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50   3.17
                0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58   3.17
                0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67   3.17
                0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75   3.17
                0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83   3.17
                0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92   3.17
                1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00   3.17
                1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08   1.81
                1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17   1.81
                1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25   1.81
                1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33   1.81
                1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42   1.81
                1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50   1.81
                1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58   1.81
                1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67   1.81
                1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75   1.81
                1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83   1.81
                1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92   1.81
                2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00   1.81
                2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08   1.81
                2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17   1.81
                2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25   1.81
                2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33   1.81
                2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42   1.81
                2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50   1.81
                2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58   1.81
                2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67   1.81
                2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75   1.81
                2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83   1.81
                2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92   1.81
                3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00   1.81

     Max.Eff.Inten.(mm/hr)=      119.72        102.72
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         2.23 (ii)     9.86 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.30          0.11
                                                             *TOTALS*
     PEAK FLOW        (cms)=        0.27          0.08         0.357 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00          6.00
     RUNOFF VOLUME     (mm)=       89.70         66.45         82.25
     TOTAL RAINFALL    (mm)=       90.70         90.70         90.70
     RUNOFF COEFFICIENT   =         0.99          0.73          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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================================================================================

       V    V   I    SSSSS  U    U    A     L                (v 6.1.2002)
       V    V   I    SS     U    U   A A    L
        V  V    I     SS    U    U  AAAAA   L
        V  V    I      SS   U    U  A   A   L
         VV     I    SSSSS  UUUUU   A   A   LLLLL

        OOO    TTTTT  TTTTT  H    H  Y    Y  M    M   OOO      TM
       O   O     T      T    H    H   Y Y    MM MM   O   O
       O   O     T      T    H    H    Y     M    M  O   O
        OOO      T      T    H    H    Y     M    M   OOO
```



```
                     *****  D E T A I L E D    O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\18f25aa3
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\18f25aa3


DATE: 05-18-2022                             TIME: 12:41:46

USER:



COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------------------------
  **************************************************
  ** SIMULATION : Run 17                          **
  **************************************************


--------------------
|    READ STORM      |     Filename: C:\Users\caef070146\AppD
|                    |               ata\Local\Temp\
|                    |               b414f864-f56d-471c-a2fc-7a8c6cfa5585\9894c1dc
| Ptotal=101.70 mm |     Comments: 50-Yr,12-hr SCS, City of Barrie
--------------------
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.25    2.54 |  3.25    4.07 |  6.25   18.31 |  9.25   3.56
                 0.50    2.54 |  3.50    4.07 |  6.50   18.31 |  9.50   3.56
                 0.75    2.54 |  3.75    4.07 |  6.75    8.14 |  9.75   3.56
                 1.00    2.54 |  4.00    4.07 |  7.00    8.14 | 10.00   3.56
                 1.25    2.54 |  4.25    6.10 |  7.25    6.10 | 10.25   2.03
                 1.50    2.54 |  4.50    6.10 |  7.50    6.10 | 10.50   2.03
                 1.75    2.54 |  4.75    8.14 |  7.75    6.10 | 10.75   2.03
                 2.00    2.54 |  5.00    8.14 |  8.00    6.10 | 11.00   2.03
                 2.25    3.05 |  5.25   12.20 |  8.25    3.56 | 11.25   2.03
                 2.50    3.05 |  5.50   12.20 |  8.50    3.56 | 11.50   2.03
                 2.75    3.05 |  5.75   48.82 |  8.75    3.56 | 11.75   2.03
                 3.00    3.05 |  6.00  134.24 |  9.00    3.56 | 12.00   2.03

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| CALIB              |
| STANDHYD ( 10011)|   Area    (ha)=   0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.17          0.04
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       37.42         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08   3.56
                0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17   3.56
                0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25   3.56
                0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33   3.56
                0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42   3.56
                0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50   3.56
                0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58   3.56
                0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67   3.56
                0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75   3.56
                0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83   3.56
                0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92   3.56
                1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00   3.56
                1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08   2.03
                1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17   2.03
                1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25   2.03
                1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33   2.03
                1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42   2.03
                1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50   2.03
                1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58   2.03
                1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67   2.03
                1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75   2.03
                1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83   2.03
                1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92   2.03
                2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00   2.03
                2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08   2.03
                2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17   2.03
                2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25   2.03
                2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33   2.03
                2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42   2.03
                2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50   2.03
                2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58   2.03
                2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67   2.03
                2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75   2.03
                2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83   2.03
                2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92   2.03
                3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00   2.03

     Max.Eff.Inten.(mm/hr)=      134.24        117.80
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         1.26 (ii)     5.30 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.33          0.16
                                                             *TOTALS*
     PEAK FLOW        (cms)=        0.06          0.01         0.075 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00          6.00
     RUNOFF VOLUME     (mm)=      100.70         76.77         95.66
     TOTAL RAINFALL    (mm)=      101.70        101.70        101.70
     RUNOFF COEFFICIENT   =         0.99          0.75          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10022)|   Area    (ha)=   0.83
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.00   Dir. Conn.(%)=  75.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.62          0.21
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       74.39         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08   3.56
                0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17   3.56
                0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25   3.56
                0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33   3.56
                0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42   3.56
                0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50   3.56
                0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58   3.56
                0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67   3.56
                0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75   3.56
                0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83   3.56
                0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92   3.56
                1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00   3.56
                1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08   2.03
                1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17   2.03
                1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25   2.03
                1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33   2.03
                1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42   2.03
                1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50   2.03
                1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58   2.03
                1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67   2.03
                1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75   2.03
                1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83   2.03
                1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92   2.03
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          2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
          2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
          2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
          2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
          2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
          2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
          2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
          2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
          2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
          2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
          2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
          2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
          3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.90 (ii)     6.32 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.15
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.23          0.06          0.291 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=     100.70         76.77         94.71
     TOTAL RAINFALL   (mm)=     101.70        101.70        101.70
     RUNOFF COEFFICIENT   =       0.99          0.75          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10021)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  71.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.52          0.21
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     69.76         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
           TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
            hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
          0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
          0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
          0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
          0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
          0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
          0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
          0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
          0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
          0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
          0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
          0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
          1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
          1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
          1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
          1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
          1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
          1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
          1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
          1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
          1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
          1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
          1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
          1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
          2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
          2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
          2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
          2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
          2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
          2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
          2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
          2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
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          2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
          2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
          2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
          2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
          3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.83 (ii)     6.62 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.14
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.19          0.06          0.253 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=     100.70         76.77         93.75
     TOTAL RAINFALL   (mm)=     101.70        101.70        101.70
     RUNOFF COEFFICIENT   =       0.99          0.75          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10031)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  66.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.25          0.13
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     50.33         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
           TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
            hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
          0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
          0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
          0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
          0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
          0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
          0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
          0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
          0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
          0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
          0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
          0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
          1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
          1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
          1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
          1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
          1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
          1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
          1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
          1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
          1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
          1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
          1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
          1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
          2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
          2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
          2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
          2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
          2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
          2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
          2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
          2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
          2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
          2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
          2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
          2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
          3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00         10.00
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     Storage Coeff.  (min)=       1.50 (ii)     8.73 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.12
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.03          0.127 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=     100.70         76.77         92.55
     TOTAL RAINFALL   (mm)=     101.70        101.70        101.70
     RUNOFF COEFFICIENT   =       0.99          0.75          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10032)|   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.31          0.08
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     50.99         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
           TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
            hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
          0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
          0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
          0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
          0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
          0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
          0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
          0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
          0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
          0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
          0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
          0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
          1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
          1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
          1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
          1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
          1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
          1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
          1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
          1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
          1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
          1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
          1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
          1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
          2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
          2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
          2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
          2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
          2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
          2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
          2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
          2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
          2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
          2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
          2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
          2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
          3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.52 (ii)     5.55 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.16
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.11          0.02          0.139 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=     100.70         76.77         95.67
     TOTAL RAINFALL   (mm)=     101.70        101.70        101.70
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     RUNOFF COEFFICIENT   =       0.99          0.75          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.00   Dir. Conn.(%)=  69.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.24          0.11
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     48.30         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
           TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
            hrs    mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
          0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
          0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
          0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
          0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
          0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
          0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
          0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
          0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
          0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
          0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
          0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
          1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
          1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
          1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
          1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
          1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
          1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
          1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
          1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
          1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
          1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
          1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
          1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
          2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
          2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
          2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
          2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
          2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
          2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
          2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
          2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
          2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
          2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
          2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
          2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
          3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.47 (ii)     6.45 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.14
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.03          0.121 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=     100.70         76.77         93.27
     TOTAL RAINFALL   (mm)=     101.70        101.70        101.70
     RUNOFF COEFFICIENT   =       0.99          0.75          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
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     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10042)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.28          0.10
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     50.33         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08   3.56
            0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17   3.56
            0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25   3.56
            0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33   3.56
            0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42   3.56
            0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50   3.56
            0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58   3.56
            0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67   3.56
            0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75   3.56
            0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83   3.56
            0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92   3.56
            1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00   3.56
            1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08   2.03
            1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17   2.03
            1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25   2.03
            1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33   2.03
            1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42   2.03
            1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50   2.03
            1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58   2.03
            1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67   2.03
            1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75   2.03
            1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83   2.03
            1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92   2.03
            2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00   2.03
            2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08   2.03
            2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17   2.03
            2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25   2.03
            2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33   2.03
            2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42   2.03
            2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50   2.03
            2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58   2.03
            2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67   2.03
            2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75   2.03
            2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83   2.03
            2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92   2.03
            3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00   2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.50 (ii)     6.02 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.15
                                                         *TOTALS*
     PEAK FLOW        (cms)=      0.10          0.03         0.133 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00          6.00
     RUNOFF VOLUME     (mm)=    100.70         76.77         94.47
     TOTAL RAINFALL    (mm)=    101.70        101.70        101.70
     RUNOFF COEFFICIENT   =       0.99          0.75          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10012)|   Area    (ha)=   0.23
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
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                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.18          0.05
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     39.16         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08   3.56
            0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17   3.56
            0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25   3.56
            0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33   3.56
            0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42   3.56
            0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50   3.56
            0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58   3.56
            0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67   3.56
            0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75   3.56
            0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83   3.56
            0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92   3.56
            1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00   3.56
            1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08   2.03
            1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17   2.03
            1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25   2.03
            1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33   2.03
            1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42   2.03
            1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50   2.03
            1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58   2.03
            1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67   2.03
            1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75   2.03
            1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83   2.03
            1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92   2.03
            2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00   2.03
            2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08   2.03
            2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17   2.03
            2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25   2.03
            2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33   2.03
            2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42   2.03
            2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50   2.03
            2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58   2.03
            2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67   2.03
            2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75   2.03
            2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83   2.03
            2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92   2.03
            3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00   2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.29 (ii)     5.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.16
                                                         *TOTALS*
     PEAK FLOW        (cms)=      0.07          0.01         0.082 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00          6.00
     RUNOFF VOLUME     (mm)=    100.70         76.77         95.42
     TOTAL RAINFALL    (mm)=    101.70        101.70        101.70
     RUNOFF COEFFICIENT   =       0.99          0.75          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10051)|   Area    (ha)=   0.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  66.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.24          0.13
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     49.67         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08   3.56
            0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17   3.56
            0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25   3.56
            0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33   3.56
            0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42   3.56
            0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50   3.56
            0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58   3.56
            0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67   3.56
            0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75   3.56
            0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83   3.56
            0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92   3.56
            1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00   3.56
            1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08   2.03
            1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17   2.03
            1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25   2.03
            1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33   2.03
            1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42   2.03
            1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50   2.03
            1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58   2.03
            1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67   2.03
            1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75   2.03
            1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83   2.03
            1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92   2.03
            2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00   2.03
            2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08   2.03
            2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17   2.03
            2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25   2.03
            2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33   2.03
            2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42   2.03
            2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50   2.03
            2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58   2.03
            2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67   2.03
            2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75   2.03
            2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83   2.03
            2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92   2.03
            3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00   2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.49 (ii)     8.72 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.12
                                                         *TOTALS*
     PEAK FLOW        (cms)=      0.09          0.03         0.124 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00          6.00
     RUNOFF VOLUME     (mm)=    100.70         76.77         92.54
     TOTAL RAINFALL    (mm)=    101.70        101.70        101.70
     RUNOFF COEFFICIENT   =       0.99          0.75          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10052)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  62.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.22          0.14
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     48.99         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08   3.56
            0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17   3.56
            0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25   3.56
            0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33   3.56
            0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42   3.56
            0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50   3.56
            0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58   3.56
            0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67   3.56
            0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75   3.56
            0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83   3.56
            0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92   3.56
            1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00   3.56
            1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08   2.03
            1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17   2.03
            1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25   2.03
            1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33   2.03
            1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42   2.03
            1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50   2.03
            1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58   2.03
            1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67   2.03
            1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75   2.03
            1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83   2.03
            1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92   2.03
            2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00   2.03
            2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08   2.03
            2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17   2.03
            2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25   2.03
            2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33   2.03
            2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42   2.03
            2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50   2.03
            2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58   2.03
            2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67   2.03
            2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75   2.03
            2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83   2.03
            2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92   2.03
            3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00   2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.48 (ii)     8.71 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.12
                                                         *TOTALS*
     PEAK FLOW        (cms)=      0.08          0.04         0.119 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00          6.00
     RUNOFF VOLUME     (mm)=    100.70         76.77         91.59
     TOTAL RAINFALL    (mm)=    101.70        101.70        101.70
     RUNOFF COEFFICIENT   =       0.99          0.75          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10062)|   Area    (ha)=   0.66
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  62.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.41          0.25
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     66.33         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08   3.56
            0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17   3.56
            0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25   3.56
            0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33   3.56
            0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42   3.56
            0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50   3.56
            0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58   3.56
            0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67   3.56
            0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75   3.56
            0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83   3.56
            0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92   3.56
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            1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
            1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
            1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
            1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
            1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
            1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
            1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
            1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
            1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
            1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
            1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
            1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
            2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
            2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
            2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
            2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
            2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
            2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
            2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
            2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
            2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
            2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
            2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
            2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
            3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
               over (min)        5.00         10.00
     Storage Coeff.  (min)=      1.78 (ii)     9.00 (ii)
     Unit Hyd. Tpeak (min)=      5.00         10.00
     Unit Hyd. peak  (cms)=      0.32          0.12
                                                         *TOTALS*
     PEAK FLOW       (cms)=      0.15          0.06        0.217 (iii)
     TIME TO PEAK    (hrs)=      6.00          6.00         6.00
     RUNOFF VOLUME    (mm)=    100.70         76.77        91.60
     TOTAL RAINFALL   (mm)=    101.70        101.70       101.70
     RUNOFF COEFFICIENT   =      0.99          0.75         0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  65.00
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                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.42          0.23
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     65.83         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN | TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |  hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
            0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
            0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
            0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
            0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
            0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
            0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
            0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
            0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
            0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
            0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
            1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
            1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
            1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
            1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
            1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
            1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
            1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
            1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
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            1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
            1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
            1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
            1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
            2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
            2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
            2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
            2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
            2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
            2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
            2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
            2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
            2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
            2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
            2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
            2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
            3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
               over (min)        5.00         10.00
     Storage Coeff.  (min)=      1.77 (ii)     8.99 (ii)
     Unit Hyd. Tpeak (min)=      5.00         10.00
     Unit Hyd. peak  (cms)=      0.32          0.12
                                                         *TOTALS*
     PEAK FLOW       (cms)=      0.16          0.06        0.216 (iii)
     TIME TO PEAK    (hrs)=      6.00          6.00         6.00
     RUNOFF VOLUME    (mm)=    100.70         76.77        92.32
     TOTAL RAINFALL   (mm)=    101.70        101.70       101.70
     RUNOFF COEFFICIENT   =      0.99          0.75         0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10072)|   Area    (ha)=   0.74
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  71.00
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                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.53          0.21
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     70.24         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN | TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |  hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
            0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
            0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
            0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
            0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
            0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
            0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
            0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
            0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
            0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
            0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
            1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
            1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
            1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
            1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
            1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
            1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
            1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
            1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
            1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
            1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
            1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
            1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
            2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
            2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
            2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
            2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
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            2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
            2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
            2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
            2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
            2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
            2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
            2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
            2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
            3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
               over (min)        5.00         10.00
     Storage Coeff.  (min)=      1.84 (ii)     6.63 (ii)
     Unit Hyd. Tpeak (min)=      5.00         10.00
     Unit Hyd. peak  (cms)=      0.32          0.14
                                                         *TOTALS*
     PEAK FLOW       (cms)=      0.20          0.06        0.256 (iii)
     TIME TO PEAK    (hrs)=      6.00          6.00         6.00
     RUNOFF VOLUME    (mm)=    100.70         76.77        93.75
     TOTAL RAINFALL   (mm)=    101.70        101.70       101.70
     RUNOFF COEFFICIENT   =      0.99          0.75         0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10071)|   Area    (ha)=   0.72
|ID= 1 DT= 5.0 min |   Total Imp(%)=  60.00   Dir. Conn.(%)=  60.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.43          0.29
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     69.28         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN | TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |  hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
            0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
            0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
            0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
            0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
            0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
            0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
            0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
            0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
            0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
            0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
            1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
            1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
            1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
            1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
            1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
            1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
            1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
            1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
            1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
            1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
            1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
            1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
            2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
            2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
            2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
            2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
            2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
            2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
            2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
            2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
            2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
            2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
            2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
            2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
```

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            3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
               over (min)        5.00         10.00
     Storage Coeff.  (min)=      1.82 (ii)     9.05 (ii)
     Unit Hyd. Tpeak (min)=      5.00         10.00
     Unit Hyd. peak  (cms)=      0.32          0.12
                                                         *TOTALS*
     PEAK FLOW       (cms)=      0.16          0.07        0.235 (iii)
     TIME TO PEAK    (hrs)=      6.00          6.00         6.00
     RUNOFF VOLUME    (mm)=    100.70         76.77        91.12
     TOTAL RAINFALL   (mm)=    101.70        101.70       101.70
     RUNOFF COEFFICIENT   =      0.99          0.75         0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10081)|   Area    (ha)=   0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  52.00   Dir. Conn.(%)=  52.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.11          0.10
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     37.42         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN | TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |  hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
            0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
            0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
            0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
            0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
            0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
            0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
            0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
            0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
            0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
            0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
            1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
            1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
            1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
            1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
            1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
            1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
            1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
            1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
            1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
            1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
            1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
            1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
            2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
            2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
            2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
            2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
            2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
            2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
            2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
            2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
            2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
            2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
            2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
            2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
            3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
               over (min)        5.00         10.00
     Storage Coeff.  (min)=      1.26 (ii)     8.48 (ii)
     Unit Hyd. Tpeak (min)=      5.00         10.00
     Unit Hyd. peak  (cms)=      0.33          0.12
                                                         *TOTALS*
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     PEAK FLOW        (cms)=        0.04          0.03          0.067 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      100.70         76.77          89.19
     TOTAL RAINFALL    (mm)=      101.70        101.70         101.70
     RUNOFF COEFFICIENT   =         0.99          0.75           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10082)|   Area    (ha)=   0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.18          0.03
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       37.42         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
               0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
               0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
               0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
               0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
               0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
               0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
               0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
               0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
               0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
               0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
               0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
               1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
               1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
               1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
               1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
               1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
               1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
               1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
               1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
               1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
               1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
               1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
               1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
               2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
               2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
               2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
               2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
               2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
               2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
               2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
               2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
               2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
               2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
               2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
               2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
               3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=      134.24        117.80
                over (min)          5.00          5.00
     Storage Coeff.  (min)=         1.26 (ii)     4.46 (ii)
     Unit Hyd. Tpeak (min)=         5.00          5.00
     Unit Hyd. peak  (cms)=         0.33          0.23
                                                              *TOTALS*
     PEAK FLOW        (cms)=        0.07          0.01          0.077 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      100.70         76.77          97.58
     TOTAL RAINFALL    (mm)=      101.70        101.70         101.70
     RUNOFF COEFFICIENT   =         0.99          0.75           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.51          0.12
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       64.81         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
               0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
               0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
               0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
               0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
               0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
               0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
               0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
               0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
               0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
               0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
               0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
               1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
               1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
               1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
               1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
               1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
               1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
               1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
               1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
               1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
               1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
               1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
               1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
               2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
               2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
               2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
               2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
               2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
               2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
               2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
               2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
               2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
               2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
               2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
               2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
               3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=      134.24        117.80
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         1.75 (ii)     5.59 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.32          0.16
                                                              *TOTALS*
     PEAK FLOW        (cms)=        0.19          0.03          0.225 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      100.70         76.77          96.15
     TOTAL RAINFALL    (mm)=      101.70        101.70         101.70
     RUNOFF COEFFICIENT   =         0.99          0.75           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10091)|   Area    (ha)=   0.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.37          0.13
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       57.74         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
               0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
               0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
               0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
               0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
               0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
               0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
               0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
               0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
               0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
               0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
               0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
               1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
               1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
               1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
               1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
               1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
               1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
               1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
               1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
               1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
               1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
               1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
               1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
               2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
               2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
               2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
               2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
               2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
               2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
               2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
               2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
               2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
               2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
               2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
               2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
               3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=      134.24        117.80
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         1.63 (ii)     6.15 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.32          0.15
                                                              *TOTALS*
     PEAK FLOW        (cms)=        0.14          0.04          0.175 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      100.70         76.77          94.47
     TOTAL RAINFALL    (mm)=      101.70        101.70         101.70
     RUNOFF COEFFICIENT   =         0.99          0.75           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  1101)|   Area    (ha)=   0.91
|ID= 1 DT= 5.0 min |   Total Imp(%)=  55.00   Dir. Conn.(%)=  55.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.50          0.41
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       77.89         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
               0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
               0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
               0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
               0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
               0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
               0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
               0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
               0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
               0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
               0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
               0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
               1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
               1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
               1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
               1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
               1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
               1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
               1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
               1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
               1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
               1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
               1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
               1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
               2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
               2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
               2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
               2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
               2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
               2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
               2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
               2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
               2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
               2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
               2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
               2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
               3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=      134.24        117.80
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         1.95 (ii)     9.18 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.31          0.12
                                                              *TOTALS*
     PEAK FLOW        (cms)=        0.19          0.10          0.291 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      100.70         76.77          89.92
     TOTAL RAINFALL    (mm)=      101.70        101.70         101.70
     RUNOFF COEFFICIENT   =         0.99          0.75           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  1102)|   Area    (ha)=   0.88
|ID= 1 DT= 5.0 min |   Total Imp(%)=  72.00   Dir. Conn.(%)=  72.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.63          0.25
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       76.59         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
```

```
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
  0.083   2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
  0.167   2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
  0.250   2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
  0.333   2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
  0.417   2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
  0.500   2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
  0.583   2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
  0.667   2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
  0.750   2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
  0.833   2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
  0.917   2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
  1.000   2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
  1.083   2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
  1.167   2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
  1.250   2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
  1.333   2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
  1.417   2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
  1.500   2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
  1.583   2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
  1.667   2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
  1.750   2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
  1.833   2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
  1.917   2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
  2.000   2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
  2.083   3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
  2.167   3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
  2.250   3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
  2.333   3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
  2.417   3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
  2.500   3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
  2.583   3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
  2.667   3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
  2.750   3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
  2.833   3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
  2.917   3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
  3.000   3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

Max.Eff.Inten.(mm/hr)=     134.24       117.80
          over (min)          5.00        10.00
Storage Coeff.  (min)=        1.94 (ii)    6.64 (ii)
Unit Hyd. Tpeak (min)=        5.00        10.00
Unit Hyd. peak  (cms)=        0.31         0.14
                                                     *TOTALS*
PEAK FLOW       (cms)=        0.24         0.07        0.305 (iii)
TIME TO PEAK    (hrs)=        6.00         6.00        6.00
RUNOFF VOLUME    (mm)=      100.70        76.77       94.00
TOTAL RAINFALL   (mm)=      101.70       101.70      101.70
RUNOFF COEFFICIENT   =        0.99         0.75        0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (  1111)|   Area    (ha)=   1.06
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area    (ha)=     0.63         0.43
     Dep. Storage    (mm)=     1.00         1.00
     Average Slope    (%)=     1.00         2.00
     Length           (m)=    84.06        40.00
     Mannings n          =    0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
   TIME   RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs  mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
  0.083   2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
  0.167   2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
  0.250   2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
  0.333   2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
  0.417   2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
  0.500   2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
  0.583   2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
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  0.667   2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
  0.750   2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
  0.833   2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
  0.917   2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
  1.000   2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
  1.083   2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
  1.167   2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
  1.250   2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
  1.333   2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
  1.417   2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
  1.500   2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
  1.583   2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
  1.667   2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
  1.750   2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
  1.833   2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
  1.917   2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
  2.000   2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
  2.083   3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
  2.167   3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
  2.250   3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
  2.333   3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
  2.417   3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
  2.500   3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
  2.583   3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
  2.667   3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
  2.750   3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
  2.833   3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
  2.917   3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
  3.000   3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

Max.Eff.Inten.(mm/hr)=     134.24       117.80
          over (min)          5.00        10.00
Storage Coeff.  (min)=        2.05 (ii)    9.27 (ii)
Unit Hyd. Tpeak (min)=        5.00        10.00
Unit Hyd. peak  (cms)=        0.31         0.12
                                                     *TOTALS*
PEAK FLOW       (cms)=        0.23         0.11        0.343 (iii)
TIME TO PEAK    (hrs)=        6.00         6.00        6.00
RUNOFF VOLUME    (mm)=      100.70        76.77       90.88
TOTAL RAINFALL   (mm)=      101.70       101.70      101.70
RUNOFF COEFFICIENT   =        0.99         0.75        0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  1112)|   Area    (ha)=   0.97
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area    (ha)=     0.76         0.21
     Dep. Storage    (mm)=     1.00         1.00
     Average Slope    (%)=     1.00         2.00
     Length           (m)=    80.42        40.00
     Mannings n          =    0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
   TIME   RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs  mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
  0.083   2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
  0.167   2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
  0.250   2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
  0.333   2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
  0.417   2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
  0.500   2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
  0.583   2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
  0.667   2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
  0.750   2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
  0.833   2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
  0.917   2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
  1.000   2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
  1.083   2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
  1.167   2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
  1.250   2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
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  1.333   2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
  1.417   2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
  1.500   2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
  1.583   2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
  1.667   2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
  1.750   2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
  1.833   2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
  1.917   2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
  2.000   2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
  2.083   3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
  2.167   3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
  2.250   3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
  2.333   3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
  2.417   3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
  2.500   3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
  2.583   3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
  2.667   3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
  2.750   3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
  2.833   3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
  2.917   3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
  3.000   3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

Max.Eff.Inten.(mm/hr)=     134.24       117.80
          over (min)          5.00        10.00
Storage Coeff.  (min)=        1.99 (ii)    6.13 (ii)
Unit Hyd. Tpeak (min)=        5.00        10.00
Unit Hyd. peak  (cms)=        0.31         0.15
                                                     *TOTALS*
PEAK FLOW       (cms)=        0.28         0.06        0.343 (iii)
TIME TO PEAK    (hrs)=        6.00         6.00        6.00
RUNOFF VOLUME    (mm)=      100.70        76.77       95.43
TOTAL RAINFALL   (mm)=      101.70       101.70      101.70
RUNOFF COEFFICIENT   =        0.99         0.75        0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (  1122)|   Area    (ha)=   1.22
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.00   Dir. Conn.(%)=  69.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area    (ha)=     0.84         0.38
     Dep. Storage    (mm)=     1.00         1.00
     Average Slope    (%)=     1.00         2.00
     Length           (m)=    90.18        40.00
     Mannings n          =    0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
   TIME   RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs  mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
  0.083   2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
  0.167   2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
  0.250   2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
  0.333   2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
  0.417   2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
  0.500   2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
  0.583   2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
  0.667   2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
  0.750   2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
  0.833   2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
  0.917   2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
  1.000   2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
  1.083   2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
  1.167   2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
  1.250   2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
  1.333   2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
  1.417   2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
  1.500   2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
  1.583   2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
  1.667   2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
  1.750   2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
  1.833   2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
  1.917   2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
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  2.000   2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
  2.083   3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
  2.167   3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
  2.250   3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
  2.333   3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
  2.417   3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
  2.500   3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
  2.583   3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
  2.667   3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
  2.750   3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
  2.833   3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
  2.917   3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
  3.000   3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

Max.Eff.Inten.(mm/hr)=     134.24       117.80
          over (min)          5.00        10.00
Storage Coeff.  (min)=        2.13 (ii)    7.11 (ii)
Unit Hyd. Tpeak (min)=        5.00        10.00
Unit Hyd. peak  (cms)=        0.31         0.14
                                                     *TOTALS*
PEAK FLOW       (cms)=        0.31         0.10        0.418 (iii)
TIME TO PEAK    (hrs)=        6.00         6.00        6.00
RUNOFF VOLUME    (mm)=      100.70        76.77       93.28
TOTAL RAINFALL   (mm)=      101.70       101.70      101.70
RUNOFF COEFFICIENT   =        0.99         0.75        0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
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| CALIB              |
| STANDHYD (  1121)|   Area    (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.00   Dir. Conn.(%)=  68.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area    (ha)=     0.82         0.39
     Dep. Storage    (mm)=     1.00         1.00
     Average Slope    (%)=     1.00         2.00
     Length           (m)=    89.81        40.00
     Mannings n          =    0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
   TIME   RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs  mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
  0.083   2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
  0.167   2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
  0.250   2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
  0.333   2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
  0.417   2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
  0.500   2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
  0.583   2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
  0.667   2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
  0.750   2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
  0.833   2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
  0.917   2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
  1.000   2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
  1.083   2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
  1.167   2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
  1.250   2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
  1.333   2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
  1.417   2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
  1.500   2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
  1.583   2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
  1.667   2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
  1.750   2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
  1.833   2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
  1.917   2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
  2.000   2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
  2.083   3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
  2.167   3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
  2.250   3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
  2.333   3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
  2.417   3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
  2.500   3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
  2.583   3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
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             2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
             2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
             2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
             2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
             3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.13 (ii)     9.35 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.12
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.31          0.10        0.405 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00         6.00
     RUNOFF VOLUME    (mm)=     100.70         76.77        93.04
     TOTAL RAINFALL   (mm)=     101.70        101.70       101.70
     RUNOFF COEFFICIENT   =       0.99          0.75         0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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=============================================================================================

      V    V   I    SSSSS  U    U    A     L                 (v 6.1.2002)
      V    V   I    SS     U    U   A A    L
       V  V    I     SS    U    U  AAAAA   L
       V  V    I      SS   U    U  A   A   L
        VV     I    SSSSS  UUUUU  A    A   LLLLL

       OOO    TTTTT  TTTTT  H    H  Y    Y  M    M   OOO     TM
      O   O     T      T    H    H   Y Y    MM MM   O   O
      O   O     T      T    H    H    Y     M    M  O   O
       OOO      T      T    H    H    Y     M    M   OOO
Developed and Distributed by Smart City Water Inc
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                    *****  D E T A I L E D    O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\710b9e08
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\710b9e08


DATE: 05-18-2022                        TIME: 12:41:46

USER:



COMMENTS: ____________________________________________________________


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  ***************************************************
  ** SIMULATION : Run 18                          **
  ***************************************************


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|    READ STORM    |    Filename: C:\Users\caef070146\AppD
|                  |              ata\Local\Temp\
|                  |              b414f864-f56d-471c-a2fc-7a8c6cfa5585\13bf36c4
| Ptotal=112.50 mm |    Comments: 100-Yr,12-hr SCS, City of Barrie
--------------------
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.25    2.81 |  3.25    4.50 |  6.25   20.25 |  9.25    3.94
              0.50    2.81 |  3.50    4.50 |  6.50   20.25 |  9.50    3.94
              0.75    2.81 |  3.75    4.50 |  6.75    9.00 |  9.75    3.94
              1.00    2.81 |  4.00    4.50 |  7.00    9.00 | 10.00    3.94
              1.25    2.81 |  4.25    6.75 |  7.25    6.75 | 10.25    2.25
              1.50    2.81 |  4.50    6.75 |  7.50    6.75 | 10.50    2.25
              1.75    2.81 |  4.75    9.00 |  7.75    6.75 | 10.75    2.25
              2.00    2.81 |  5.00    9.00 |  8.00    6.75 | 11.00    2.25
              2.25    3.37 |  5.25   13.50 |  8.25    3.94 | 11.25    2.25
              2.50    3.37 |  5.50   13.50 |  8.50    3.94 | 11.50    2.25
              2.75    3.37 |  5.75   54.00 |  8.75    3.94 | 11.75    2.25
              3.00    3.37 |  6.00  148.50 |  9.00    3.94 | 12.00    2.25

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| CALIB            |
| STANDHYD ( 10011)|   Area    (ha)=   0.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.17          0.04
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      37.42         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.21 (ii)     5.09 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.16
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.07          0.01        0.083 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00         6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00       106.34
     TOTAL RAINFALL   (mm)=     112.50        112.50       112.50
     RUNOFF COEFFICIENT   =       0.99          0.77         0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 10022)|   Area    (ha)=   0.83
|ID= 1 DT= 5.0 min |   Total Imp(%)=  75.00   Dir. Conn.(%)=  75.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62          0.21
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      74.39         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.83 (ii)     6.07 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.26          0.07        0.324 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00         6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00       105.37
     TOTAL RAINFALL   (mm)=     112.50        112.50       112.50
     RUNOFF COEFFICIENT   =       0.99          0.77         0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 10021)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  71.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.52          0.21
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      69.76         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.76 (ii)     6.36 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.21          0.07        0.282 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00         6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00       104.39
     TOTAL RAINFALL   (mm)=     112.50        112.50       112.50
     RUNOFF COEFFICIENT   =       0.99          0.77         0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 10031)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  66.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.25          0.13
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      50.33         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
```

```
  0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
  0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
  0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
  0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
  0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
  0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
  0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
  0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
  0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
  0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
  0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
  1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
  1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
  1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
  1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
  1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
  1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
  1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
  1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
  1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
  1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
  1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
  1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
  2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
  2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
  2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
  2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
  2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
  2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
  2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
  2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
  2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
  2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
  2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
  2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
  3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

Max.Eff.Inten.(mm/hr)=     148.50       132.61
          over (min)        5.00        10.00
Storage Coeff.  (min)=      1.44 (ii)    8.34 (ii)
Unit Hyd. Tpeak (min)=      5.00        10.00
Unit Hyd. peak  (cms)=      0.33         0.13
                                                  *TOTALS*
PEAK FLOW       (cms)=      0.10         0.04      0.142 (iii)
TIME TO PEAK    (hrs)=      6.00         6.00       6.00
RUNOFF VOLUME    (mm)=    111.50        87.00     103.16
TOTAL RAINFALL   (mm)=    112.50       112.50     112.50
RUNOFF COEFFICIENT   =      0.99         0.77       0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 10032) |   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min  |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=      0.31         0.08
    Dep. Storage     (mm)=      1.00         1.00
    Average Slope     (%)=      1.00         2.00
    Length            (m)=     50.99        40.00
    Mannings n          =      0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                      ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
  0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
  0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
  0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
  0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
  0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
  0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
  0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
  0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
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  0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
  0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
  0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
  1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
  1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
  1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
  1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
  1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
  1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
  1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
  1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
  1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
  1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
  1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
  1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
  2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
  2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
  2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
  2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
  2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
  2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
  2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
  2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
  2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
  2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
  2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
  2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
  3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

Max.Eff.Inten.(mm/hr)=     148.50       132.61
          over (min)        5.00        10.00
Storage Coeff.  (min)=      1.46 (ii)    5.33 (ii)
Unit Hyd. Tpeak (min)=      5.00        10.00
Unit Hyd. peak  (cms)=      0.33         0.16
                                                  *TOTALS*
PEAK FLOW       (cms)=      0.13         0.03      0.154 (iii)
TIME TO PEAK    (hrs)=      6.00         6.00       6.00
RUNOFF VOLUME    (mm)=    111.50        87.00     106.35
TOTAL RAINFALL   (mm)=    112.50       112.50     112.50
RUNOFF COEFFICIENT   =      0.99         0.77       0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 10041) |   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min  |   Total Imp(%)=  69.00   Dir. Conn.(%)=  69.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=      0.24         0.11
    Dep. Storage     (mm)=      1.00         1.00
    Average Slope     (%)=      1.00         2.00
    Length            (m)=     48.30        40.00
    Mannings n          =      0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                      ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
  0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
  0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
  0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
  0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
  0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
  0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
  0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
  0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
  0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
  0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
  0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
  1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
  1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
  1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
  1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
  1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
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  1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
  1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
  1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
  1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
  1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
  1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
  1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
  2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
  2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
  2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
  2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
  2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
  2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
  2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
  2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
  2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
  2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
  2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
  2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
  3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

Max.Eff.Inten.(mm/hr)=     148.50       132.61
          over (min)        5.00        10.00
Storage Coeff.  (min)=      1.41 (ii)    6.19 (ii)
Unit Hyd. Tpeak (min)=      5.00        10.00
Unit Hyd. peak  (cms)=      0.33         0.15
                                                  *TOTALS*
PEAK FLOW       (cms)=      0.10         0.03      0.135 (iii)
TIME TO PEAK    (hrs)=      6.00         6.00       6.00
RUNOFF VOLUME    (mm)=    111.50        87.00     103.90
TOTAL RAINFALL   (mm)=    112.50       112.50     112.50
RUNOFF COEFFICIENT   =      0.99         0.77       0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 10042) |   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min  |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=      0.28         0.10
    Dep. Storage     (mm)=      1.00         1.00
    Average Slope     (%)=      1.00         2.00
    Length            (m)=     50.33        40.00
    Mannings n          =      0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                      ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
  0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
  0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
  0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
  0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
  0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
  0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
  0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
  0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
  0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
  0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
  0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
  1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
  1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
  1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
  1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
  1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
  1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
  1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
  1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
  1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
  1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
  1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
  1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
  2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
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  2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
  2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
  2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
  2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
  2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
  2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
  2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
  2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
  2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
  2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
  2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
  3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

Max.Eff.Inten.(mm/hr)=     148.50       132.61
          over (min)        5.00        10.00
Storage Coeff.  (min)=      1.44 (ii)    5.78 (ii)
Unit Hyd. Tpeak (min)=      5.00        10.00
Unit Hyd. peak  (cms)=      0.33         0.15
                                                  *TOTALS*
PEAK FLOW       (cms)=      0.12         0.03      0.148 (iii)
TIME TO PEAK    (hrs)=      6.00         6.00       6.00
RUNOFF VOLUME    (mm)=    111.50        87.00     105.12
TOTAL RAINFALL   (mm)=    112.50       112.50     112.50
RUNOFF COEFFICIENT   =      0.99         0.77       0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 10012) |   Area    (ha)=   0.23
|ID= 1 DT= 5.0 min  |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=      0.18         0.05
    Dep. Storage     (mm)=      1.00         1.00
    Average Slope     (%)=      1.00         2.00
    Length            (m)=     39.16        40.00
    Mannings n          =      0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                      ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
  0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
  0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
  0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
  0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
  0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
  0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
  0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
  0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
  0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
  0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
  0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
  1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
  1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
  1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
  1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
  1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
  1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
  1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
  1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
  1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
  1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
  1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
  1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
  2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
  2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
  2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
  2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
  2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
  2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
  2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
  2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
  2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
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             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       1.24 (ii)     5.21 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.07          0.02          0.091 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00        106.09
     TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
     RUNOFF COEFFICIENT   =       0.99          0.77          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10051)|   Area    (ha)=   0.37
|ID= 1 DT= 5.0 min |   Total Imp(%)=  66.00   Dir. Conn.(%)=  66.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.24          0.13
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      49.67         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       1.43 (ii)     8.32 (ii)
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     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.13
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.10          0.04          0.138 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00        103.16
     TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
     RUNOFF COEFFICIENT   =       0.99          0.77          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10052)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  62.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.22          0.14
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      48.99         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       1.42 (ii)     8.31 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.13
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.04          0.133 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00        102.18
     TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
     RUNOFF COEFFICIENT   =       0.99          0.77          0.91
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***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10062)|   Area    (ha)=   0.66
|ID= 1 DT= 5.0 min |   Total Imp(%)=  62.00   Dir. Conn.(%)=  62.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.41          0.25
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      66.33         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       1.70 (ii)     8.60 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.12
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.17          0.07          0.243 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00        102.18
     TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
     RUNOFF COEFFICIENT   =       0.99          0.77          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB              |
| STANDHYD ( 10061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  65.00   Dir. Conn.(%)=  65.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.42          0.23
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.83         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       1.70 (ii)     8.59 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.12
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.17          0.07          0.241 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00        102.92
     TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
     RUNOFF COEFFICIENT   =       0.99          0.77          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10072)|   Area    (ha)=   0.74
|ID= 1 DT= 5.0 min |   Total Imp(%)=  71.00   Dir. Conn.(%)=  71.00
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                           IMPERVIOUS    PERVIOUS (i)
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     Surface Area     (ha)=        0.53          0.21
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       70.24         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08   3.94
              0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17   3.94
              0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25   3.94
              0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33   3.94
              0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42   3.94
              0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50   3.94
              0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58   3.94
              0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67   3.94
              0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75   3.94
              0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83   3.94
              0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92   3.94
              1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00   3.94
              1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08   2.25
              1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17   2.25
              1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25   2.25
              1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33   2.25
              1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42   2.25
              1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50   2.25
              1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58   2.25
              1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67   2.25
              1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75   2.25
              1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83   2.25
              1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92   2.25
              2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00   2.25
              2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08   2.25
              2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17   2.25
              2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25   2.25
              2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33   2.25
              2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42   2.25
              2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50   2.25
              2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58   2.25
              2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67   2.25
              2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75   2.25
              2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83   2.25
              2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92   2.25
              3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00   2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.76 (ii)     6.37 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.15
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.22          0.07          0.285 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      111.50         87.00         104.39
     TOTAL RAINFALL   (mm)=      112.50        112.50         112.50
     RUNOFF COEFFICIENT   =        0.99          0.77           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10071)|    Area    (ha)=   0.72
|ID= 1 DT= 5.0 min |    Total Imp(%)=  60.00   Dir. Conn.(%)=  60.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.43          0.29
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       69.28         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08   3.94
              0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17   3.94
              0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25   3.94
              0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33   3.94
              0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42   3.94
              0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50   3.94
              0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58   3.94
              0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67   3.94
              0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75   3.94
              0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83   3.94
              0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92   3.94
              1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00   3.94
              1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08   2.25
              1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17   2.25
              1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25   2.25
              1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33   2.25
              1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42   2.25
              1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50   2.25
              1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58   2.25
              1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67   2.25
              1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75   2.25
              1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83   2.25
              1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92   2.25
              2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00   2.25
              2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08   2.25
              2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17   2.25
              2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25   2.25
              2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33   2.25
              2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42   2.25
              2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50   2.25
              2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58   2.25
              2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67   2.25
              2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75   2.25
              2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83   2.25
              2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92   2.25
              3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00   2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.75 (ii)     8.64 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.12
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.18          0.08          0.263 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      111.50         87.00         101.69
     TOTAL RAINFALL   (mm)=      112.50        112.50         112.50
     RUNOFF COEFFICIENT   =        0.99          0.77           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 10081)|    Area    (ha)=   0.21
|ID= 1 DT= 5.0 min |    Total Imp(%)=  52.00   Dir. Conn.(%)=  52.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.11          0.10
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       37.42         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08   3.94
              0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17   3.94
              0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25   3.94
              0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33   3.94
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              0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42   3.94
              0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50   3.94
              0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58   3.94
              0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67   3.94
              0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75   3.94
              0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83   3.94
              0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92   3.94
              1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00   3.94
              1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08   2.25
              1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17   2.25
              1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25   2.25
              1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33   2.25
              1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42   2.25
              1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50   2.25
              1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58   2.25
              1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67   2.25
              1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75   2.25
              1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83   2.25
              1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92   2.25
              2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00   2.25
              2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08   2.25
              2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17   2.25
              2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25   2.25
              2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33   2.25
              2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42   2.25
              2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50   2.25
              2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58   2.25
              2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67   2.25
              2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75   2.25
              2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83   2.25
              2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92   2.25
              3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00   2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.21 (ii)     8.10 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.13
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.05          0.03          0.075 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      111.50         87.00          99.72
     TOTAL RAINFALL   (mm)=      112.50        112.50         112.50
     RUNOFF COEFFICIENT   =        0.99          0.77           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10082)|    Area    (ha)=   0.21
|ID= 1 DT= 5.0 min |    Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.18          0.03
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       37.42         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08   3.94
              0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17   3.94
              0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25   3.94
              0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33   3.94
              0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42   3.94
              0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50   3.94
              0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58   3.94
              0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67   3.94
              0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75   3.94
              0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83   3.94
              0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92   3.94
              1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00   3.94
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              1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08   2.25
              1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17   2.25
              1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25   2.25
              1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33   2.25
              1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42   2.25
              1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50   2.25
              1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58   2.25
              1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67   2.25
              1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75   2.25
              1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83   2.25
              1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92   2.25
              2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00   2.25
              2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08   2.25
              2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17   2.25
              2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25   2.25
              2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33   2.25
              2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42   2.25
              2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50   2.25
              2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58   2.25
              2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67   2.25
              2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75   2.25
              2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83   2.25
              2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92   2.25
              3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00   2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.21 (ii)     4.29 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.23
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.08          0.01          0.085 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      111.50         87.00         108.30
     TOTAL RAINFALL   (mm)=      112.50        112.50         112.50
     RUNOFF COEFFICIENT   =        0.99          0.77           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10092)|    Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |    Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.51          0.12
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       64.81         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08   3.94
              0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17   3.94
              0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25   3.94
              0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33   3.94
              0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42   3.94
              0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50   3.94
              0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58   3.94
              0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67   3.94
              0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75   3.94
              0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83   3.94
              0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92   3.94
              1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00   3.94
              1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08   2.25
              1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17   2.25
              1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25   2.25
              1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33   2.25
              1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42   2.25
              1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50   2.25
              1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58   2.25
              1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67   2.25
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         1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
         1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
         1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
         2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
         2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
         2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
         2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
         2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
         2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
         2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
         2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
         2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
         2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
         2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
         2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
         3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.68 (ii)     5.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.21          0.04        0.250 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00      106.84
     TOTAL RAINFALL   (mm)=     112.50        112.50      112.50
     RUNOFF COEFFICIENT   =       0.99          0.77        0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 10091)|   Area    (ha)=   0.50
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.37         0.13
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     57.74        40.00
     Mannings n           =     0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
         0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
         0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
         0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
         0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
         0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
         1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
         1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
         1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
         1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
         1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
         1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
         1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
         2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
         2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
         2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
         2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
         2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
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         2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
         2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
         2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
         2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
         2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
         2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
         2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
         3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.57 (ii)     5.90 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.15          0.04        0.195 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00      105.13
     TOTAL RAINFALL   (mm)=     112.50        112.50      112.50
     RUNOFF COEFFICIENT   =       0.99          0.77        0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  1101)|   Area    (ha)=   0.91
|ID= 1 DT= 5.0 min |   Total Imp(%)=  55.00   Dir. Conn.(%)=  55.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.50         0.41
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     77.89        40.00
     Mannings n           =     0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
         0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
         0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
         0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
         0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
         0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
         1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
         1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
         1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
         1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
         1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
         1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
         1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
         2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
         2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
         2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
         2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
         2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
         2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
         2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
         2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
         2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
         2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
         2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
         2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
         3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25
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     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.88 (ii)     8.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.12
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.21          0.12        0.326 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00      100.47
     TOTAL RAINFALL   (mm)=     112.50        112.50      112.50
     RUNOFF COEFFICIENT   =       0.99          0.77        0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (  1102)|   Area    (ha)=   0.88
|ID= 1 DT= 5.0 min |   Total Imp(%)=  72.00   Dir. Conn.(%)=  72.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.63         0.25
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     76.59        40.00
     Mannings n           =     0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
         0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
         0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
         0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
         0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
         0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
         1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
         1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
         1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
         1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
         1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
         1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
         1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
         2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
         2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
         2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
         2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
         2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
         2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
         2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
         2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
         2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
         2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
         2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
         2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
         3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.86 (ii)     6.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.26          0.08        0.340 (iii)
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     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00      104.64
     TOTAL RAINFALL   (mm)=     112.50        112.50      112.50
     RUNOFF COEFFICIENT   =       0.99          0.77        0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (  1111)|   Area    (ha)=   1.06
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.63         0.43
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     84.06        40.00
     Mannings n           =     0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
         0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
         0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
         0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
         0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
         0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
         1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
         1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
         1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
         1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
         1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
         1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
         1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
         2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
         2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
         2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
         2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
         2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
         2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
         2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
         2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
         2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
         2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
         2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
         2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
         3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.97 (ii)     8.86 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.12
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.26          0.13        0.385 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00      101.45
     TOTAL RAINFALL   (mm)=     112.50        112.50      112.50
     RUNOFF COEFFICIENT   =       0.99          0.77        0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
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      CN* =  89.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 1112)|   Area    (ha)=   0.97
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.76          0.21
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      80.42         40.00
    Mannings n          =       0.013         0.290

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
            0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
            0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
            0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
            0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
            0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
            0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
            0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
            0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
            0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
            0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
            1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
            1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
            1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
            1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
            1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
            1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
            1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
            1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
            1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
            1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
            1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
            1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
            2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
            2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
            2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
            2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
            2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
            2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
            2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
            2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
            2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
            2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
            2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
            2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
            3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

    Max.Eff.Inten.(mm/hr)=     148.50        132.61
               over (min)        5.00         10.00
    Storage Coeff.  (min)=       1.91 (ii)     5.88 (ii)
    Unit Hyd. Tpeak (min)=       5.00         10.00
    Unit Hyd. peak  (cms)=       0.31          0.15
                                                          *TOTALS*
    PEAK FLOW       (cms)=       0.31          0.07         0.382 (iii)
    TIME TO PEAK    (hrs)=       6.00          6.00          6.00
    RUNOFF VOLUME    (mm)=     111.50         87.00        106.11
    TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
    RUNOFF COEFFICIENT   =       0.99          0.77          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 1122)|   Area    (ha)=   1.22
|ID= 1 DT= 5.0 min |   Total Imp(%)=  69.00   Dir. Conn.(%)=  69.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.84          0.38
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      90.18         40.00
    Mannings n          =       0.013         0.290

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
            0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
            0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
            0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
            0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
            0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
            0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
            0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
            0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
            0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
            0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
            1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
            1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
            1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
            1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
            1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
            1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
            1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
            1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
            1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
            1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
            1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
            1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
            2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
            2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
            2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
            2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
            2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
            2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
            2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
            2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
            2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
            2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
            2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
            2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
            3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

    Max.Eff.Inten.(mm/hr)=     148.50        132.61
               over (min)        5.00         10.00
    Storage Coeff.  (min)=       2.05 (ii)     6.83 (ii)
    Unit Hyd. Tpeak (min)=       5.00         10.00
    Unit Hyd. peak  (cms)=       0.31          0.14
                                                          *TOTALS*
    PEAK FLOW       (cms)=       0.35          0.12         0.466 (iii)
    TIME TO PEAK    (hrs)=       6.00          6.00          6.00
    RUNOFF VOLUME    (mm)=     111.50         87.00        103.90
    TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
    RUNOFF COEFFICIENT   =       0.99          0.77          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 1121)|   Area    (ha)=   1.21
|ID= 1 DT= 5.0 min |   Total Imp(%)=  68.00   Dir. Conn.(%)=  68.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.82          0.39
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      89.81         40.00
    Mannings n          =       0.013         0.290

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
            0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
            0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
            0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
            0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
            0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
            0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
            0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
            0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
            0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
            0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
            1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
            1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
            1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
            1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
            1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
            1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
            1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
            1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
            1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
            1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
            1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
            1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
            2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
            2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
            2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
            2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
            2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
            2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
            2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
            2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
            2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
            2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
            2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
            2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
            3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

    Max.Eff.Inten.(mm/hr)=     148.50        132.61
               over (min)        5.00         10.00
    Storage Coeff.  (min)=       2.04 (ii)     6.92 (ii)
    Unit Hyd. Tpeak (min)=       5.00         10.00
    Unit Hyd. peak  (cms)=       0.31          0.14
                                                          *TOTALS*
    PEAK FLOW       (cms)=       0.34          0.12         0.461 (iii)
    TIME TO PEAK    (hrs)=       6.00          6.00          6.00
    RUNOFF VOLUME    (mm)=     111.50         87.00        103.66
    TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
    RUNOFF COEFFICIENT   =       0.99          0.77          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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 FINISH
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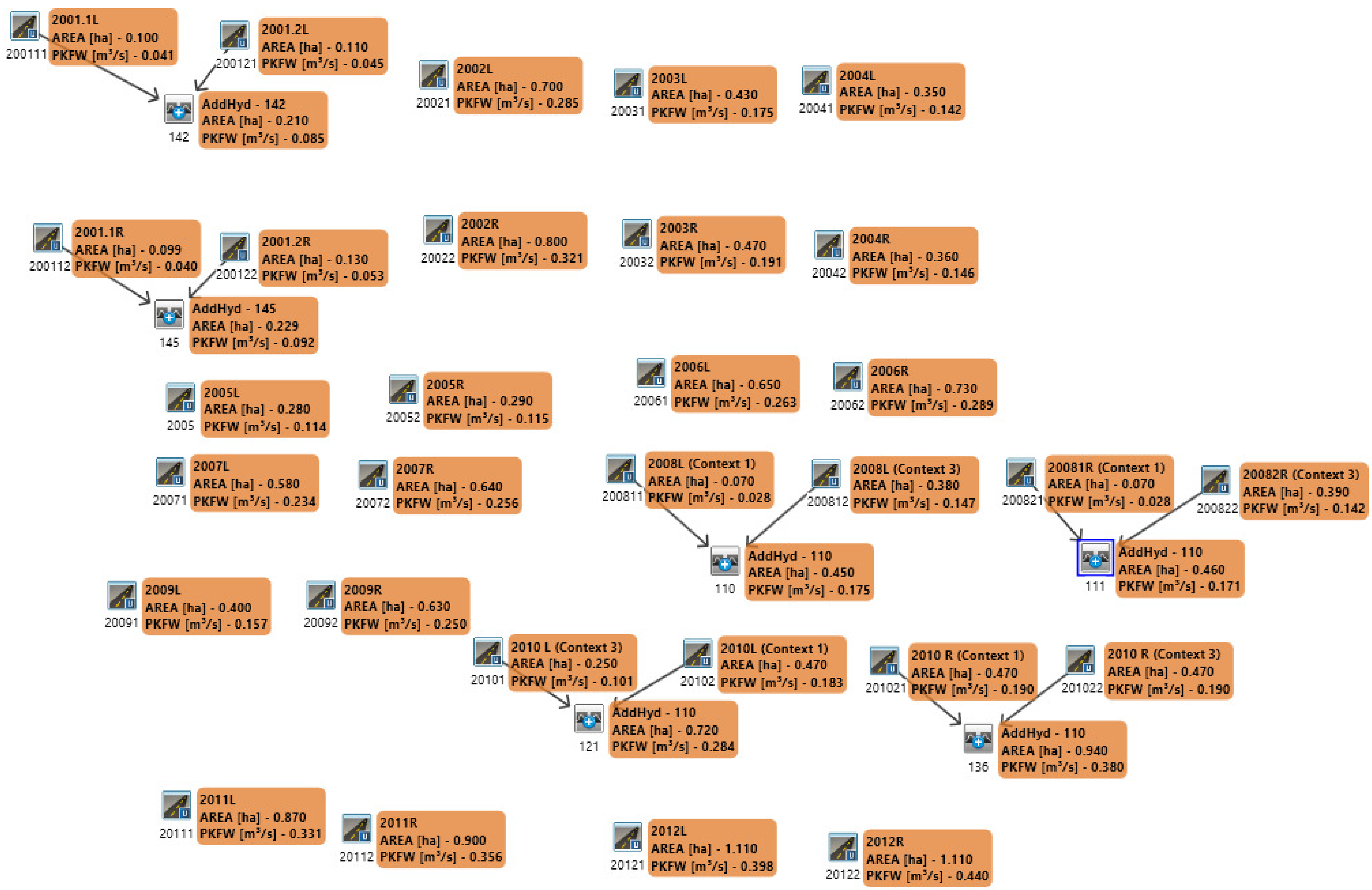
100-yr Post-developmet Roadway Drainge Area Flows (12-hr SCS II)



```
=========================================================================================================

      V    V   I   SSSSS  U   U    A    L              (v 6.1.2002)
      V    V   I   SS     U   U   A A   L
       V  V    I    SS    U   U  AAAAA  L
       V  V    I     SS   U   U  A   A  L
        VV     I   SSSSS  UUUUU  A   A  LLLLL

      OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
     O   O    T      T    H   H   Y Y   MM MM  O   O
     O   O    T      T    H   H    Y    M   M  O   O
      OOO     T      T    H   H    Y    M   M   OOO
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                   ***** D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\4f6f2ffc
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\4f6f2ffc


DATE: 05-18-2022                                TIME: 12:50:56

USER:


COMMENTS: ____________________________________________________________

--------------------------------------------------------------------------------------------------------
  *************************************************
  ** SIMULATION : Run 13                          **
  *************************************************


--------------------
|   READ STORM     |     Filename: C:\Users\caef070146\AppD
|                  |               ata\Local\Temp\
|                  |               a3a8b910-d519-48ad-be84-5b44b6daecc3\39b42806
| Ptotal= 46.70 mm |     Comments: 2-Yr,12-hr SCS, City of Barrie
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    1.17 |  3.25    1.87 |  6.25    8.41 |  9.25    1.63
                0.50    1.17 |  3.50    1.87 |  6.50    8.41 |  9.50    1.63
                0.75    1.17 |  3.75    1.87 |  6.75    3.74 |  9.75    1.63
                1.00    1.17 |  4.00    1.87 |  7.00    3.74 | 10.00    1.63
                1.25    1.17 |  4.25    2.80 |  7.25    2.80 | 10.25    0.93
                1.50    1.17 |  4.50    2.80 |  7.50    2.80 | 10.50    0.93
                1.75    1.17 |  4.75    3.74 |  7.75    2.80 | 10.75    0.93
                2.00    1.17 |  5.00    3.74 |  8.00    2.80 | 11.00    0.93
                2.25    1.40 |  5.25    5.60 |  8.25    1.63 | 11.25    0.93
                2.50    1.40 |  5.50    5.60 |  8.50    1.63 | 11.50    0.93
                2.75    1.40 |  5.75   22.42 |  8.75    1.63 | 11.75    0.93
                3.00    1.40 |  6.00   61.64 |  9.00    1.63 | 12.00    0.93

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--------------------
| CALIB            |
| STANDHYD ( 20022)|   Area    (ha)=   0.80
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.68          0.12
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       73.03         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
               0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
               0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
               0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
               0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
               0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
               0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
               0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
               0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
               0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
               0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
               1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
               1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
               1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
               1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
               1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
               1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
               1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
               1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
               1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
               1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
               1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
               1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
               2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
               2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
               2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
               2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
               2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
               2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
               2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
               2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
               2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
               2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
               2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
               2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
               3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         43.41
               over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.57 (ii)     7.25 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.29          0.14
                                                         *TOTALS*
     PEAK FLOW        (cms)=      0.12          0.01          0.128 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=     45.70         27.09          42.90
     TOTAL RAINFALL    (mm)=     46.70         46.70          46.70
     RUNOFF COEFFICIENT   =       0.98          0.58           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20021)|   Area    (ha)=   0.70
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.62          0.08
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       68.31         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
               0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
               0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
               0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
               0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
               0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
               0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
               0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
               0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
               0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
               0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
               1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
               1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
               1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
               1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
               1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
               1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
               1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
               1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
               1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
               1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
               1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
               1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
               2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
               2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
               2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
               2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
               2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
               2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
               2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
               2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
               2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
               2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
               2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
               2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
               3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         43.41
               over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.47 (ii)     6.52 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.30          0.14
                                                         *TOTALS*
     PEAK FLOW        (cms)=      0.11          0.01          0.114 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=     45.70         27.09          43.65
     TOTAL RAINFALL    (mm)=     46.70         46.70          46.70
     RUNOFF COEFFICIENT   =       0.98          0.58           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20031)|   Area    (ha)=   0.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.39          0.04
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       53.54         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
               0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
               0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
               0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
               0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
               0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
               0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
               0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
               0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
               0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
               0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
               1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
               1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
               1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
               1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
               1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
               1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
               1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
               1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
               1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
               1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
               1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
               1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
               2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
               2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
               2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
               2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
               2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
               2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
               2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
               2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
               2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
               2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
               2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
               2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
               3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         43.41
               over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.13 (ii)     6.02 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                         *TOTALS*
     PEAK FLOW        (cms)=      0.07          0.00          0.071 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=     45.70         27.09          43.83
     TOTAL RAINFALL    (mm)=     46.70         46.70          46.70
     RUNOFF COEFFICIENT   =       0.98          0.58           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20032)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.41          0.06
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       55.98         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
               0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
               0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
               0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
               0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
               0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
               0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
               0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
               0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
               0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
               0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
               1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
               1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
               1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
               1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
               1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
               1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
               1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
               1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
               1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
               1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
               1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
               1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
               2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
               2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
               2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
               2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
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   2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
   2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
   2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
   2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
   2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
   2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
   2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
   2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
   3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         43.41
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.19 (ii)     6.57 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.14
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.07          0.01         0.076 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         43.27
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.31          0.04
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    48.30         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
              0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
              0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
              0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
              0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
              0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
              0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
              0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
              0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
              0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
              0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
              1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
              1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
              1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
              1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
              1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
              1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
              1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
              1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
              1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
              1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
              1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
              1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
              2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
              2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
              2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
              2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
              2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
              2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
              2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
              2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
              2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
              2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
              2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
              2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
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              3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         43.41
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.00 (ii)     6.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.05          0.00         0.057 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         43.65
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20042)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.31          0.05
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    48.99         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
              0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
              0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
              0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
              0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
              0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
              0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
              0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
              0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
              0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
              0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
              1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
              1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
              1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
              1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
              1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
              1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
              1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
              1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
              1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
              1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
              1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
              1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
              2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
              2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
              2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
              2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
              2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
              2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
              2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
              2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
              2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
              2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
              2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
              2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
              3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         43.41
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.02 (ii)     6.70 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.14
                                                         *TOTALS*
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     PEAK FLOW       (cms)=       0.05          0.01         0.058 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         42.90
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20052)|   Area    (ha)=   0.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.23          0.06
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    43.97         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
              0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
              0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
              0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
              0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
              0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
              0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
              0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
              0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
              0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
              0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
              1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
              1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
              1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
              1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
              1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
              1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
              1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
              1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
              1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
              1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
              1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
              1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
              2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
              2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
              2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
              2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
              2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
              2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
              2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
              2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
              2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
              2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
              2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
              2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
              3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       1.89 (ii)    12.87 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.32          0.08
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.04          0.00         0.043 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         41.58
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
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```
      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.58          0.15
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    69.76         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
              0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
              0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
              0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
              0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
              0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
              0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
              0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
              0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
              0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
              0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
              1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
              1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
              1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
              1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
              1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
              1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
              1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
              1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
              1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
              1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
              1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
              1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
              2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
              2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
              2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
              2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
              2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
              2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
              2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
              2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
              2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
              2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
              2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
              2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
              3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       2.50 (ii)    13.47 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.29          0.08
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.10          0.01         0.109 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         41.97
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.55          0.10
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     65.83         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
              0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
              0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
              0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
              0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
              0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
              0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
              0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
              0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
              0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
              0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
              1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
              1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
              1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
              1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
              1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
              1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
              1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
              1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
              1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
              1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
              1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
              1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
              2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
              2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
              2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
              2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
              2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
              2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
              2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
              2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
              2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
              2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
              2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
              2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
              3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=       61.64         43.41
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         2.41 (ii)     7.09 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.30          0.14
                                                           *TOTALS*
     PEAK FLOW       (cms)=         0.09          0.01       0.104 (iii)
     TIME TO PEAK    (hrs)=         6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=        45.70         27.09       42.90
     TOTAL RAINFALL   (mm)=        46.70         46.70       46.70
     RUNOFF COEFFICIENT   =         0.98          0.58        0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
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                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.54          0.10
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     65.32         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
              0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
              0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
              0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
              0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
              0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
              0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
              0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
              0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
              0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
              0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
              1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
              1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
              1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
              1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
              1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
              1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
              1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
              1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
              1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
              1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
              1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
              1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
              2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
              2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
              2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
              2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
              2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
              2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
              2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
              2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
              2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
              2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
              2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
              2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
              3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=       61.64         43.41
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         2.40 (ii)     7.22 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.30          0.14
                                                           *TOTALS*
     PEAK FLOW       (cms)=         0.09          0.01       0.102 (iii)
     TIME TO PEAK    (hrs)=         6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=        45.70         27.09       42.72
     TOTAL RAINFALL   (mm)=        46.70         46.70       46.70
     RUNOFF COEFFICIENT   =         0.98          0.58        0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
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                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.49          0.09
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     62.18         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
              0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
              0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
              0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
              0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
              0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
              0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
              0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
              0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
              0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
              0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
              1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
              1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
              1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
              1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
              1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
              1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
              1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
              1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
              1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
              1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
              1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
              1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
              2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
              2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
              2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
              2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
              2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
              2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
              2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
              2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
              2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
              2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
              2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
              2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
              3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=       61.64         43.41
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         2.33 (ii)     7.01 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.30          0.14
                                                           *TOTALS*
     PEAK FLOW       (cms)=         0.08          0.01       0.093 (iii)
     TIME TO PEAK    (hrs)=         6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=        45.70         27.09       42.90
     TOTAL RAINFALL   (mm)=        46.70         46.70       46.70
     RUNOFF COEFFICIENT   =         0.98          0.58        0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.51          0.12
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     64.81         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
              0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
              0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
              0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
              0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
              0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
              0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
              0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
              0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
              0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
              0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
              1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
              1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
              1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
              1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
              1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
              1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
              1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
              1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
              1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
              1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
              1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
              1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
              2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
              2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
              2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
              2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
              2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
              2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
              2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
              2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
              2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
              2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
              2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
              2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
              3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=       61.64         41.44
                over (min)          5.00         15.00
     Storage Coeff.  (min)=         2.39 (ii)    13.36 (ii)
     Unit Hyd. Tpeak (min)=         5.00         15.00
     Unit Hyd. peak  (cms)=         0.30          0.08
                                                           *TOTALS*
     PEAK FLOW       (cms)=         0.09          0.01       0.095 (iii)
     TIME TO PEAK    (hrs)=         6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=        45.70         27.09       42.15
     TOTAL RAINFALL   (mm)=        46.70         46.70       46.70
     RUNOFF COEFFICIENT   =         0.98          0.58        0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20091)|   Area    (ha)=   0.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.00   Dir. Conn.(%)=  77.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.31          0.09
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     51.64         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
              0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
              0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
              0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
              0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
              0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
              0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
              0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
              0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
              0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
              0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
              1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
              1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
              1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
              1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
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     1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
     1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
     1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
     1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
     1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
     1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
     1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
     1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
     2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
     2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
     2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
     2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
     2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
     2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
     2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
     2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
     2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
     2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
     2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
     2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
     3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
               over (min)         5.00         15.00
     Storage Coeff.  (min)=       2.09 (ii)    13.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.31          0.08
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.05          0.01         0.059 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         41.40
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD (200812)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  70.00   Dir. Conn.(%)=  70.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.27          0.11
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      50.33         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
       TIME     RAIN | TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
        hrs    mm/hr |  hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
      0.083     1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
      0.167     1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
      0.250     1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
      0.333     1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
      0.417     1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
      0.500     1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
      0.583     1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
      0.667     1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
      0.750     1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
      0.833     1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
      0.917     1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
      1.000     1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
      1.083     1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
      1.167     1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
      1.250     1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
      1.333     1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
      1.417     1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
      1.500     1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
      1.583     1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
      1.667     1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
      1.750     1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
      1.833     1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
      1.917     1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
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     2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
     2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
     2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
     2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
     2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
     2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
     2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
     2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
     2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
     2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
     2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
     2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
     3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
               over (min)         5.00         15.00
     Storage Coeff.  (min)=       2.05 (ii)    13.03 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.31          0.08
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.05          0.01         0.053 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         40.10
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (200811)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.06          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      21.60         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
       TIME     RAIN | TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
        hrs    mm/hr |  hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
      0.083     1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
      0.167     1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
      0.250     1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
      0.333     1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
      0.417     1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
      0.500     1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
      0.583     1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
      0.667     1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
      0.750     1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
      0.833     1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
      0.917     1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
      1.000     1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
      1.083     1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
      1.167     1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
      1.250     1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
      1.333     1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
      1.417     1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
      1.500     1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
      1.583     1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
      1.667     1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
      1.750     1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
      1.833     1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
      1.917     1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
      2.000     1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
      2.083     1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
      2.167     1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
      2.250     1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
      2.333     1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
      2.417     1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
      2.500     1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
      2.583     1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
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     2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
     2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
     2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
     2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
     3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         43.41
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       1.24 (ii)     6.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.01          0.00         0.011 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         42.71
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0110)|
|   1 +  2 =  3     |         AREA     QPEAK     TPEAK      R.V.
--------------------          (ha)     (cms)     (hrs)      (mm)
        ID1= 1 (200811):      0.07    0.011      6.00     42.71
      + ID2= 2 (200812):      0.38    0.053      6.00     40.10
        ===================================================
        ID = 3 (  0110):      0.45    0.064      6.00     40.50

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (200822)|   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23          0.16
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      50.99         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
       TIME     RAIN | TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
        hrs    mm/hr |  hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
      0.083     1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
      0.167     1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
      0.250     1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
      0.333     1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
      0.417     1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
      0.500     1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
      0.583     1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
      0.667     1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
      0.750     1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
      0.833     1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
      0.917     1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
      1.000     1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
      1.083     1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
      1.167     1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
      1.250     1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
      1.333     1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
      1.417     1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
      1.500     1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
      1.583     1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
      1.667     1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
      1.750     1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
      1.833     1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
      1.917     1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
      2.000     1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
      2.083     1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
      2.167     1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
      2.250     1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
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     2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
     2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
     2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
     2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
     2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
     2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
     2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
     2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
     3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         41.44
               over (min)         5.00         15.00
     Storage Coeff.  (min)=       2.07 (ii)    13.04 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.31          0.08
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.04          0.01         0.050 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         38.05
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (200821)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00   Dir. Conn.(%)=  83.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.06          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      21.60         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
       TIME     RAIN | TIME     RAIN |'  TIME     RAIN |  TIME     RAIN
        hrs    mm/hr |  hrs    mm/hr |'   hrs    mm/hr |   hrs    mm/hr
      0.083     1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
      0.167     1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
      0.250     1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
      0.333     1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
      0.417     1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
      0.500     1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
      0.583     1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
      0.667     1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
      0.750     1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
      0.833     1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
      0.917     1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
      1.000     1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
      1.083     1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
      1.167     1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
      1.250     1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
      1.333     1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
      1.417     1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
      1.500     1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
      1.583     1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
      1.667     1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
      1.750     1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
      1.833     1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
      1.917     1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
      2.000     1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
      2.083     1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
      2.167     1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
      2.250     1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
      2.333     1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
      2.417     1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
      2.500     1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
      2.583     1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
      2.667     1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
      2.750     1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
      2.833     1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
      2.917     1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
```

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            3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64        43.41
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.24 (ii)    6.20 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.15
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.01         0.00         0.011 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=      45.70        27.09         42.52
     TOTAL RAINFALL   (mm)=      46.70        46.70         46.70
     RUNOFF COEFFICIENT   =       0.98         0.58          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0111)|
|   1 +  2 =  3    |          AREA    QPEAK     TPEAK      R.V.
--------------------          (ha)    (cms)     (hrs)      (mm)
        ID1= 1 (200821):      0.07   0.011      6.00    42.52
      + ID2= 2 (200822):      0.39   0.050      6.00    38.05
        ===============================================
        ID = 3 (  0111):      0.46   0.061      6.00    38.73

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20102)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.35          0.12
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
             0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
             0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
             0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
             0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
             0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
             0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
             0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
             0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
             0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
             0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
             1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
             1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
             1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
             1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
             1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
             1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
             1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
             1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
             1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
             1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
             1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
             1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
             2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
             2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
             2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
             2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
             2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
             2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
             2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
             2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
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             2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
             2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
             2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
             2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
             3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64        41.44
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.19 (ii)   13.16 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.31         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.06         0.01         0.068 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      45.70        27.09         40.84
     TOTAL RAINFALL   (mm)=      46.70        46.70         46.70
     RUNOFF COEFFICIENT   =       0.98         0.58          0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20101)|   Area    (ha)=   0.25
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  82.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.20          0.05
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     40.82         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
             0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
             0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
             0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
             0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
             0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
             0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
             0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
             0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
             0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
             0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
             1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
             1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
             1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
             1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
             1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
             1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
             1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
             1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
             1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
             1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
             1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
             1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
             2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
             2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
             2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
             2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
             2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
             2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
             2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
             2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
             2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
             2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
             2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
             2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
             3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64        41.44
                over (min)        5.00        15.00
```

```
     Storage Coeff.  (min)=       1.81 (ii)   12.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.32         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.04         0.00         0.038 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      45.70        27.09         42.32
     TOTAL RAINFALL   (mm)=      46.70        46.70         46.70
     RUNOFF COEFFICIENT   =       0.98         0.58          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0121)|
|   1 +  2 =  3    |          AREA    QPEAK     TPEAK      R.V.
--------------------          (ha)    (cms)     (hrs)      (mm)
        ID1= 1 ( 20101):      0.25   0.038      6.00    42.32
      + ID2= 2 ( 20102):      0.47   0.068      6.00    40.84
        ===============================================
        ID = 3 (  0121):      0.72   0.106      6.00    41.36

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20111)|   Area    (ha)=   0.87
|ID= 1 DT= 5.0 min |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.58          0.29
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     76.16         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
             0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
             0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
             0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
             0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
             0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
             0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
             0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
             0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
             0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
             0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
             1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
             1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
             1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
             1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
             1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
             1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
             1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
             1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
             1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
             1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
             1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
             1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
             2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
             2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
             2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
             2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
             2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
             2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
             2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
             2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
             2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
             2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
             2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
             2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
```

```
             3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64        41.44
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.63 (ii)   13.61 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.29         0.08
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.10         0.02         0.118 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08          6.00
     RUNOFF VOLUME    (mm)=      45.70        27.09         39.55
     TOTAL RAINFALL   (mm)=      46.70        46.70         46.70
     RUNOFF COEFFICIENT   =       0.98         0.58          0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.72          0.18
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     77.46         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
             0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
             0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
             0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
             0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
             0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
             0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
             0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
             0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
             0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
             0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
             1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
             1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
             1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
             1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
             1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
             1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
             1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
             1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
             1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
             1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
             1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
             1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
             2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
             2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
             2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
             2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
             2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
             2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
             2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
             2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
             2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
             2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
             2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
             2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
             3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64        41.44
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.66 (ii)   13.63 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.29         0.08
                                                        *TOTALS*
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   PEAK FLOW       (cms)=       0.12          0.01          0.135 (iii)
   TIME TO PEAK    (hrs)=       6.00          6.08           6.00
   RUNOFF VOLUME    (mm)=      45.70         27.09          41.97
   TOTAL RAINFALL   (mm)=      46.70         46.70          46.70
   RUNOFF COEFFICIENT   =       0.98          0.58           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
   Surface Area     (ha)=      0.90          0.21
   Dep. Storage     (mm)=      1.00          1.00
   Average Slope     (%)=      1.00          2.00
   Length            (m)=     86.02         40.00
   Mannings n           =     0.013         0.290

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08   1.63
             0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17   1.63
             0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25   1.63
             0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33   1.63
             0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42   1.63
             0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50   1.63
             0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58   1.63
             0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67   1.63
             0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75   1.63
             0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83   1.63
             0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92   1.63
             1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00   1.63
             1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08   0.93
             1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17   0.93
             1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25   0.93
             1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33   0.93
             1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42   0.93
             1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50   0.93
             1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58   0.93
             1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67   0.93
             1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75   0.93
             1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83   0.93
             1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92   0.93
             2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00   0.93
             2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08   0.93
             2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17   0.93
             2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25   0.93
             2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33   0.93
             2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42   0.93
             2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50   0.93
             2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58   0.93
             2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67   0.93
             2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75   0.93
             2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83   0.93
             2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92   0.93
             3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00   0.93

   Max.Eff.Inten.(mm/hr)=      61.64         41.44
              over (min)        5.00         15.00
   Storage Coeff.  (min)=       2.83 (ii)    13.81 (ii)
   Unit Hyd. Tpeak (min)=       5.00         15.00
   Unit Hyd. peak  (cms)=       0.28          0.08
                                                           *TOTALS*
   PEAK FLOW       (cms)=       0.15          0.02          0.167 (iii)
   TIME TO PEAK    (hrs)=       6.00          6.08           6.00
   RUNOFF VOLUME    (mm)=      45.70         27.09          42.16
   TOTAL RAINFALL   (mm)=      46.70         46.70          46.70
   RUNOFF COEFFICIENT   =       0.98          0.58           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
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```
      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
   Surface Area     (ha)=      0.40          0.07
   Dep. Storage     (mm)=      1.00          1.00
   Average Slope     (%)=      1.00          2.00
   Length            (m)=     55.98         40.00
   Mannings n           =     0.013         0.290

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08   1.63
             0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17   1.63
             0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25   1.63
             0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33   1.63
             0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42   1.63
             0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50   1.63
             0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58   1.63
             0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67   1.63
             0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75   1.63
             0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83   1.63
             0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92   1.63
             1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00   1.63
             1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08   0.93
             1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17   0.93
             1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25   0.93
             1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33   0.93
             1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42   0.93
             1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50   0.93
             1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58   0.93
             1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67   0.93
             1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75   0.93
             1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83   0.93
             1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92   0.93
             2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00   0.93
             2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08   0.93
             2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17   0.93
             2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25   0.93
             2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33   0.93
             2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42   0.93
             2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50   0.93
             2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58   0.93
             2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67   0.93
             2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75   0.93
             2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83   0.93
             2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92   0.93
             3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00   0.93

   Max.Eff.Inten.(mm/hr)=      61.64         43.41
              over (min)        5.00         10.00
   Storage Coeff.  (min)=       2.19 (ii)     6.87 (ii)
   Unit Hyd. Tpeak (min)=       5.00         10.00
   Unit Hyd. peak  (cms)=       0.31          0.14
                                                           *TOTALS*
   PEAK FLOW       (cms)=       0.07          0.01          0.075 (iii)
   TIME TO PEAK    (hrs)=       6.00          6.00           6.00
   RUNOFF VOLUME    (mm)=      45.70         27.09          42.90
   TOTAL RAINFALL   (mm)=      46.70         46.70          46.70
   RUNOFF COEFFICIENT   =       0.98          0.58           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
   Surface Area     (ha)=      0.40          0.07
   Dep. Storage     (mm)=      1.00          1.00
   Average Slope     (%)=      1.00          2.00
   Length            (m)=     55.98         40.00
   Mannings n           =     0.013         0.290

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08   1.63
             0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17   1.63
             0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25   1.63
             0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33   1.63
             0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42   1.63
             0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50   1.63
             0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58   1.63
             0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67   1.63
             0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75   1.63
             0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83   1.63
             0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92   1.63
             1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00   1.63
             1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08   0.93
             1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17   0.93
             1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25   0.93
             1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33   0.93
             1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42   0.93
             1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50   0.93
             1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58   0.93
             1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67   0.93
             1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75   0.93
             1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83   0.93
             1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92   0.93
             2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00   0.93
             2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08   0.93
             2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17   0.93
             2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25   0.93
             2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33   0.93
             2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42   0.93
             2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50   0.93
             2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58   0.93
             2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67   0.93
             2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75   0.93
             2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83   0.93
             2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92   0.93
             3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00   0.93

   Max.Eff.Inten.(mm/hr)=      61.64         43.41
              over (min)        5.00         10.00
   Storage Coeff.  (min)=       2.19 (ii)     6.87 (ii)
   Unit Hyd. Tpeak (min)=       5.00         10.00
   Unit Hyd. peak  (cms)=       0.31          0.14
                                                           *TOTALS*
   PEAK FLOW       (cms)=       0.07          0.01          0.075 (iii)
   TIME TO PEAK    (hrs)=       6.00          6.00           6.00
   RUNOFF VOLUME    (mm)=      45.70         27.09          42.90
   TOTAL RAINFALL   (mm)=      46.70         46.70          46.70
   RUNOFF COEFFICIENT   =       0.98          0.58           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0136)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (201021):      0.47   0.075     6.00     42.90
     + ID2= 2 (201022):      0.47   0.075     6.00     42.90
       ===============================================
       ID = 3 (  0136):      0.94   0.151     6.00     42.90
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      NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| STANDHYD (  2005)|   Area    (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
   Surface Area     (ha)=      0.25          0.03
   Dep. Storage     (mm)=      1.00          1.00
   Average Slope     (%)=      1.00          2.00
   Length            (m)=     43.20         40.00
   Mannings n           =     0.013         0.290

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08   1.63
             0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17   1.63
             0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25   1.63
             0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33   1.63
             0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42   1.63
             0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50   1.63
             0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58   1.63
             0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67   1.63
             0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75   1.63
             0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83   1.63
             0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92   1.63
             1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00   1.63
             1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08   0.93
             1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17   0.93
             1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25   0.93
             1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33   0.93
             1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42   0.93
             1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50   0.93
             1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58   0.93
             1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67   0.93
             1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75   0.93
             1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83   0.93
             1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92   0.93
             2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00   0.93
             2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08   0.93
             2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17   0.93
             2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25   0.93
             2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33   0.93
             2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42   0.93
             2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50   0.93
             2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58   0.93
             2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67   0.93
             2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75   0.93
             2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83   0.93
             2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92   0.93
             3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00   0.93

   Max.Eff.Inten.(mm/hr)=      61.64         43.41
              over (min)        5.00         10.00
   Storage Coeff.  (min)=       1.87 (ii)     5.76 (ii)
   Unit Hyd. Tpeak (min)=       5.00         10.00
   Unit Hyd. peak  (cms)=       0.32          0.15
                                                           *TOTALS*
   PEAK FLOW       (cms)=       0.04          0.00          0.046 (iii)
   TIME TO PEAK    (hrs)=       6.00          6.00           6.00
   RUNOFF VOLUME    (mm)=      45.70         27.09          43.83
   TOTAL RAINFALL   (mm)=      46.70         46.70          46.70
   RUNOFF COEFFICIENT   =       0.98          0.58           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20121)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
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                     IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.62         0.49
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     86.02        40.00
     Mannings n          =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                     ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
          0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
          0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
          0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
          0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
          0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
          0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
          0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
          0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
          0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
          0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
          1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
          1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
          1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
          1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
          1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
          1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
          1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
          1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
          1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
          1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
          1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
          1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
          2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
          2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
          2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
          2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
          2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
          2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
          2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
          2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
          2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
          2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
          2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
          2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
          3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64        41.44
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.83 (ii)   13.81 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.28         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.11         0.04        0.138 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08         6.00
     RUNOFF VOLUME    (mm)=      45.70        27.09        37.50
     TOTAL RAINFALL   (mm)=      46.70        46.70        46.70
     RUNOFF COEFFICIENT  =        0.98         0.58         0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200111)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                     IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.09         0.01
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     25.82        40.00
     Mannings n          =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                     ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
          0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
          0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
          0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
          0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
          0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
          0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
          0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
          0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
          0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
          0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
          1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
          1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
          1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
          1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
          1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
          1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
          1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
          1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
          1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
          1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
          1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
          1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
          2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
          2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
          2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
          2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
          2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
          2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
          2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
          2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
          2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
          2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
          2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
          2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
          3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64        43.41
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.38 (ii)    5.35 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.16
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.02         0.00        0.016 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00         6.00
     RUNOFF VOLUME    (mm)=      45.70        27.09        43.74
     TOTAL RAINFALL   (mm)=      46.70        46.70        46.70
     RUNOFF COEFFICIENT  =        0.98         0.58         0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200121)|   Area    (ha)=   0.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                     IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.10         0.01
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     27.08        40.00
     Mannings n          =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                     ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
          0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
          0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
          0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
          0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
          0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
          0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
          0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
          0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
          0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
          0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
          1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
          1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
          1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
          1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
          1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
          1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
          1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
          1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
          1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
          1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
          1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
          1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
          2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
          2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
          2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
          2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
          2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
          2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
          2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
          2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
          2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
          2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
          2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
          2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
          3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64        43.41
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.42 (ii)    5.79 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.15
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.02         0.00        0.018 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00         6.00
     RUNOFF VOLUME    (mm)=      45.70        27.09        43.27
     TOTAL RAINFALL   (mm)=      46.70        46.70        46.70
     RUNOFF COEFFICIENT  =        0.98         0.58         0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0142)|
|   1 +  2 =  3     |        AREA    QPEAK     TPEAK       R.V.
--------------------        (ha)    (cms)     (hrs)       (mm)
         ID1= 1 (200111):    0.10   0.016      6.00      43.74
       + ID2= 2 (200121):    0.11   0.018      6.00      43.27
         ==================================================
         ID = 3 (  0142):    0.21   0.034      6.00      43.49

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB              |
| STANDHYD (200112)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                     IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.08         0.02
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     25.69        40.00
     Mannings n          =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                     ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
          0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
          0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
          0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
          0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
          0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
          0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
          0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
          0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
          0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
          0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
          1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
          1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
          1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
          1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
          1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
          1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
          1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
          1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
          1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
          1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
          1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
          1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
          2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
          2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
          2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
          2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
          2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
          2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
          2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
          2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
          2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
          2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
          2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
          2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
          3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64        41.44
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       1.37 (ii)   12.35 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.33         0.08
                                                      *TOTALS*
     PEAK FLOW       (cms)=       0.01         0.00        0.015 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.08         6.00
     RUNOFF VOLUME    (mm)=      45.70        27.09        41.75
     TOTAL RAINFALL   (mm)=      46.70        46.70        46.70
     RUNOFF COEFFICIENT  =        0.98         0.58         0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200122)|   Area    (ha)=   0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                     IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.11         0.02
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     29.44        40.00
     Mannings n          =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                     ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    1.17 | 3.083    1.87 | 6.083    8.41 |  9.08    1.63
          0.167    1.17 | 3.167    1.87 | 6.167    8.41 |  9.17    1.63
          0.250    1.17 | 3.250    1.87 | 6.250    8.41 |  9.25    1.63
          0.333    1.17 | 3.333    1.87 | 6.333    8.41 |  9.33    1.63
          0.417    1.17 | 3.417    1.87 | 6.417    8.41 |  9.42    1.63
          0.500    1.17 | 3.500    1.87 | 6.500    8.41 |  9.50    1.63
          0.583    1.17 | 3.583    1.87 | 6.583    3.74 |  9.58    1.63
```

```
     0.667    1.17 | 3.667    1.87 | 6.667    3.74 |  9.67    1.63
     0.750    1.17 | 3.750    1.87 | 6.750    3.74 |  9.75    1.63
     0.833    1.17 | 3.833    1.87 | 6.833    3.74 |  9.83    1.63
     0.917    1.17 | 3.917    1.87 | 6.917    3.74 |  9.92    1.63
     1.000    1.17 | 4.000    1.87 | 7.000    3.74 | 10.00    1.63
     1.083    1.17 | 4.083    2.80 | 7.083    2.80 | 10.08    0.93
     1.167    1.17 | 4.167    2.80 | 7.167    2.80 | 10.17    0.93
     1.250    1.17 | 4.250    2.80 | 7.250    2.80 | 10.25    0.93
     1.333    1.17 | 4.333    2.80 | 7.333    2.80 | 10.33    0.93
     1.417    1.17 | 4.417    2.80 | 7.417    2.80 | 10.42    0.93
     1.500    1.17 | 4.500    2.80 | 7.500    2.80 | 10.50    0.93
     1.583    1.17 | 4.583    3.74 | 7.583    2.80 | 10.58    0.93
     1.667    1.17 | 4.667    3.74 | 7.667    2.80 | 10.67    0.93
     1.750    1.17 | 4.750    3.74 | 7.750    2.80 | 10.75    0.93
     1.833    1.17 | 4.833    3.74 | 7.833    2.80 | 10.83    0.93
     1.917    1.17 | 4.917    3.74 | 7.917    2.80 | 10.92    0.93
     2.000    1.17 | 5.000    3.74 | 8.000    2.80 | 11.00    0.93
     2.083    1.40 | 5.083    5.60 | 8.083    1.63 | 11.08    0.93
     2.167    1.40 | 5.167    5.60 | 8.167    1.63 | 11.17    0.93
     2.250    1.40 | 5.250    5.60 | 8.250    1.63 | 11.25    0.93
     2.333    1.40 | 5.333    5.60 | 8.333    1.63 | 11.33    0.93
     2.417    1.40 | 5.417    5.60 | 8.417    1.63 | 11.42    0.93
     2.500    1.40 | 5.500    5.60 | 8.500    1.63 | 11.50    0.93
     2.583    1.40 | 5.583   22.42 | 8.583    1.63 | 11.58    0.93
     2.667    1.40 | 5.667   22.42 | 8.667    1.63 | 11.67    0.93
     2.750    1.40 | 5.750   22.42 | 8.750    1.63 | 11.75    0.93
     2.833    1.40 | 5.833   61.64 | 8.833    1.63 | 11.83    0.93
     2.917    1.40 | 5.917   61.64 | 8.917    1.63 | 11.92    0.93
     3.000    1.40 | 6.000   61.64 | 9.000    1.63 | 12.00    0.93

     Max.Eff.Inten.(mm/hr)=      61.64         43.41
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       1.49 (ii)     6.02 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.02          0.00          0.021 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      45.70         27.09         43.08
     TOTAL RAINFALL   (mm)=      46.70         46.70         46.70
     RUNOFF COEFFICIENT   =       0.98          0.58          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0145)|
|   1 +  2 =  3    |          AREA     QPEAK     TPEAK      R.V.
--------------------          (ha)     (cms)     (hrs)      (mm)
         ID1= 1 (200112):     0.10    0.015      6.00     41.75
       + ID2= 2 (200122):     0.13    0.021      6.00     43.08
         ==================================================
         ID = 3 (  0145):     0.23    0.036      6.00     42.50

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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================================================================================

         V    V   I    SSSSS  U    U     A     L               (v 6.1.2002)
         V    V   I    SS     U    U    A A    L
          V  V    I     SS    U    U   AAAAA   L
          V  V    I       SS  U    U   A   A   L
           VV     I    SSSSS  UUUUU   A    A   LLLLL

          OOO    TTTTT  TTTTT  H    H  Y   Y  M    M   OOO      TM
         O   O     T      T    H    H   Y Y   MM MM   O   O
         O   O     T      T    H    H    Y    M    M  O   O
          OOO      T      T    H    H    Y    M    M   OOO
Developed and Distributed by Smart City Water Inc
```



```
                      *****  D E T A I L E D   O U T P U T  *****


   Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
```

```
   Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\0f24e9d2
   Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\0f24e9d2


DATE: 05-18-2022                         TIME: 12:50:57

USER:



COMMENTS: ____________________________________________________________


---------------------------------------------------------------------------------------------------------
  *************************************************
  ** SIMULATION : Run 14                        **
  *************************************************


--------------------
|    READ STORM    |     Filename: C:\Users\caef070146\AppD
|                  |               ata\Local\Temp\
|                  |               a3a8b910-d519-48ad-be84-5b44b6daecc3\5b7ccddc
| Ptotal= 64.30 mm |     Comments: 2-Yr,12-hr SCS, City of Barrie
--------------------
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.25    1.61 |  3.25    2.57 |  6.25   11.57 |  9.25    2.25
                0.50    1.61 |  3.50    2.57 |  6.50   11.57 |  9.50    2.25
                0.75    1.61 |  3.75    2.57 |  6.75    5.14 |  9.75    2.25
                1.00    1.61 |  4.00    2.57 |  7.00    5.14 | 10.00    2.25
                1.25    1.61 |  4.25    3.86 |  7.25    3.86 | 10.25    1.29
                1.50    1.61 |  4.50    3.86 |  7.50    3.86 | 10.50    1.29
                1.75    1.61 |  4.75    5.14 |  7.75    3.86 | 10.75    1.29
                2.00    1.61 |  5.00    5.14 |  8.00    3.86 | 11.00    1.29
                2.25    1.93 |  5.25    7.72 |  8.25    2.25 | 11.25    1.29
                2.50    1.93 |  5.50    7.72 |  8.50    2.25 | 11.50    1.29
                2.75    1.93 |  5.75   30.86 |  8.75    2.25 | 11.75    1.29
                3.00    1.93 |  6.00   84.88 |  9.00    2.25 | 12.00    1.29

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--------------------
| CALIB            |
| STANDHYD ( 20022)|   Area    (ha)=   0.80
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.68          0.12
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      73.03         40.00
     Mannings n          =       0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
               0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
               0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
               0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
               0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
               0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
               0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
               0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
               0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
               0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
               0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
               1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
               1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
               1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
               1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
               1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
               1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
               1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
               1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
               1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
               1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
               1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
               1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
               2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
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               2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
               2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
               2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
               2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
               2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
               2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
               2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
               2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
               2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
               2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
               2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
               3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       2.26 (ii)     6.38 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.30          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.16          0.02          0.179 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31         60.15
     TOTAL RAINFALL   (mm)=      64.30         64.30         64.30
     RUNOFF COEFFICIENT   =       0.98          0.66          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20021)|   Area    (ha)=   0.70
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62          0.08
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      68.31         40.00
     Mannings n          =       0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
               0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
               0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
               0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
               0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
               0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
               0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
               0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
               0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
               0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
               0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
               1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
               1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
               1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
               1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
               1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
               1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
               1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
               1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
               1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
               1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
               1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
               1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
               2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
               2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
               2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
               2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
               2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
               2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
               2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
               2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
               2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
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               2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
               2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
               2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
               3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       2.17 (ii)     5.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.15          0.01          0.159 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31         60.99
     TOTAL RAINFALL   (mm)=      64.30         64.30         64.30
     RUNOFF COEFFICIENT   =       0.98          0.66          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20031)|   Area    (ha)=   0.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.39          0.04
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      53.54         40.00
     Mannings n          =       0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
               0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
               0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
               0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
               0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
               0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
               0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
               0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
               0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
               0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
               0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
               1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
               1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
               1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
               1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
               1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
               1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
               1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
               1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
               1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
               1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
               1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
               1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
               2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
               2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
               2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
               2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
               2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
               2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
               2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
               2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
               2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
               2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
               2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
               2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
               3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       1.88 (ii)     5.30 (ii)
```

```
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.32           0.16
                                                            *TOTALS*
     PEAK FLOW        (cms)=        0.09           0.01           0.098 (iii)
     TIME TO PEAK     (hrs)=        6.00           6.00            6.00
     RUNOFF VOLUME     (mm)=       63.30          42.31           61.20
     TOTAL RAINFALL    (mm)=       64.30          64.30           64.30
     RUNOFF COEFFICIENT   =         0.98           0.66            0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20032)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.41          0.06
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       55.98         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                               ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                 0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                 0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                 0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                 0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
                 0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                 0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                 0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                 1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                 1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                 1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                 1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                 1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
                 1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                 1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                 1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                 1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                 1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                 1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                 1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                 2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
                 2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
                 2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
                 2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
                 2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
                 2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
                 2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
                 2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
                 2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
                 2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
                 2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
                 2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
                 3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=       84.88          66.77
                over (min)        5.00          10.00
     Storage Coeff.  (min)=        1.93 (ii)      5.78 (ii)
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.31           0.15
                                                            *TOTALS*
     PEAK FLOW        (cms)=        0.10           0.01           0.106 (iii)
     TIME TO PEAK     (hrs)=        6.00           6.00            6.00
     RUNOFF VOLUME     (mm)=       63.30          42.31           60.56
     TOTAL RAINFALL    (mm)=       64.30          64.30           64.30
     RUNOFF COEFFICIENT   =         0.98           0.66            0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.31          0.04
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       48.30         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                               ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                 0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                 0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                 0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                 0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
                 0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                 0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                 0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                 1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                 1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                 1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                 1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                 1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
                 1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                 1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                 1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                 1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                 1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                 1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                 1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                 2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
                 2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
                 2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
                 2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
                 2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
                 2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
                 2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
                 2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
                 2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
                 2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
                 2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
                 2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
                 3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=       84.88          66.77
                over (min)        5.00          10.00
     Storage Coeff.  (min)=        1.76 (ii)      5.33 (ii)
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.32           0.16
                                                            *TOTALS*
     PEAK FLOW        (cms)=        0.07           0.01           0.080 (iii)
     TIME TO PEAK     (hrs)=        6.00           6.00            6.00
     RUNOFF VOLUME     (mm)=       63.30          42.31           60.99
     TOTAL RAINFALL    (mm)=       64.30          64.30           64.30
     RUNOFF COEFFICIENT   =         0.98           0.66            0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20042)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.31          0.05
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       48.99         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                               ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                 0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                 0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                 0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                 0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
                 0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                 0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                 0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                 1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                 1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                 1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                 1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                 1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
                 1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                 1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                 1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                 1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                 1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                 1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                 1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                 2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
                 2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
                 2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
                 2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
                 2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
                 2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
                 2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
                 2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
                 2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
                 2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
                 2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
                 2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
                 3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=       84.88          66.77
                over (min)        5.00          10.00
     Storage Coeff.  (min)=        1.78 (ii)      5.89 (ii)
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.32           0.15
                                                            *TOTALS*
     PEAK FLOW        (cms)=        0.07           0.01           0.081 (iii)
     TIME TO PEAK     (hrs)=        6.00           6.00            6.00
     RUNOFF VOLUME     (mm)=       63.30          42.31           60.14
     TOTAL RAINFALL    (mm)=       64.30          64.30           64.30
     RUNOFF COEFFICIENT   =         0.98           0.66            0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20052)|   Area    (ha)=   0.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.23          0.06
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       43.97         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                               ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
                 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
                 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
                 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
                 0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
                 0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
                 0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
                 0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
                 0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
                 0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
                 0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
                 1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
                 1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
                 1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
                 1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
                 1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
                 1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
                 1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
                 1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
                 1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
                 1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
                 1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
                 1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
                 2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
                 2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
                 2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
                 2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
                 2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
                 2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
                 2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
                 2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
                 2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
                 2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
                 2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
                 2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
                 3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=       84.88          66.77
                over (min)        5.00          10.00
     Storage Coeff.  (min)=        1.67 (ii)      6.63 (ii)
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.32           0.14
                                                            *TOTALS*
     PEAK FLOW        (cms)=        0.05           0.01           0.063 (iii)
     TIME TO PEAK     (hrs)=        6.00           6.00            6.00
     RUNOFF VOLUME     (mm)=       63.30          42.31           58.67
     TOTAL RAINFALL    (mm)=       64.30          64.30           64.30
     RUNOFF COEFFICIENT   =         0.98           0.66            0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.58          0.15
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       69.76         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
 0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
 0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
 0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
 0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
 0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
 0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
 0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
 1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
 1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
 1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
 1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
 1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
 1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
 1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
 1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
 1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
 1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
 1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
 1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
 2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
 2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
 2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
 2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
 2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
 2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
 2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
 2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
 2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
 2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
 2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
 2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
 3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       2.20 (ii)     6.93 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.30          0.14
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.14          0.02       0.160 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31       59.10
     TOTAL RAINFALL   (mm)=      64.30         64.30       64.30
     RUNOFF COEFFICIENT   =       0.98          0.66        0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS   PERVIOUS (i)
     Surface Area     (ha)=       0.55          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.83         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
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 0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
 0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
 0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
 0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
 0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
 0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
 0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
 1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
 1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
 1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
 1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
 1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
 1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
 1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
 1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
 1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
 1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
 1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
 1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
 2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
 2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
 2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
 2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
 2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
 2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
 2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
 2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
 2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
 2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
 2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
 2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
 3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       2.12 (ii)     6.24 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.13          0.02       0.146 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31       60.15
     TOTAL RAINFALL   (mm)=      64.30         64.30       64.30
     RUNOFF COEFFICIENT   =       0.98          0.66        0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                            IMPERVIOUS   PERVIOUS (i)
     Surface Area     (ha)=       0.54          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.32         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
 0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
 0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
 0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
 0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
 0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
 0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
 0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
 1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
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 1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
 1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
 1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
 1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
 1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
 1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
 1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
 1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
 1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
 1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
 1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
 2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
 2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
 2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
 2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
 2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
 2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
 2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
 2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
 2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
 2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
 2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
 2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
 3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       2.11 (ii)     6.36 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.13          0.02       0.143 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31       59.94
     TOTAL RAINFALL   (mm)=      64.30         64.30       64.30
     RUNOFF COEFFICIENT   =       0.98          0.66        0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS   PERVIOUS (i)
     Surface Area     (ha)=       0.49          0.09
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      62.18         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
 0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
 0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
 0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
 0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
 0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
 0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
 0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
 1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
 1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
 1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
 1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
 1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
 1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
 1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
 1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
 1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
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 1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
 1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
 1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
 2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
 2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
 2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
 2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
 2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
 2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
 2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
 2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
 2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
 2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
 2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
 2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
 3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       2.05 (ii)     6.17 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.12          0.01       0.130 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31       60.15
     TOTAL RAINFALL   (mm)=      64.30         64.30       64.30
     RUNOFF COEFFICIENT   =       0.98          0.66        0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD ( 20092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                            IMPERVIOUS   PERVIOUS (i)
     Surface Area     (ha)=       0.51          0.12
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      64.81         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
 0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
 0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
 0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
 0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
 0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
 0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
 0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
 0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
 0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
 0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
 1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
 1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
 1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
 1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
 1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
 1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
 1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
 1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
 1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
 1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
 1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
 1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
 2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
 2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
 2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
 2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
 2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
```

2.417	1.93	5.417	7.72	8.417	2.25	11.42	1.29
2.500	1.93	5.500	7.72	8.500	2.25	11.50	1.29
2.583	1.93	5.583	30.86	8.583	2.25	11.58	1.29
2.667	1.93	5.667	30.86	8.667	2.25	11.67	1.29
2.750	1.93	5.750	30.86	8.750	2.25	11.75	1.29
2.833	1.93	5.833	84.88	8.833	2.25	11.83	1.29
2.917	1.93	5.917	84.88	8.917	2.25	11.92	1.29
3.000	1.93	6.000	84.87	9.000	2.25	12.00	1.29

Max.Eff.Inten.(mm/hr)=		84.88	66.77	
over (min)		5.00	10.00	
Storage Coeff.	(min)=	2.10 (ii)	6.72 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	10.00	
Unit Hyd. peak	(cms)=	0.31	0.14	
				TOTALS
PEAK FLOW	(cms)=	0.12	0.02	0.139 (iii)
TIME TO PEAK	(hrs)=	6.00	6.00	6.00
RUNOFF VOLUME	(mm)=	63.30	42.31	59.31
TOTAL RAINFALL	(mm)=	64.30	64.30	64.30
RUNOFF COEFFICIENT	=	0.98	0.66	0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 89.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (20091) | Area (ha)= 0.40
|ID= 1 DT= 5.0 min | Total Imp(%)= 77.00 Dir. Conn.(%)= 77.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.31	0.09
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	51.64	40.00
Mannings n	=	0.013	0.290

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.61	3.083	2.57	6.083	11.57	9.08	2.25
0.167	1.61	3.167	2.57	6.167	11.57	9.17	2.25
0.250	1.61	3.250	2.57	6.250	11.57	9.25	2.25
0.333	1.61	3.333	2.57	6.333	11.57	9.33	2.25
0.417	1.61	3.417	2.57	6.417	11.57	9.42	2.25
0.500	1.61	3.500	2.57	6.500	11.57	9.50	2.25
0.583	1.61	3.583	2.57	6.583	5.14	9.58	2.25
0.667	1.61	3.667	2.57	6.667	5.14	9.67	2.25
0.750	1.61	3.750	2.57	6.750	5.14	9.75	2.25
0.833	1.61	3.833	2.57	6.833	5.14	9.83	2.25
0.917	1.61	3.917	2.57	6.917	5.14	9.92	2.25
1.000	1.61	4.000	2.57	7.000	5.14	10.00	2.25
1.083	1.61	4.083	3.86	7.083	3.86	10.08	1.29
1.167	1.61	4.167	3.86	7.167	3.86	10.17	1.29
1.250	1.61	4.250	3.86	7.250	3.86	10.25	1.29
1.333	1.61	4.333	3.86	7.333	3.86	10.33	1.29
1.417	1.61	4.417	3.86	7.417	3.86	10.42	1.29
1.500	1.61	4.500	3.86	7.500	3.86	10.50	1.29
1.583	1.61	4.583	5.14	7.583	3.86	10.58	1.29
1.667	1.61	4.667	5.14	7.667	3.86	10.67	1.29
1.750	1.61	4.750	5.14	7.750	3.86	10.75	1.29
1.833	1.61	4.833	5.14	7.833	3.86	10.83	1.29
1.917	1.61	4.917	5.14	7.917	3.86	10.92	1.29
2.000	1.61	5.000	5.14	8.000	3.86	11.00	1.29
2.083	1.93	5.083	7.72	8.083	2.25	11.08	1.29
2.167	1.93	5.167	7.72	8.167	2.25	11.17	1.29
2.250	1.93	5.250	7.72	8.250	2.25	11.25	1.29
2.333	1.93	5.333	7.72	8.333	2.25	11.33	1.29
2.417	1.93	5.417	7.72	8.417	2.25	11.42	1.29
2.500	1.93	5.500	7.72	8.500	2.25	11.50	1.29
2.583	1.93	5.583	30.86	8.583	2.25	11.58	1.29
2.667	1.93	5.667	30.86	8.667	2.25	11.67	1.29
2.750	1.93	5.750	30.86	8.750	2.25	11.75	1.29
2.833	1.93	5.833	84.88	8.833	2.25	11.83	1.29
2.917	1.93	5.917	84.88	8.917	2.25	11.92	1.29
3.000	1.93	6.000	84.87	9.000	2.25	12.00	1.29

Max.Eff.Inten.(mm/hr)=		84.88	66.77	
over (min)		5.00	15.00	
Storage Coeff.	(min)=	1.83 (ii)	10.90 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	15.00	
Unit Hyd. peak	(cms)=	0.32	0.09	
				TOTALS
PEAK FLOW	(cms)=	0.07	0.01	0.083 (iii)
TIME TO PEAK	(hrs)=	6.00	6.08	6.00
RUNOFF VOLUME	(mm)=	63.30	42.31	58.46
TOTAL RAINFALL	(mm)=	64.30	64.30	64.30
RUNOFF COEFFICIENT	=	0.98	0.66	0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 89.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (200812) | Area (ha)= 0.38
|ID= 1 DT= 5.0 min | Total Imp(%)= 70.00 Dir. Conn.(%)= 70.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.27	0.11
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	50.33	40.00
Mannings n	=	0.013	0.290

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.61	3.083	2.57	6.083	11.57	9.08	2.25
0.167	1.61	3.167	2.57	6.167	11.57	9.17	2.25
0.250	1.61	3.250	2.57	6.250	11.57	9.25	2.25
0.333	1.61	3.333	2.57	6.333	11.57	9.33	2.25
0.417	1.61	3.417	2.57	6.417	11.57	9.42	2.25
0.500	1.61	3.500	2.57	6.500	11.57	9.50	2.25
0.583	1.61	3.583	2.57	6.583	5.14	9.58	2.25
0.667	1.61	3.667	2.57	6.667	5.14	9.67	2.25
0.750	1.61	3.750	2.57	6.750	5.14	9.75	2.25
0.833	1.61	3.833	2.57	6.833	5.14	9.83	2.25
0.917	1.61	3.917	2.57	6.917	5.14	9.92	2.25
1.000	1.61	4.000	2.57	7.000	5.14	10.00	2.25
1.083	1.61	4.083	3.86	7.083	3.86	10.08	1.29
1.167	1.61	4.167	3.86	7.167	3.86	10.17	1.29
1.250	1.61	4.250	3.86	7.250	3.86	10.25	1.29
1.333	1.61	4.333	3.86	7.333	3.86	10.33	1.29
1.417	1.61	4.417	3.86	7.417	3.86	10.42	1.29
1.500	1.61	4.500	3.86	7.500	3.86	10.50	1.29
1.583	1.61	4.583	5.14	7.583	3.86	10.58	1.29
1.667	1.61	4.667	5.14	7.667	3.86	10.67	1.29
1.750	1.61	4.750	5.14	7.750	3.86	10.75	1.29
1.833	1.61	4.833	5.14	7.833	3.86	10.83	1.29
1.917	1.61	4.917	5.14	7.917	3.86	10.92	1.29
2.000	1.61	5.000	5.14	8.000	3.86	11.00	1.29
2.083	1.93	5.083	7.72	8.083	2.25	11.08	1.29
2.167	1.93	5.167	7.72	8.167	2.25	11.17	1.29
2.250	1.93	5.250	7.72	8.250	2.25	11.25	1.29
2.333	1.93	5.333	7.72	8.333	2.25	11.33	1.29
2.417	1.93	5.417	7.72	8.417	2.25	11.42	1.29
2.500	1.93	5.500	7.72	8.500	2.25	11.50	1.29
2.583	1.93	5.583	30.86	8.583	2.25	11.58	1.29
2.667	1.93	5.667	30.86	8.667	2.25	11.67	1.29
2.750	1.93	5.750	30.86	8.750	2.25	11.75	1.29
2.833	1.93	5.833	84.88	8.833	2.25	11.83	1.29
2.917	1.93	5.917	84.88	8.917	2.25	11.92	1.29
3.000	1.93	6.000	84.87	9.000	2.25	12.00	1.29

Max.Eff.Inten.(mm/hr)=		84.88	66.77	
over (min)		5.00	15.00	
Storage Coeff.	(min)=	1.81 (ii)	10.87 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	15.00	
Unit Hyd. peak	(cms)=	0.32	0.09	
				TOTALS
PEAK FLOW	(cms)=	0.06	0.01	0.076 (iii)
TIME TO PEAK	(hrs)=	6.00	6.08	6.00
RUNOFF VOLUME	(mm)=	63.30	42.31	56.99
TOTAL RAINFALL	(mm)=	64.30	64.30	64.30
RUNOFF COEFFICIENT	=	0.98	0.66	0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 89.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (200811) | Area (ha)= 0.07
|ID= 1 DT= 5.0 min | Total Imp(%)= 84.00 Dir. Conn.(%)= 84.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.06	0.01
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	21.60	40.00
Mannings n	=	0.013	0.290

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.61	3.083	2.57	6.083	11.57	9.08	2.25
0.167	1.61	3.167	2.57	6.167	11.57	9.17	2.25
0.250	1.61	3.250	2.57	6.250	11.57	9.25	2.25
0.333	1.61	3.333	2.57	6.333	11.57	9.33	2.25
0.417	1.61	3.417	2.57	6.417	11.57	9.42	2.25
0.500	1.61	3.500	2.57	6.500	11.57	9.50	2.25
0.583	1.61	3.583	2.57	6.583	5.14	9.58	2.25
0.667	1.61	3.667	2.57	6.667	5.14	9.67	2.25
0.750	1.61	3.750	2.57	6.750	5.14	9.75	2.25
0.833	1.61	3.833	2.57	6.833	5.14	9.83	2.25
0.917	1.61	3.917	2.57	6.917	5.14	9.92	2.25
1.000	1.61	4.000	2.57	7.000	5.14	10.00	2.25
1.083	1.61	4.083	3.86	7.083	3.86	10.08	1.29
1.167	1.61	4.167	3.86	7.167	3.86	10.17	1.29
1.250	1.61	4.250	3.86	7.250	3.86	10.25	1.29
1.333	1.61	4.333	3.86	7.333	3.86	10.33	1.29
1.417	1.61	4.417	3.86	7.417	3.86	10.42	1.29
1.500	1.61	4.500	3.86	7.500	3.86	10.50	1.29
1.583	1.61	4.583	5.14	7.583	3.86	10.58	1.29
1.667	1.61	4.667	5.14	7.667	3.86	10.67	1.29
1.750	1.61	4.750	5.14	7.750	3.86	10.75	1.29
1.833	1.61	4.833	5.14	7.833	3.86	10.83	1.29
1.917	1.61	4.917	5.14	7.917	3.86	10.92	1.29
2.000	1.61	5.000	5.14	8.000	3.86	11.00	1.29
2.083	1.93	5.083	7.72	8.083	2.25	11.08	1.29
2.167	1.93	5.167	7.72	8.167	2.25	11.17	1.29
2.250	1.93	5.250	7.72	8.250	2.25	11.25	1.29
2.333	1.93	5.333	7.72	8.333	2.25	11.33	1.29
2.417	1.93	5.417	7.72	8.417	2.25	11.42	1.29
2.500	1.93	5.500	7.72	8.500	2.25	11.50	1.29
2.583	1.93	5.583	30.86	8.583	2.25	11.58	1.29
2.667	1.93	5.667	30.86	8.667	2.25	11.67	1.29
2.750	1.93	5.750	30.86	8.750	2.25	11.75	1.29
2.833	1.93	5.833	84.88	8.833	2.25	11.83	1.29
2.917	1.93	5.917	84.88	8.917	2.25	11.92	1.29
3.000	1.93	6.000	84.87	9.000	2.25	12.00	1.29

Max.Eff.Inten.(mm/hr)=		84.88	66.77	
over (min)		5.00	10.00	
Storage Coeff.	(min)=	1.09 (ii)	5.33 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	10.00	
Unit Hyd. peak	(cms)=	0.34	0.16	
				TOTALS
PEAK FLOW	(cms)=	0.01	0.00	0.016 (iii)
TIME TO PEAK	(hrs)=	6.00	6.00	6.00
RUNOFF VOLUME	(mm)=	63.30	42.31	59.92
TOTAL RAINFALL	(mm)=	64.30	64.30	64.30
RUNOFF COEFFICIENT	=	0.98	0.66	0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 89.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0110)|
| 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (200811):	0.07	0.016	6.00	59.92
+ ID2= 2 (200812):	0.38	0.076	6.00	56.99
ID = 3 (0110):	0.45	0.091	6.00	57.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (200822) | Area (ha)= 0.39
|ID= 1 DT= 5.0 min | Total Imp(%)= 59.00 Dir. Conn.(%)= 59.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.23	0.16
Dep. Storage	(mm)=	1.00	1.00
Average Slope	(%)=	1.00	2.00
Length	(m)=	50.99	40.00
Mannings n	=	0.013	0.290

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.61	3.083	2.57	6.083	11.57	9.08	2.25
0.167	1.61	3.167	2.57	6.167	11.57	9.17	2.25
0.250	1.61	3.250	2.57	6.250	11.57	9.25	2.25
0.333	1.61	3.333	2.57	6.333	11.57	9.33	2.25
0.417	1.61	3.417	2.57	6.417	11.57	9.42	2.25
0.500	1.61	3.500	2.57	6.500	11.57	9.50	2.25
0.583	1.61	3.583	2.57	6.583	5.14	9.58	2.25
0.667	1.61	3.667	2.57	6.667	5.14	9.67	2.25
0.750	1.61	3.750	2.57	6.750	5.14	9.75	2.25
0.833	1.61	3.833	2.57	6.833	5.14	9.83	2.25
0.917	1.61	3.917	2.57	6.917	5.14	9.92	2.25
1.000	1.61	4.000	2.57	7.000	5.14	10.00	2.25
1.083	1.61	4.083	3.86	7.083	3.86	10.08	1.29
1.167	1.61	4.167	3.86	7.167	3.86	10.17	1.29
1.250	1.61	4.250	3.86	7.250	3.86	10.25	1.29
1.333	1.61	4.333	3.86	7.333	3.86	10.33	1.29
1.417	1.61	4.417	3.86	7.417	3.86	10.42	1.29
1.500	1.61	4.500	3.86	7.500	3.86	10.50	1.29
1.583	1.61	4.583	5.14	7.583	3.86	10.58	1.29
1.667	1.61	4.667	5.14	7.667	3.86	10.67	1.29
1.750	1.61	4.750	5.14	7.750	3.86	10.75	1.29
1.833	1.61	4.833	5.14	7.833	3.86	10.83	1.29
1.917	1.61	4.917	5.14	7.917	3.86	10.92	1.29
2.000	1.61	5.000	5.14	8.000	3.86	11.00	1.29
2.083	1.93	5.083	7.72	8.083	2.25	11.08	1.29
2.167	1.93	5.167	7.72	8.167	2.25	11.17	1.29
2.250	1.93	5.250	7.72	8.250	2.25	11.25	1.29
2.333	1.93	5.333	7.72	8.333	2.25	11.33	1.29
2.417	1.93	5.417	7.72	8.417	2.25	11.42	1.29
2.500	1.93	5.500	7.72	8.500	2.25	11.50	1.29
2.583	1.93	5.583	30.86	8.583	2.25	11.58	1.29
2.667	1.93	5.667	30.86	8.667	2.25	11.67	1.29
2.750	1.93	5.750	30.86	8.750	2.25	11.75	1.29
2.833	1.93	5.833	84.88	8.833	2.25	11.83	1.29
2.917	1.93	5.917	84.88	8.917	2.25	11.92	1.29
3.000	1.93	6.000	84.87	9.000	2.25	12.00	1.29

Max.Eff.Inten.(mm/hr)=		84.88	66.77	
over (min)		5.00	15.00	
Storage Coeff.	(min)=	1.82 (ii)	10.89 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	15.00	
Unit Hyd. peak	(cms)=	0.32	0.09	
				TOTALS
PEAK FLOW	(cms)=	0.05	0.02	0.072 (iii)
TIME TO PEAK	(hrs)=	6.00	6.08	6.00
RUNOFF VOLUME	(mm)=	63.30	42.31	54.68
TOTAL RAINFALL	(mm)=	64.30	64.30	64.30
RUNOFF COEFFICIENT	=	0.98	0.66	0.85

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200821)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00   Dir. Conn.(%)=  83.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=      0.06          0.01
    Dep. Storage     (mm)=      1.00          1.00
    Average Slope     (%)=      1.00          2.00
    Length            (m)=     21.60         40.00
    Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
            0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
            0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
            0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
            0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
            0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
            0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
            0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
            0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
            0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
            0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
            1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
            1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
            1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
            1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
            1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
            1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
            1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
            1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
            1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
            1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
            1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
            1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
            2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
            2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
            2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
            2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
            2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
            2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
            2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
            2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
            2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
            2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
            2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
            2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
            3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

    Max.Eff.Inten.(mm/hr)=     84.88         66.77
              over (min)        5.00         10.00
    Storage Coeff.  (min)=      1.09 (ii)     5.46 (ii)
    Unit Hyd. Tpeak (min)=      5.00         10.00
    Unit Hyd. peak  (cms)=      0.34          0.16
                                                           *TOTALS*
    PEAK FLOW       (cms)=      0.01          0.00           0.016 (iii)
    TIME TO PEAK    (hrs)=      6.00          6.00            6.00
    RUNOFF VOLUME    (mm)=     63.30         42.31           59.71
    TOTAL RAINFALL   (mm)=     64.30         64.30           64.30
    RUNOFF COEFFICIENT   =      0.98          0.66            0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| ADD HYD  (  0111)|
|   1 +  2 =  3    |          AREA    QPEAK     TPEAK       R.V.
--------------------          (ha)    (cms)     (hrs)       (mm)
       ID1= 1 (200821):        0.07   0.016      6.00      59.71
     + ID2= 2 (200822):        0.39   0.072      6.00      54.68
       ==================================================
       ID = 3 (  0111):        0.46   0.088      6.00      55.44

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| STANDHYD ( 20102)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=      0.35          0.12
    Dep. Storage     (mm)=      1.00          1.00
    Average Slope     (%)=      1.00          2.00
    Length            (m)=     55.98         40.00
    Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
            0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
            0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
            0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
            0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
            0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
            0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
            0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
            0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
            0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
            0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
            1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
            1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
            1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
            1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
            1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
            1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
            1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
            1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
            1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
            1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
            1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
            1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
            2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
            2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
            2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
            2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
            2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
            2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
            2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
            2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
            2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
            2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
            2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
            2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
            3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

    Max.Eff.Inten.(mm/hr)=     84.88         66.77
              over (min)        5.00         15.00
    Storage Coeff.  (min)=      1.93 (ii)    10.99 (ii)
    Unit Hyd. Tpeak (min)=      5.00         15.00
    Unit Hyd. peak  (cms)=      0.31          0.09
                                                           *TOTALS*
    PEAK FLOW       (cms)=      0.08          0.02           0.096 (iii)
    TIME TO PEAK    (hrs)=      6.00          6.08            6.00
    RUNOFF VOLUME    (mm)=     63.30         42.31           57.83
    TOTAL RAINFALL   (mm)=     64.30         64.30           64.30
    RUNOFF COEFFICIENT   =      0.98          0.66            0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
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          CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20101)|   Area    (ha)=   0.25
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  82.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=      0.20          0.05
    Dep. Storage     (mm)=      1.00          1.00
    Average Slope     (%)=      1.00          2.00
    Length            (m)=     40.82         40.00
    Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
            0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
            0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
            0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
            0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
            0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
            0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
            0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
            0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
            0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
            0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
            1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
            1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
            1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
            1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
            1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
            1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
            1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
            1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
            1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
            1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
            1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
            1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
            2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
            2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
            2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
            2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
            2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
            2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
            2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
            2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
            2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
            2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
            2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
            2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
            3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

    Max.Eff.Inten.(mm/hr)=     84.88         66.77
              over (min)        5.00         10.00
    Storage Coeff.  (min)=      1.59 (ii)     6.09 (ii)
    Unit Hyd. Tpeak (min)=      5.00         10.00
    Unit Hyd. peak  (cms)=      0.33          0.15
                                                           *TOTALS*
    PEAK FLOW       (cms)=      0.05          0.01           0.056 (iii)
    TIME TO PEAK    (hrs)=      6.00          6.00            6.00
    RUNOFF VOLUME    (mm)=     63.30         42.31           59.51
    TOTAL RAINFALL   (mm)=     64.30         64.30           64.30
    RUNOFF COEFFICIENT   =      0.98          0.66            0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0121)|
|   1 +  2 =  3    |          AREA    QPEAK     TPEAK       R.V.
--------------------          (ha)    (cms)     (hrs)       (mm)
       ID1= 1 ( 20101):        0.25   0.056      6.00      59.51
     + ID2= 2 ( 20102):        0.47   0.096      6.00      57.83
       ==================================================
       ID = 3 (  0121):        0.72   0.151      6.00      58.41

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB              |
| STANDHYD ( 20111)|   Area    (ha)=   0.87
|ID= 1 DT= 5.0 min |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=      0.58          0.29
    Dep. Storage     (mm)=      1.00          1.00
    Average Slope     (%)=      1.00          2.00
    Length            (m)=     76.16         40.00
    Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
            0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
            0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
            0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
            0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
            0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
            0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
            0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
            0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
            0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
            0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
            1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
            1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
            1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
            1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
            1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
            1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
            1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
            1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
            1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
            1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
            1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
            1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
            2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
            2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
            2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
            2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
            2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
            2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
            2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
            2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
            2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
            2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
            2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
            2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
            3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

    Max.Eff.Inten.(mm/hr)=     84.88         66.77
              over (min)        5.00         15.00
    Storage Coeff.  (min)=      2.32 (ii)    11.38 (ii)
    Unit Hyd. Tpeak (min)=      5.00         15.00
    Unit Hyd. peak  (cms)=      0.30          0.09
                                                           *TOTALS*
    PEAK FLOW       (cms)=      0.14          0.04           0.169 (iii)
    TIME TO PEAK    (hrs)=      6.00          6.08            6.00
    RUNOFF VOLUME    (mm)=     63.30         42.31           56.37
    TOTAL RAINFALL   (mm)=     64.30         64.30           64.30
    RUNOFF COEFFICIENT   =      0.98          0.66            0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB             |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
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                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.72          0.18
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      77.46         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
               0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
               0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
               0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
               0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
               0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
               0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
               0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
               0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
               0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
               0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
               1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
               1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
               1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
               1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
               1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
               1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
               1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
               1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
               1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
               1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
               1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
               1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
               2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
               2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
               2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
               2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
               2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
               2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
               2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
               2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
               2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
               2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
               2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
               2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
               3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.34 (ii)     7.07 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.30          0.14
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.17          0.03          0.197 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31          59.10
     TOTAL RAINFALL   (mm)=      64.30         64.30          64.30
     RUNOFF COEFFICIENT   =       0.98          0.66           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

          (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
               CN* =  89.0     Ia = Dep. Storage  (Above)
         (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
               THAN THE STORAGE COEFFICIENT.
        (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
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                            IMPERVIOUS    PERVIOUS (i)
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     Surface Area     (ha)=       0.90          0.21
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      86.02         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
               0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
               0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
               0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
               0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
               0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
               0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
               0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
               0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
               0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
               0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
               1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
               1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
               1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
               1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
               1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
               1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
               1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
               1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
               1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
               1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
               1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
               1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
               2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
               2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
               2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
               2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
               2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
               2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
               2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
               2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
               2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
               2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
               2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
               2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
               3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.49 (ii)     7.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.29          0.14
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.21          0.03          0.244 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31          59.31
     TOTAL RAINFALL   (mm)=      64.30         64.30          64.30
     RUNOFF COEFFICIENT   =       0.98          0.66           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

          (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
               CN* =  89.0     Ia = Dep. Storage  (Above)
         (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
               THAN THE STORAGE COEFFICIENT.
        (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40          0.07
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      55.98         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
               0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
               0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
               0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
               0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
               0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
               0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
               0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
               0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
               0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
               0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
               1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
               1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
               1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
               1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
               1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
               1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
               1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
               1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
               1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
               1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
               1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
               1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
               2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
               2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
               2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
               2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
               2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
               2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
               2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
               2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
               2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
               2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
               2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
               2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
               3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.93 (ii)     6.04 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.01          0.105 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31          60.14
     TOTAL RAINFALL   (mm)=      64.30         64.30          64.30
     RUNOFF COEFFICIENT   =       0.98          0.66           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

          (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
               CN* =  89.0     Ia = Dep. Storage  (Above)
         (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
               THAN THE STORAGE COEFFICIENT.
        (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40          0.07
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      55.98         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
               0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
               0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
               0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
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               0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
               0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
               0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
               0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
               0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
               0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
               0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
               1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
               1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
               1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
               1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
               1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
               1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
               1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
               1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
               1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
               1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
               1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
               1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
               2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
               2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
               2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
               2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
               2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
               2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
               2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
               2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
               2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
               2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
               2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
               2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
               3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88         66.77
               over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.93 (ii)     6.04 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.01          0.105 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=      63.30         42.31          60.14
     TOTAL RAINFALL   (mm)=      64.30         64.30          64.30
     RUNOFF COEFFICIENT   =       0.98          0.66           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

          (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
               CN* =  89.0     Ia = Dep. Storage  (Above)
         (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
               THAN THE STORAGE COEFFICIENT.
        (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-----------------------------------------------------------------------------

--------------------
| ADD HYD (  0136)|
|   1 + 2 = 3     |          AREA    QPEAK     TPEAK      R.V.
--------------------         (ha)    (cms)     (hrs)      (mm)
         ID1= 1 (201021):    0.47   0.105      6.00     60.14
       + ID2= 2 (201022):    0.47   0.105      6.00     60.14
         ==================================================
         ID = 3 (  0136):    0.94   0.211      6.00     60.14

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-----------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (  2005)|   Area    (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.25          0.03
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      43.20         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
```

```
          0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
          0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
          0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
          0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
          0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
          0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
          0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
          0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
          0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
          0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
          0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
          1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
          1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
          1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
          1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
          1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
          1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
          1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
          1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
          1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
          1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
          1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
          1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
          2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
          2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
          2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
          2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
          2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
          2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
          2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
          2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
          2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
          2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
          2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
          2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
          3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88          66.77
                over (min)        5.00          10.00
     Storage Coeff.  (min)=       1.65 (ii)      5.07 (ii)
     Unit Hyd. Tpeak (min)=       5.00          10.00
     Unit Hyd. peak  (cms)=       0.32           0.16
                                                          *TOTALS*
     PEAK FLOW        (cms)=      0.06           0.00         0.064 (iii)
     TIME TO PEAK     (hrs)=      6.00           6.00          6.00
     RUNOFF VOLUME     (mm)=     63.30          42.31         61.20
     TOTAL RAINFALL    (mm)=     64.30          64.30         64.30
     RUNOFF COEFFICIENT   =       0.98           0.66          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20121)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.62           0.49
     Dep. Storage     (mm)=      1.00           1.00
     Average Slope     (%)=      1.00           2.00
     Length            (m)=     86.02          40.00
     Mannings n           =     0.013          0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
          0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
          0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
          0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
          0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
          0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
          0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
          0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
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          0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
          0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
          0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
          1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
          1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
          1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
          1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
          1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
          1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
          1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
          1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
          1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
          1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
          1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
          1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
          2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
          2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
          2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
          2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
          2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
          2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
          2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
          2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
          2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
          2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
          2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
          2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
          3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88          66.77
                over (min)        5.00          15.00
     Storage Coeff.  (min)=       2.49 (ii)     11.56 (ii)
     Unit Hyd. Tpeak (min)=       5.00          15.00
     Unit Hyd. peak  (cms)=       0.29           0.09
                                                          *TOTALS*
     PEAK FLOW        (cms)=      0.15           0.06         0.200 (iii)
     TIME TO PEAK     (hrs)=      6.00           6.08          6.00
     RUNOFF VOLUME     (mm)=     63.30          42.31         54.06
     TOTAL RAINFALL    (mm)=     64.30          64.30         64.30
     RUNOFF COEFFICIENT   =       0.98           0.66          0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200111)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.09           0.01
     Dep. Storage     (mm)=      1.00           1.00
     Average Slope     (%)=      1.00           2.00
     Length            (m)=     25.82          40.00
     Mannings n           =     0.013          0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
          0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
          0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
          0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
          0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
          0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
          0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
          0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
          0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
          0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
          0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
          1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
          1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
          1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
          1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
          1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
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          1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
          1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
          1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
          1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
          1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
          1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
          1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
          2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
          2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
          2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
          2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
          2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
          2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
          2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
          2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
          2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
          2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
          2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
          2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
          3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88          66.77
                over (min)        5.00           5.00
     Storage Coeff.  (min)=       1.21 (ii)      4.71 (ii)
     Unit Hyd. Tpeak (min)=       5.00           5.00
     Unit Hyd. peak  (cms)=       0.33           0.22
                                                          *TOTALS*
     PEAK FLOW        (cms)=      0.02           0.00         0.023 (iii)
     TIME TO PEAK     (hrs)=      6.00           6.00          6.00
     RUNOFF VOLUME     (mm)=     63.30          42.31         61.09
     TOTAL RAINFALL    (mm)=     64.30          64.30         64.30
     RUNOFF COEFFICIENT   =       0.98           0.66          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200121)|   Area    (ha)=   0.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.10           0.01
     Dep. Storage     (mm)=      1.00           1.00
     Average Slope     (%)=      1.00           2.00
     Length            (m)=     27.08          40.00
     Mannings n           =     0.013          0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
          0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
          0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
          0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
          0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
          0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
          0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
          0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
          0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
          0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
          0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
          1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
          1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
          1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
          1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
          1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
          1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
          1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
          1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
          1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
          1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
          1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
          1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
          2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
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          2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
          2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
          2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
          2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
          2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
          2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
          2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
          2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
          2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
          2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
          2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
          3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=      84.88          66.77
                over (min)        5.00          10.00
     Storage Coeff.  (min)=       1.25 (ii)      5.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00          10.00
     Unit Hyd. peak  (cms)=       0.33           0.16
                                                          *TOTALS*
     PEAK FLOW        (cms)=      0.02           0.00         0.025 (iii)
     TIME TO PEAK     (hrs)=      6.00           6.00          6.00
     RUNOFF VOLUME     (mm)=     63.30          42.31         60.56
     TOTAL RAINFALL    (mm)=     64.30          64.30         64.30
     RUNOFF COEFFICIENT   =       0.98           0.66          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0142)|
|   1 + 2 = 3      |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
          ID1= 1 (200111):   0.10    0.023    6.00     61.09
        + ID2= 2 (200121):   0.11    0.025    6.00     60.56
          ==========================================
          ID = 3 (  0142):   0.21    0.048    6.00     60.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (200112)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.08           0.02
     Dep. Storage     (mm)=      1.00           1.00
     Average Slope     (%)=      1.00           2.00
     Length            (m)=     25.69          40.00
     Mannings n           =     0.013          0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
          0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
          0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
          0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
          0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
          0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
          0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
          0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
          0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
          0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
          0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
          1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
          1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
          1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
          1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
          1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
          1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
          1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
          1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
          1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
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        1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
        1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
        1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
        2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
        2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
        2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
        2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
        2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
        2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
        2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
        2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
        2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
        2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
        2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
        2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
        3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=       84.88         66.77
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.21 (ii)     6.06 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.02          0.00         0.022 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=       63.30         42.31         58.86
     TOTAL RAINFALL   (mm)=       64.30         64.30         64.30
     RUNOFF COEFFICIENT   =        0.98          0.66          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200122)|   Area    (ha)=    0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.11          0.02
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       29.44         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN | TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |  hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    1.61 | 3.083    2.57 | 6.083   11.57 |  9.08    2.25
         0.167    1.61 | 3.167    2.57 | 6.167   11.57 |  9.17    2.25
         0.250    1.61 | 3.250    2.57 | 6.250   11.57 |  9.25    2.25
         0.333    1.61 | 3.333    2.57 | 6.333   11.57 |  9.33    2.25
         0.417    1.61 | 3.417    2.57 | 6.417   11.57 |  9.42    2.25
         0.500    1.61 | 3.500    2.57 | 6.500   11.57 |  9.50    2.25
         0.583    1.61 | 3.583    2.57 | 6.583    5.14 |  9.58    2.25
         0.667    1.61 | 3.667    2.57 | 6.667    5.14 |  9.67    2.25
         0.750    1.61 | 3.750    2.57 | 6.750    5.14 |  9.75    2.25
         0.833    1.61 | 3.833    2.57 | 6.833    5.14 |  9.83    2.25
         0.917    1.61 | 3.917    2.57 | 6.917    5.14 |  9.92    2.25
         1.000    1.61 | 4.000    2.57 | 7.000    5.14 | 10.00    2.25
         1.083    1.61 | 4.083    3.86 | 7.083    3.86 | 10.08    1.29
         1.167    1.61 | 4.167    3.86 | 7.167    3.86 | 10.17    1.29
         1.250    1.61 | 4.250    3.86 | 7.250    3.86 | 10.25    1.29
         1.333    1.61 | 4.333    3.86 | 7.333    3.86 | 10.33    1.29
         1.417    1.61 | 4.417    3.86 | 7.417    3.86 | 10.42    1.29
         1.500    1.61 | 4.500    3.86 | 7.500    3.86 | 10.50    1.29
         1.583    1.61 | 4.583    5.14 | 7.583    3.86 | 10.58    1.29
         1.667    1.61 | 4.667    5.14 | 7.667    3.86 | 10.67    1.29
         1.750    1.61 | 4.750    5.14 | 7.750    3.86 | 10.75    1.29
         1.833    1.61 | 4.833    5.14 | 7.833    3.86 | 10.83    1.29
         1.917    1.61 | 4.917    5.14 | 7.917    3.86 | 10.92    1.29
         2.000    1.61 | 5.000    5.14 | 8.000    3.86 | 11.00    1.29
         2.083    1.93 | 5.083    7.72 | 8.083    2.25 | 11.08    1.29
         2.167    1.93 | 5.167    7.72 | 8.167    2.25 | 11.17    1.29
         2.250    1.93 | 5.250    7.72 | 8.250    2.25 | 11.25    1.29
         2.333    1.93 | 5.333    7.72 | 8.333    2.25 | 11.33    1.29
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        2.417    1.93 | 5.417    7.72 | 8.417    2.25 | 11.42    1.29
        2.500    1.93 | 5.500    7.72 | 8.500    2.25 | 11.50    1.29
        2.583    1.93 | 5.583   30.86 | 8.583    2.25 | 11.58    1.29
        2.667    1.93 | 5.667   30.86 | 8.667    2.25 | 11.67    1.29
        2.750    1.93 | 5.750   30.86 | 8.750    2.25 | 11.75    1.29
        2.833    1.93 | 5.833   84.88 | 8.833    2.25 | 11.83    1.29
        2.917    1.93 | 5.917   84.88 | 8.917    2.25 | 11.92    1.29
        3.000    1.93 | 6.000   84.87 | 9.000    2.25 | 12.00    1.29

     Max.Eff.Inten.(mm/hr)=       84.88         66.77
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.31 (ii)     5.30 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.03          0.00         0.029 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=       63.30         42.31         60.34
     TOTAL RAINFALL   (mm)=       64.30         64.30         64.30
     RUNOFF COEFFICIENT   =        0.98          0.66          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0145)|
|  1 + 2 =  3      |        AREA    QPEAK     TPEAK      R.V.
--------------------        (ha)    (cms)     (hrs)      (mm)
        ID1= 1 (200112):     0.10   0.022      6.00     58.86
      + ID2= 2 (200122):     0.13   0.029      6.00     60.34
        ===================================================
        ID = 3 (  0145):     0.23   0.051      6.00     59.70

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
==============================================================================================

      V    V   I    SSSSS  U    U    A    L              (v 6.1.2002)
      V    V   I    SS     U    U   A A   L
       V  V    I     SS    U    U  AAAAA  L
       V  V    I      SS   U    U  A   A  L
        VV     I    SSSSS  UUUUU  A    A  LLLLL

       OOO    TTTTT   TTTTT  H    H  Y   Y   M   M   OOO     TM
      O   O     T       T    H    H   Y Y    MM MM  O   O
      O   O     T       T    H    H    Y     M   M  O   O
       OOO      T       T    H    H    Y     M   M   OOO
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                  *****  D E T A I L E D   O U T P U T *****

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\73cb36f5
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\73cb36f5

DATE: 05-18-2022                          TIME: 12:50:58

USER:

COMMENTS: ____________________________________________________________

----------------------------------------------------------------------------------------------
  ************************************************
  ** SIMULATION : Run 15                         **
  ************************************************

--------------------
|    READ STORM    |     Filename: C:\Users\caef070146\AppD
```

```
|                  |             ata\Local\Temp\
|                  |             a3a8b910-d519-48ad-be84-5b44b6daecc3\ba607aec
| Ptotal= 76.00 mm |     Comments: 10-Yr,12-hr SCS, City of Barrie
--------------------
          TIME    RAIN | TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |  hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.25    1.90 |  3.25    3.04 |  6.25   13.68 |  9.25    2.66
          0.50    1.90 |  3.50    3.04 |  6.50   13.68 |  9.50    2.66
          0.75    1.90 |  3.75    3.04 |  6.75    6.08 |  9.75    2.66
          1.00    1.90 |  4.00    3.04 |  7.00    6.08 | 10.00    2.66
          1.25    1.90 |  4.25    4.56 |  7.25    4.56 | 10.25    1.52
          1.50    1.90 |  4.50    4.56 |  7.50    4.56 | 10.50    1.52
          1.75    1.90 |  4.75    6.08 |  7.75    4.56 | 10.75    1.52
          2.00    1.90 |  5.00    6.08 |  8.00    4.56 | 11.00    1.52
          2.25    2.28 |  5.25    9.12 |  8.25    2.66 | 11.25    1.52
          2.50    2.28 |  5.50    9.12 |  8.50    2.66 | 11.50    1.52
          2.75    2.28 |  5.75   36.48 |  8.75    2.66 | 11.75    1.52
          3.00    2.28 |  6.00  100.32 |  9.00    2.66 | 12.00    1.52

------------------------------------------------------------------------------

--------------------
| CALIB              |
| STANDHYD ( 20022)|   Area    (ha)=    0.80
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.68          0.12
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       73.03         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN | TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |  hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
         0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
         0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
         0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
         0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
         0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
         0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
         0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
         0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
         0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
         0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
         1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
         1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
         1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
         1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
         1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
         1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
         1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
         1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
         1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
         1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
         1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
         1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
         2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
         2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
         2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
         2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
         2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
         2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
         2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
         2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
         2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
         2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
         2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
         2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
         3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        2.11 (ii)     5.96 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.19          0.02         0.213 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00          6.00
```

```
     RUNOFF VOLUME    (mm)=       75.00         52.87         71.68
     TOTAL RAINFALL   (mm)=       76.00         76.00         76.00
     RUNOFF COEFFICIENT   =        0.99          0.70          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------

--------------------
| CALIB              |
| STANDHYD ( 20021)|   Area    (ha)=    0.70
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.62          0.08
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       68.31         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN | TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |  hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
         0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
         0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
         0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
         0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
         0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
         0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
         0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
         0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
         0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
         0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
         1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
         1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
         1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
         1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
         1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
         1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
         1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
         1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
         1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
         1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
         1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
         1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
         2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
         2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
         2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
         2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
         2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
         2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
         2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
         2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
         2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
         2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
         2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
         2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
         3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        2.03 (ii)     5.37 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.17          0.02         0.189 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87         72.56
     TOTAL RAINFALL   (mm)=       76.00         76.00         76.00
     RUNOFF COEFFICIENT   =        0.99          0.70          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
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  (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
       THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20031)|   Area    (ha)=   0.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.39          0.04
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    53.54         40.00
     Mannings n          =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
                 hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
               0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
               0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
               0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
               0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
               0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
               0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
               0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
               0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
               0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
               0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
               0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
               1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
               1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
               1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
               1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
               1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
               1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
               1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
               1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
               1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
               1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
               1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
               1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
               2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
               2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
               2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
               2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
               2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
               2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
               2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
               2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
               2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
               2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
               2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
               2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
               3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.75 (ii)     4.95 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.32          0.22
                                                            *TOTALS*
     PEAK FLOW        (cms)=        0.11          0.01          0.117 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=       75.00         52.87          72.78
     TOTAL RAINFALL    (mm)=       76.00         76.00          76.00
     RUNOFF COEFFICIENT    =        0.99          0.70           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20032)|   Area    (ha)=   0.47
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|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
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                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.41          0.06
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    55.98         40.00
     Mannings n          =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
                 hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
               0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
               0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
               0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
               0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
               0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
               0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
               0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
               0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
               0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
               0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
               0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
               1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
               1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
               1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
               1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
               1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
               1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
               1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
               1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
               1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
               1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
               1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
               1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
               2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
               2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
               2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
               2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
               2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
               2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
               2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
               2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
               2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
               2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
               2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
               2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
               3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.80 (ii)     5.40 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.16
                                                            *TOTALS*
     PEAK FLOW        (cms)=        0.11          0.01          0.126 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=       75.00         52.87          72.11
     TOTAL RAINFALL    (mm)=       76.00         76.00          76.00
     RUNOFF COEFFICIENT    =        0.99          0.70           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
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                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.31          0.04
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    48.30         40.00
     Mannings n          =     0.013         0.290
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         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
                 hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
               0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
               0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
               0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
               0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
               0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
               0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
               0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
               0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
               0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
               0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
               0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
               1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
               1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
               1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
               1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
               1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
               1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
               1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
               1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
               1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
               1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
               1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
               1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
               2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
               2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
               2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
               2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
               2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
               2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
               2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
               2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
               2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
               2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
               2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
               2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
               3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.65 (ii)     4.99 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.32          0.22
                                                            *TOTALS*
     PEAK FLOW        (cms)=        0.09          0.01          0.095 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=       75.00         52.87          72.56
     TOTAL RAINFALL    (mm)=       76.00         76.00          76.00
     RUNOFF COEFFICIENT    =        0.99          0.70           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20042)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.31          0.05
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    48.99         40.00
     Mannings n          =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
                 hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
               0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
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               0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
               0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
               0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
               0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
               0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
               0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
               0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
               0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
               0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
               0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
               1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
               1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
               1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
               1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
               1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
               1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
               1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
               1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
               1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
               1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
               1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
               1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
               2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
               2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
               2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
               2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
               2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
               2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
               2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
               2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
               2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
               2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
               2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
               2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
               3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52
     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.66 (ii)     5.51 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.16
                                                            *TOTALS*
     PEAK FLOW        (cms)=        0.09          0.01          0.096 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=       75.00         52.87          71.67
     TOTAL RAINFALL    (mm)=       76.00         76.00          76.00
     RUNOFF COEFFICIENT    =        0.99          0.70           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN*  =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20052)|   Area    (ha)=   0.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.23          0.06
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    43.97         40.00
     Mannings n          =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
                 hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
               0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
               0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
               0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
               0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
               0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
               0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
               0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
               0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
               0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
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      0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
      0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
      1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
      1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
      1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
      1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
      1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
      1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
      1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
      1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
      1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
      1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
      1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
      1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
      2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
      2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
      2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
      2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
      2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
      2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
      2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
      2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
      2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
      2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
      2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
      2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
      3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.56 (ii)     6.20 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.06          0.01          0.076 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87          70.12
     TOTAL RAINFALL   (mm)=       76.00         76.00          76.00
     RUNOFF COEFFICIENT   =        0.99          0.70           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.58          0.15
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      69.76         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN | TIME     RAIN |' TIME     RAIN | TIME     RAIN
        hrs   mm/hr |  hrs    mm/hr |'  hrs    mm/hr |  hrs    mm/hr
      0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
      0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
      0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
      0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
      0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
      0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
      0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
      0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
      0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
      0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
      0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
      1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
      1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
      1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
      1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
      1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
      1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
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      1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
      1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
      1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
      1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
      1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
      1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
      2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
      2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
      2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
      2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
      2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
      2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
      2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
      2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
      2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
      2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
      2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
      2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
      3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        2.06 (ii)     6.48 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.16          0.03          0.191 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87          70.57
     TOTAL RAINFALL   (mm)=       76.00         76.00          76.00
     RUNOFF COEFFICIENT   =        0.99          0.70           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.55          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.83         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN | TIME     RAIN |' TIME     RAIN | TIME     RAIN
        hrs   mm/hr |  hrs    mm/hr |'  hrs    mm/hr |  hrs    mm/hr
      0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
      0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
      0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
      0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
      0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
      0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
      0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
      0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
      0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
      0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
      0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
      1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
      1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
      1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
      1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
      1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
      1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
      1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
      1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
      1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
      1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
      1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
      1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
      2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
      2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
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      2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
      2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
      2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
      2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
      2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
      2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
      2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
      2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
      2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
      2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
      3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.99 (ii)     5.84 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.15          0.02          0.174 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87          71.68
     TOTAL RAINFALL   (mm)=       76.00         76.00          76.00
     RUNOFF COEFFICIENT   =        0.99          0.70           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.54          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.32         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN | TIME     RAIN |' TIME     RAIN | TIME     RAIN
        hrs   mm/hr |  hrs    mm/hr |'  hrs    mm/hr |  hrs    mm/hr
      0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
      0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
      0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
      0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
      0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
      0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
      0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
      0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
      0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
      0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
      0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
      1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
      1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
      1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
      1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
      1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
      1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
      1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
      1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
      1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
      1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
      1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
      1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
      2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
      2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
      2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
      2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
      2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
      2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
      2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
      2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
      2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
      2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
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      2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
      2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
      3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.98 (ii)     5.95 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.15          0.02          0.170 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87          71.45
     TOTAL RAINFALL   (mm)=       76.00         76.00          76.00
     RUNOFF COEFFICIENT   =        0.99          0.70           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.49          0.09
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      62.18         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN | TIME     RAIN |' TIME     RAIN | TIME     RAIN
        hrs   mm/hr |  hrs    mm/hr |'  hrs    mm/hr |  hrs    mm/hr
      0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
      0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
      0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
      0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
      0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
      0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
      0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
      0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
      0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
      0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
      0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
      1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
      1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
      1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
      1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
      1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
      1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
      1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
      1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
      1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
      1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
      1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
      1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
      2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
      2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
      2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
      2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
      2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
      2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
      2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
      2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
      2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
      2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
      2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
      2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
      3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=      100.32         82.63
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.92 (ii)     5.77 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
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     Unit Hyd. peak  (cms)=       0.31          0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.14          0.02         0.155 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      75.00         52.87         71.68
     TOTAL RAINFALL   (mm)=      76.00         76.00         76.00
     RUNOFF COEFFICIENT   =       0.99          0.70          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20092)|   Area     (ha)=    0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.51          0.12
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      64.81         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                  0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                  0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                  0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                  0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
                  0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                  0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                  0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                  0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                  0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                  0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                  1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                  1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
                  1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
                  1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
                  1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
                  1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
                  1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
                  1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
                  1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
                  1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
                  1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
                  1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
                  2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
                  2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
                  2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
                  2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
                  2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
                  2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
                  2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
                  2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
                  2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
                  2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
                  2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
                  2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
                  3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.97 (ii)     6.28 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.14          0.02         0.166 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      75.00         52.87         70.79
     TOTAL RAINFALL   (mm)=      76.00         76.00         76.00
     RUNOFF COEFFICIENT   =       0.99          0.70          0.93
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***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20091)|   Area     (ha)=    0.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.00   Dir. Conn.(%)=  77.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31          0.09
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      51.64         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                  0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                  0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                  0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                  0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
                  0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                  0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                  0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                  0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                  0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                  0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                  1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                  1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
                  1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
                  1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
                  1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
                  1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
                  1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
                  1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
                  1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
                  1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
                  1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
                  1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
                  2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
                  2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
                  2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
                  2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
                  2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
                  2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
                  2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
                  2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
                  2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
                  2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
                  2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
                  2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
                  3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.72 (ii)     6.47 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.14
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.02         0.104 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      75.00         52.87         69.90
     TOTAL RAINFALL   (mm)=      76.00         76.00         76.00
     RUNOFF COEFFICIENT   =       0.99          0.70          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB              |
| STANDHYD (200812)|   Area     (ha)=    0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  70.00   Dir. Conn.(%)=  70.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.27          0.11
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      50.33         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                  0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                  0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                  0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                  0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
                  0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                  0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                  0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                  0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                  0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                  0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                  1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                  1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
                  1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
                  1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
                  1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
                  1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
                  1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
                  1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
                  1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
                  1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
                  1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
                  1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
                  2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
                  2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
                  2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
                  2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
                  2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
                  2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
                  2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
                  2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
                  2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
                  2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
                  2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
                  2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
                  3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       1.69 (ii)    10.02 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.32          0.10
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.07          0.02         0.091 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.08          6.00
     RUNOFF VOLUME    (mm)=      75.00         52.87         68.35
     TOTAL RAINFALL   (mm)=      76.00         76.00         76.00
     RUNOFF COEFFICIENT   =       0.99          0.70          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200811)|   Area     (ha)=    0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.06          0.01
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     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      21.60         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                  0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                  0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                  0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                  0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
                  0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                  0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                  0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                  0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                  0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                  0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                  1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                  1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
                  1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
                  1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
                  1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
                  1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
                  1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
                  1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
                  1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
                  1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
                  1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
                  1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
                  2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
                  2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
                  2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
                  2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
                  2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
                  2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
                  2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
                  2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
                  2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
                  2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
                  2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
                  2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
                  3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.02 (ii)     4.99 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.22
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.02          0.00         0.019 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      75.00         52.87         71.45
     TOTAL RAINFALL   (mm)=      76.00         76.00         76.00
     RUNOFF COEFFICIENT   =       0.99          0.70          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-----------------------------------------------------------------------------
--------------------
| ADD HYD  (  0110)|
|   1 + 2 = 3      |         AREA    QPEAK     TPEAK      R.V.
--------------------         (ha)    (cms)     (hrs)      (mm)
         ID1= 1 (200811):    0.07    0.019      6.00     71.45
       + ID2= 2 (200812):    0.38    0.091      6.00     68.35
         ===================================================
         ID = 3 (  0110):    0.45    0.110      6.00     68.83

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-----------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (200822)|   Area     (ha)=    0.39
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|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.23          0.16
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     50.99         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08   2.66
                0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17   2.66
                0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25   2.66
                0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33   2.66
                0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42   2.66
                0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50   2.66
                0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58   2.66
                0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67   2.66
                0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75   2.66
                0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83   2.66
                0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92   2.66
                1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00   2.66
                1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08   1.52
                1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17   1.52
                1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25   1.52
                1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33   1.52
                1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42   1.52
                1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50   1.52
                1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58   1.52
                1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67   1.52
                1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75   1.52
                1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83   1.52
                1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92   1.52
                2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00   1.52
                2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08   1.52
                2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17   1.52
                2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25   1.52
                2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33   1.52
                2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42   1.52
                2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50   1.52
                2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58   1.52
                2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67   1.52
                2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75   1.52
                2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83   1.52
                2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92   1.52
                3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00   1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
               over (min)          5.00         15.00
     Storage Coeff.  (min)=        1.70 (ii)    10.03 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.32          0.10
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.06          0.03       0.088 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87       65.91
     TOTAL RAINFALL   (mm)=       76.00         76.00       76.00
     RUNOFF COEFFICIENT   =        0.99          0.70        0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200821)|   Area     (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00   Dir. Conn.(%)=  83.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.06          0.01
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     21.60         40.00
     Mannings n           =     0.013         0.290
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         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08   2.66
                0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17   2.66
                0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25   2.66
                0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33   2.66
                0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42   2.66
                0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50   2.66
                0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58   2.66
                0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67   2.66
                0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75   2.66
                0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83   2.66
                0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92   2.66
                1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00   2.66
                1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08   1.52
                1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17   1.52
                1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25   1.52
                1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33   1.52
                1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42   1.52
                1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50   1.52
                1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58   1.52
                1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67   1.52
                1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75   1.52
                1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83   1.52
                1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92   1.52
                2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00   1.52
                2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08   1.52
                2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17   1.52
                2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25   1.52
                2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33   1.52
                2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42   1.52
                2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50   1.52
                2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58   1.52
                2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67   1.52
                2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75   1.52
                2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83   1.52
                2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92   1.52
                3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00   1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
               over (min)          5.00         10.00
     Storage Coeff.  (min)=        1.02 (ii)     5.10 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.34          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.02          0.00       0.019 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87       71.21
     TOTAL RAINFALL   (mm)=       76.00         76.00       76.00
     RUNOFF COEFFICIENT   =        0.99          0.70        0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0111)|
|   1 + 2 =  3     |           AREA    QPEAK     TPEAK       R.V.
--------------------           (ha)    (cms)     (hrs)       (mm)
        ID1= 1 (200821):       0.07    0.019      6.00      71.21
      + ID2= 2 (200822):       0.39    0.088      6.00      65.91
        ==================================================
        ID = 3 (  0111):       0.46    0.106      6.00      66.71

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| STANDHYD ( 20102)|   Area     (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.35          0.12
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     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08   2.66
                0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17   2.66
                0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25   2.66
                0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33   2.66
                0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42   2.66
                0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50   2.66
                0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58   2.66
                0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67   2.66
                0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75   2.66
                0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83   2.66
                0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92   2.66
                1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00   2.66
                1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08   1.52
                1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17   1.52
                1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25   1.52
                1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33   1.52
                1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42   1.52
                1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50   1.52
                1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58   1.52
                1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67   1.52
                1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75   1.52
                1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83   1.52
                1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92   1.52
                2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00   1.52
                2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08   1.52
                2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17   1.52
                2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25   1.52
                2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33   1.52
                2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42   1.52
                2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50   1.52
                2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58   1.52
                2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67   1.52
                2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75   1.52
                2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83   1.52
                2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92   1.52
                3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00   1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
               over (min)          5.00         15.00
     Storage Coeff.  (min)=        1.80 (ii)    10.13 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.32          0.10
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.10          0.02       0.115 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.08        6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87       69.23
     TOTAL RAINFALL   (mm)=       76.00         76.00       76.00
     RUNOFF COEFFICIENT   =        0.99          0.70        0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20101)|   Area     (ha)=   0.25
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  82.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.20          0.05
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     40.82         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                              ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08   2.66
                0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17   2.66
                0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25   2.66
                0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33   2.66
                0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42   2.66
                0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50   2.66
                0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58   2.66
                0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67   2.66
                0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75   2.66
                0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83   2.66
                0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92   2.66
                1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00   2.66
                1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08   1.52
                1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17   1.52
                1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25   1.52
                1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33   1.52
                1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42   1.52
                1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50   1.52
                1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58   1.52
                1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67   1.52
                1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75   1.52
                1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83   1.52
                1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92   1.52
                2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00   1.52
                2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08   1.52
                2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17   1.52
                2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25   1.52
                2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33   1.52
                2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42   1.52
                2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50   1.52
                2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58   1.52
                2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67   1.52
                2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75   1.52
                2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83   1.52
                2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92   1.52
                3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00   1.52

     Max.Eff.Inten.(mm/hr)=     100.32         82.63
               over (min)          5.00         10.00
     Storage Coeff.  (min)=        1.49 (ii)     5.69 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.06          0.01       0.066 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=       75.00         52.87       71.00
     TOTAL RAINFALL   (mm)=       76.00         76.00       76.00
     RUNOFF COEFFICIENT   =        0.99          0.70        0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0121)|
|   1 + 2 =  3     |           AREA    QPEAK     TPEAK       R.V.
--------------------           (ha)    (cms)     (hrs)       (mm)
        ID1= 1 ( 20101):       0.25    0.066      6.00      71.00
      + ID2= 2 ( 20102):       0.47    0.115      6.00      69.23
        ==================================================
        ID = 3 (  0121):       0.72    0.181      6.00      69.85

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| STANDHYD ( 20111)|   Area     (ha)=   0.87
|ID= 1 DT= 5.0 min |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                         IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.58          0.29
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     76.16         40.00
     Mannings n           =     0.013         0.290
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   NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

              ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
  0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
  0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
  0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
  0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
  0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
  0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
  0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
  0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
  0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
  0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
  0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
  1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
  1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
  1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
  1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
  1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
  1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
  1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
  1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
  1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
  1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
  1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
  1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
  2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
  2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
  2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
  2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
  2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
  2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
  2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
  2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
  2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
  2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
  2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
  2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
  3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

 Max.Eff.Inten.(mm/hr)=     100.32        82.63
            over (min)        5.00        15.00
 Storage Coeff.  (min)=       2.17 (ii)   10.49 (ii)
 Unit Hyd. Tpeak (min)=       5.00        15.00
 Unit Hyd. peak  (cms)=       0.31         0.09
                                                       *TOTALS*
 PEAK FLOW       (cms)=       0.16         0.05         0.204 (iii)
 TIME TO PEAK    (hrs)=       6.00         6.08          6.00
 RUNOFF VOLUME    (mm)=      75.00        52.87         67.69
 TOTAL RAINFALL   (mm)=      76.00        76.00         76.00
 RUNOFF COEFFICIENT  =        0.99         0.70          0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=      0.72          0.18
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     77.46         40.00
     Mannings n           =     0.013         0.290

   NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

              ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
  0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
  0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
  0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
  0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
  0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
  0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
  0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
  0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
  0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
  0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
  0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
  1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
  1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
  1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
  1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
  1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
  1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
  1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
  1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
  1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
  1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
  1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
  1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
  2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
  2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
  2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
  2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
  2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
  2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
  2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
  2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
  2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
  2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
  2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
  2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
  3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

 Max.Eff.Inten.(mm/hr)=     100.32        82.63
            over (min)        5.00        10.00
 Storage Coeff.  (min)=       2.19 (ii)    6.61 (ii)
 Unit Hyd. Tpeak (min)=       5.00        10.00
 Unit Hyd. peak  (cms)=       0.31         0.14
                                                       *TOTALS*
 PEAK FLOW       (cms)=       0.20         0.04         0.236 (iii)
 TIME TO PEAK    (hrs)=       6.00         6.00          6.00
 RUNOFF VOLUME    (mm)=      75.00        52.87         70.57
 TOTAL RAINFALL   (mm)=      76.00        76.00         76.00
 RUNOFF COEFFICIENT  =        0.99         0.70          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                            IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=      0.90          0.21
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     86.02         40.00
     Mannings n           =     0.013         0.290

   NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

              ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
  0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
  0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
  0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
  0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
  0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
  0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
  0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
  0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
  0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
  0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
  0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
  1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
  1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
  1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
  1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
  1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
  1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
  1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
  1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
  1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
  1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
  1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
  1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
  2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
  2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
  2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
  2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
  2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
  2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
  2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
  2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
  2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
  2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
  2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
  2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
  3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

 Max.Eff.Inten.(mm/hr)=     100.32        82.63
            over (min)        5.00        10.00
 Storage Coeff.  (min)=       2.33 (ii)    6.65 (ii)
 Unit Hyd. Tpeak (min)=       5.00        10.00
 Unit Hyd. peak  (cms)=       0.30         0.14
                                                       *TOTALS*
 PEAK FLOW       (cms)=       0.25         0.04         0.291 (iii)
 TIME TO PEAK    (hrs)=       6.00         6.00          6.00
 RUNOFF VOLUME    (mm)=      75.00        52.87         70.79
 TOTAL RAINFALL   (mm)=      76.00        76.00         76.00
 RUNOFF COEFFICIENT  =        0.99         0.70          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=      0.40          0.07
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n           =     0.013         0.290

   NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

              ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
  0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
  0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
  0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
  0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
  0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
  0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
  0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
  0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
  0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
  0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
  0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
  1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
  1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
  1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
  1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
  1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
  1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
  1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
  1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
  1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
  1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
  1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
  1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
  2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
  2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
  2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
  2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
  2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
  2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
  2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
  2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
  2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
  2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
  2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
  2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
  3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

 Max.Eff.Inten.(mm/hr)=     100.32        82.63
            over (min)        5.00        10.00
 Storage Coeff.  (min)=       1.80 (ii)    5.65 (ii)
 Unit Hyd. Tpeak (min)=       5.00        10.00
 Unit Hyd. peak  (cms)=       0.32         0.15
                                                       *TOTALS*
 PEAK FLOW       (cms)=       0.11         0.01         0.126 (iii)
 TIME TO PEAK    (hrs)=       6.00         6.00          6.00
 RUNOFF VOLUME    (mm)=      75.00        52.87         71.67
 TOTAL RAINFALL   (mm)=      76.00        76.00         76.00
 RUNOFF COEFFICIENT  =        0.99         0.70          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

---------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=      0.40          0.07
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n           =     0.013         0.290

   NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

              ---- TRANSFORMED HYETOGRAPH ----
   TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
    hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
  0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
  0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
  0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
  0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
  0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
  0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
  0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
  0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
  0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
  0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
  0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
  1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
  1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
  1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
  1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
  1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
  1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
  1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
  1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
  1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
  1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
  1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
  1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
  2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
  2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
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          2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
          2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
          2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
          2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
          2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
          2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
          2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
          2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
          2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
          2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
          3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32          82.63
                over (min)        5.00          10.00
     Storage Coeff.  (min)=       1.80 (ii)      5.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00          10.00
     Unit Hyd. peak  (cms)=       0.32           0.15
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.11           0.01        0.126 (iii)
     TIME TO PEAK    (hrs)=       6.00           6.00        6.00
     RUNOFF VOLUME    (mm)=      75.00          52.87       71.67
     TOTAL RAINFALL   (mm)=      76.00          76.00       76.00
     RUNOFF COEFFICIENT   =       0.99           0.70        0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0136)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (201021):    0.47    0.126     6.00    71.67
      + ID2= 2 (201022):    0.47    0.126     6.00    71.67
        ===============================================
        ID = 3 (  0136):    0.94    0.251     6.00    71.67

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD (  2005)|   Area    (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.25          0.03
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    43.20         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
          TIME     RAIN | TIME     RAIN |'  TIME    RAIN |  TIME     RAIN
           hrs    mm/hr |  hrs    mm/hr |'   hrs   mm/hr |   hrs    mm/hr
          0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
          0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
          0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
          0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
          0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
          0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
          0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
          0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
          0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
          0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
          0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
          1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
          1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
          1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
          1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
          1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
          1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
          1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
          1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
          1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
          1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
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          1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
          1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
          2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
          2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
          2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
          2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
          2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
          2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
          2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
          2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
          2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
          2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
          2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
          2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
          3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32          82.63
                over (min)        5.00           5.00
     Storage Coeff.  (min)=       1.54 (ii)      4.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00           5.00
     Unit Hyd. peak  (cms)=       0.33           0.22
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.07           0.01        0.076 (iii)
     TIME TO PEAK    (hrs)=       6.00           6.00        6.00
     RUNOFF VOLUME    (mm)=      75.00          52.87       72.78
     TOTAL RAINFALL   (mm)=      76.00          76.00       76.00
     RUNOFF COEFFICIENT   =       0.99           0.70        0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20121)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.62          0.49
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    86.02         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
          TIME     RAIN | TIME     RAIN |'  TIME    RAIN |  TIME     RAIN
           hrs    mm/hr |  hrs    mm/hr |'   hrs   mm/hr |   hrs    mm/hr
          0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
          0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
          0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
          0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
          0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
          0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
          0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
          0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
          0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
          0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
          0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
          1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
          1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
          1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
          1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
          1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
          1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
          1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
          1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
          1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
          1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
          1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
          1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
          2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
          2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
          2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
          2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
          2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
          2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
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          2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
          2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
          2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
          2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
          2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
          2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
          3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32          82.63
                over (min)        5.00          15.00
     Storage Coeff.  (min)=       2.33 (ii)     10.66 (ii)
     Unit Hyd. Tpeak (min)=       5.00          15.00
     Unit Hyd. peak  (cms)=       0.30           0.09
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.17           0.08        0.243 (iii)
     TIME TO PEAK    (hrs)=       6.00           6.08        6.00
     RUNOFF VOLUME    (mm)=      75.00          52.87       65.26
     TOTAL RAINFALL   (mm)=      76.00          76.00       76.00
     RUNOFF COEFFICIENT   =       0.99           0.70        0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200111)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.09          0.01
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    25.82         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
          TIME     RAIN | TIME     RAIN |'  TIME    RAIN |  TIME     RAIN
           hrs    mm/hr |  hrs    mm/hr |'   hrs   mm/hr |   hrs    mm/hr
          0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
          0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
          0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
          0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
          0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
          0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
          0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
          0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
          0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
          0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
          0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
          1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
          1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
          1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
          1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
          1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
          1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
          1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
          1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
          1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
          1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
          1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
          1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
          2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
          2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
          2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
          2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
          2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
          2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
          2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
          2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
          2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
          2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
          2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
          2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
          3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52
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     Max.Eff.Inten.(mm/hr)=     100.32          82.63
                over (min)        5.00           5.00
     Storage Coeff.  (min)=       1.13 (ii)      4.40 (ii)
     Unit Hyd. Tpeak (min)=       5.00           5.00
     Unit Hyd. peak  (cms)=       0.34           0.23
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.02           0.00        0.027 (iii)
     TIME TO PEAK    (hrs)=       6.00           6.00        6.00
     RUNOFF VOLUME    (mm)=      75.00          52.87       72.67
     TOTAL RAINFALL   (mm)=      76.00          76.00       76.00
     RUNOFF COEFFICIENT   =       0.99           0.70        0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD (200121)|   Area    (ha)=   0.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.10          0.01
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    27.08         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
          TIME     RAIN | TIME     RAIN |'  TIME    RAIN |  TIME     RAIN
           hrs    mm/hr |  hrs    mm/hr |'   hrs   mm/hr |   hrs    mm/hr
          0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
          0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
          0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
          0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
          0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
          0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
          0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
          0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
          0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
          0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
          0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
          1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
          1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
          1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
          1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
          1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
          1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
          1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
          1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
          1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
          1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
          1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
          1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
          2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
          2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
          2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
          2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
          2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
          2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
          2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
          2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
          2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
          2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
          2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
          2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
          3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=     100.32          82.63
                over (min)        5.00           5.00
     Storage Coeff.  (min)=       1.17 (ii)      4.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00           5.00
     Unit Hyd. peak  (cms)=       0.34           0.22
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.03           0.00        0.030 (iii)
     TIME TO PEAK    (hrs)=       6.00           6.00        6.00
```

```
     RUNOFF VOLUME     (mm)=        75.00          52.87            72.11
     TOTAL RAINFALL    (mm)=        76.00          76.00            76.00
     RUNOFF COEFFICIENT   =          0.99           0.70             0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------


--------------------
| ADD HYD  (  0142)|
|   1 + 2 =  3     |         AREA    QPEAK     TPEAK       R.V.
--------------------         (ha)    (cms)     (hrs)       (mm)
       ID1= 1 (200111):      0.10   0.027      6.00     72.67
     + ID2= 2 (200121):      0.11   0.030      6.00     72.11
       ==================================================
       ID = 3 (  0142):      0.21   0.057      6.00     72.38

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (200112)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.08          0.02
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      25.69         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                  0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                  0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                  0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                  0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
                  0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                  0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                  0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                  0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                  0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                  0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                  1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                  1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
                  1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
                  1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
                  1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
                  1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
                  1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
                  1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
                  1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
                  1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
                  1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
                  1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
                  2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
                  2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
                  2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
                  2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
                  2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
                  2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
                  2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
                  2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
                  2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
                  2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
                  2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
                  2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
                  3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=       100.32          82.63
                over (min)          5.00          10.00
     Storage Coeff.  (min)=         1.13 (ii)      5.66 (ii)
     Unit Hyd. Tpeak (min)=         5.00          10.00
```

```
     Unit Hyd. peak  (cms)=         0.34           0.15
                                                              *TOTALS*
     PEAK FLOW       (cms)=         0.02           0.00           0.026 (iii)
     TIME TO PEAK    (hrs)=         6.00           6.00            6.00
     RUNOFF VOLUME    (mm)=        75.00          52.87           70.32
     TOTAL RAINFALL   (mm)=        76.00          76.00           76.00
     RUNOFF COEFFICIENT   =         0.99           0.70            0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (200122)|   Area    (ha)=   0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.11          0.02
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      29.44         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.083    1.90 | 3.083    3.04 | 6.083   13.68 |  9.08    2.66
                  0.167    1.90 | 3.167    3.04 | 6.167   13.68 |  9.17    2.66
                  0.250    1.90 | 3.250    3.04 | 6.250   13.68 |  9.25    2.66
                  0.333    1.90 | 3.333    3.04 | 6.333   13.68 |  9.33    2.66
                  0.417    1.90 | 3.417    3.04 | 6.417   13.68 |  9.42    2.66
                  0.500    1.90 | 3.500    3.04 | 6.500   13.68 |  9.50    2.66
                  0.583    1.90 | 3.583    3.04 | 6.583    6.08 |  9.58    2.66
                  0.667    1.90 | 3.667    3.04 | 6.667    6.08 |  9.67    2.66
                  0.750    1.90 | 3.750    3.04 | 6.750    6.08 |  9.75    2.66
                  0.833    1.90 | 3.833    3.04 | 6.833    6.08 |  9.83    2.66
                  0.917    1.90 | 3.917    3.04 | 6.917    6.08 |  9.92    2.66
                  1.000    1.90 | 4.000    3.04 | 7.000    6.08 | 10.00    2.66
                  1.083    1.90 | 4.083    4.56 | 7.083    4.56 | 10.08    1.52
                  1.167    1.90 | 4.167    4.56 | 7.167    4.56 | 10.17    1.52
                  1.250    1.90 | 4.250    4.56 | 7.250    4.56 | 10.25    1.52
                  1.333    1.90 | 4.333    4.56 | 7.333    4.56 | 10.33    1.52
                  1.417    1.90 | 4.417    4.56 | 7.417    4.56 | 10.42    1.52
                  1.500    1.90 | 4.500    4.56 | 7.500    4.56 | 10.50    1.52
                  1.583    1.90 | 4.583    6.08 | 7.583    4.56 | 10.58    1.52
                  1.667    1.90 | 4.667    6.08 | 7.667    4.56 | 10.67    1.52
                  1.750    1.90 | 4.750    6.08 | 7.750    4.56 | 10.75    1.52
                  1.833    1.90 | 4.833    6.08 | 7.833    4.56 | 10.83    1.52
                  1.917    1.90 | 4.917    6.08 | 7.917    4.56 | 10.92    1.52
                  2.000    1.90 | 5.000    6.08 | 8.000    4.56 | 11.00    1.52
                  2.083    2.28 | 5.083    9.12 | 8.083    2.66 | 11.08    1.52
                  2.167    2.28 | 5.167    9.12 | 8.167    2.66 | 11.17    1.52
                  2.250    2.28 | 5.250    9.12 | 8.250    2.66 | 11.25    1.52
                  2.333    2.28 | 5.333    9.12 | 8.333    2.66 | 11.33    1.52
                  2.417    2.28 | 5.417    9.12 | 8.417    2.66 | 11.42    1.52
                  2.500    2.28 | 5.500    9.12 | 8.500    2.66 | 11.50    1.52
                  2.583    2.28 | 5.583   36.48 | 8.583    2.66 | 11.58    1.52
                  2.667    2.28 | 5.667   36.48 | 8.667    2.66 | 11.67    1.52
                  2.750    2.28 | 5.750   36.48 | 8.750    2.66 | 11.75    1.52
                  2.833    2.28 | 5.833  100.32 | 8.833    2.66 | 11.83    1.52
                  2.917    2.28 | 5.917  100.32 | 8.917    2.66 | 11.92    1.52
                  3.000    2.28 | 6.000  100.32 | 9.000    2.66 | 12.00    1.52

     Max.Eff.Inten.(mm/hr)=       100.32          82.63
                over (min)          5.00           5.00
     Storage Coeff.  (min)=         1.23 (ii)      4.95 (ii)
     Unit Hyd. Tpeak (min)=         5.00           5.00
     Unit Hyd. peak  (cms)=         0.33           0.22
                                                              *TOTALS*
     PEAK FLOW       (cms)=         0.03           0.00           0.035 (iii)
     TIME TO PEAK    (hrs)=         6.00           6.00            6.00
     RUNOFF VOLUME    (mm)=        75.00          52.87           71.89
     TOTAL RAINFALL   (mm)=        76.00          76.00           76.00
     RUNOFF COEFFICIENT   =         0.99           0.70            0.95
```

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------


--------------------
| ADD HYD  (  0145)|
|   1 + 2 =  3     |         AREA    QPEAK     TPEAK       R.V.
--------------------         (ha)    (cms)     (hrs)       (mm)
       ID1= 1 (200112):      0.10   0.026      6.00     70.32
     + ID2= 2 (200122):      0.13   0.035      6.00     71.89
       ==================================================
       ID = 3 (  0145):      0.23   0.061      6.00     71.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
==============================================================================================

        V     V    I     SSSSS   U     U     A      L                 (v 6.1.2002)
         V   V     I     SS      U     U    A A     L
          V V      I       SS    U     U   AAAAA    L
           V V     I        SS   U     U   A   A    L
            VV     I     SSSSS   UUUUU    A     A   LLLLL

        OOO    TTTTT   TTTTT   H     H   Y     Y   M     M    OOO      TM
       O   O     T       T     H     H    Y   Y    MM   MM   O   O
       O   O     T       T     H     H      Y      M     M   O   O
        OOO      T       T     H     H      Y      M     M    OOO
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                    *****  D E T A I L E D    O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\d5d7529a
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\d5d7529a


DATE: 05-18-2022                              TIME: 12:51:00

USER:



COMMENTS: ____________________________________________________________


----------------------------------------------------------------------------------------------
  **************************************************
  ** SIMULATION : Run 16                          **
  **************************************************


--------------------
|    READ STORM    |     Filename: C:\Users\caef070146\AppD
|                  |               ata\Local\Temp\
|                  |               a3a8b910-d519-48ad-be84-5b44b6daecc3\2d33b8b1
| Ptotal= 90.70 mm |     Comments: 25-Yr,12-hr SCS, City of Barrie
--------------------
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                   0.25    2.27 |  3.25    3.63 |  6.25   16.33 |  9.25    3.17
                   0.50    2.27 |  3.50    3.63 |  6.50   16.33 |  9.50    3.17
                   0.75    2.27 |  3.75    3.63 |  6.75    7.26 |  9.75    3.17
                   1.00    2.27 |  4.00    3.63 |  7.00    7.26 | 10.00    3.17
                   1.25    2.27 |  4.25    5.44 |  7.25    5.44 | 10.25    1.81
                   1.50    2.27 |  4.50    5.44 |  7.50    5.44 | 10.50    1.81
                   1.75    2.27 |  4.75    7.26 |  7.75    5.44 | 10.75    1.81
                   2.00    2.27 |  5.00    7.26 |  8.00    5.44 | 11.00    1.81
                   2.25    2.72 |  5.25   10.88 |  8.25    3.17 | 11.25    1.81
                   2.50    2.72 |  5.50   10.88 |  8.50    3.17 | 11.50    1.81
                   2.75    2.72 |  5.75   43.54 |  8.75    3.17 | 11.75    1.81
                   3.00    2.72 |  6.00  119.72 |  9.00    3.17 | 12.00    1.81

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--------------------
| CALIB            |
| STANDHYD ( 20022)|   Area    (ha)=   0.80
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.68          0.12
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      73.03         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
                  0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
                  0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
                  0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
                  0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
                  0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
                  0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
                  0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
                  0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
                  0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
                  0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
                  1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
                  1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
                  1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
                  1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
                  1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
                  1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
                  1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
                  1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
                  1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
                  1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
                  1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
                  1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
                  2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
                  2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
                  2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
                  2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
                  2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
                  2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
                  2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
                  2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
                  2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
                  2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
                  2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
                  2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
                  3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=       119.72         102.72
                over (min)          5.00          10.00
     Storage Coeff.  (min)=         1.97 (ii)      5.56 (ii)
     Unit Hyd. Tpeak (min)=         5.00          10.00
     Unit Hyd. peak  (cms)=         0.31           0.16
                                                              *TOTALS*
     PEAK FLOW       (cms)=         0.23           0.03           0.257 (iii)
     TIME TO PEAK    (hrs)=         6.00           6.00            6.00
     RUNOFF VOLUME    (mm)=        89.70          66.45           86.21
     TOTAL RAINFALL   (mm)=        90.70          90.70           90.70
     RUNOFF COEFFICIENT   =         0.99           0.73            0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20021)|   Area    (ha)=   0.70
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62          0.08
     Dep. Storage     (mm)=       1.00          1.00
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     Average Slope     (%)=        1.00          2.00
     Length            (m)=       68.31         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
                 0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
                 0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
                 0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
                 0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
                 0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
                 0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
                 0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
                 0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
                 0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
                 0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
                 1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
                 1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
                 1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
                 1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
                 1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
                 1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
                 1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
                 1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
                 1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
                 1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
                 1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
                 1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
                 2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
                 2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
                 2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
                 2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
                 2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
                 2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
                 2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
                 2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
                 2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
                 2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
                 2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
                 2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
                 3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=      119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=        1.89 (ii)     5.00 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.21          0.02          0.227 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=       89.70         66.45          87.14
     TOTAL RAINFALL   (mm)=       90.70         90.70          90.70
     RUNOFF COEFFICIENT   =        0.99          0.73           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0     Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20031)|   Area    (ha)=    0.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area      (ha)=        0.39          0.04
     Dep. Storage      (mm)=        1.00          1.00
     Average Slope      (%)=        1.00          2.00
     Length             (m)=       53.54         40.00
     Mannings n            =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
                 0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
                 0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
                 0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
                 0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
                 0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
                 0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
                 0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
                 0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
                 0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
                 0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
                 1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
                 1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
                 1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
                 1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
                 1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
                 1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
                 1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
                 1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
                 1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
                 1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
                 1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
                 1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
                 2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
                 2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
                 2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
                 2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
                 2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
                 2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
                 2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
                 2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
                 2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
                 2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
                 2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
                 2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
                 3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=      119.72        102.72
                over (min)        5.00          5.00
     Storage Coeff.  (min)=        1.63 (ii)     4.62 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.32          0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.13          0.01          0.141 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=       89.70         66.45          87.37
     TOTAL RAINFALL   (mm)=       90.70         90.70          90.70
     RUNOFF COEFFICIENT   =        0.99          0.73           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0     Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20032)|   Area    (ha)=    0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area      (ha)=        0.41          0.06
     Dep. Storage      (mm)=        1.00          1.00
     Average Slope      (%)=        1.00          2.00
     Length             (m)=       55.98         40.00
     Mannings n            =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
                 0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
                 0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
                 0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
                 0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
                 0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
                 0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
                 0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
                 0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
                 0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
                 0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
                 1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
                 1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
                 1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
                 1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
                 1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
                 1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
                 1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
                 1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
                 1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
                 1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
                 1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
                 1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
                 2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
                 2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
                 2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
                 2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
                 2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
                 2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
                 2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
                 2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
                 2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
                 2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
                 2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
                 2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
                 3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=      119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=        1.68 (ii)     5.03 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.14          0.02          0.152 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=       89.70         66.45          86.67
     TOTAL RAINFALL   (mm)=       90.70         90.70          90.70
     RUNOFF COEFFICIENT   =        0.99          0.73           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0     Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20041)|   Area    (ha)=    0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area      (ha)=        0.31          0.04
     Dep. Storage      (mm)=        1.00          1.00
     Average Slope      (%)=        1.00          2.00
     Length             (m)=       48.30         40.00
     Mannings n            =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
                 0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
                 0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
                 0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
                 0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
                 0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
                 0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
                 0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
                 0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
                 0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
                 0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
                 1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
                 1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
                 1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
                 1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
                 1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
                 1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
                 1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
                 1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
                 1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
                 1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
                 1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
                 1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
                 2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
                 2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
                 2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
                 2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
                 2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
                 2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
                 2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
                 2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
                 2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
                 2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
                 2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
                 2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
                 3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=      119.72        102.72
                over (min)        5.00          5.00
     Storage Coeff.  (min)=        1.54 (ii)     4.65 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.10          0.01          0.114 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=       89.70         66.45          87.14
     TOTAL RAINFALL   (mm)=       90.70         90.70          90.70
     RUNOFF COEFFICIENT   =        0.99          0.73           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0     Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20042)|   Area    (ha)=    0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area      (ha)=        0.31          0.05
     Dep. Storage      (mm)=        1.00          1.00
     Average Slope      (%)=        1.00          2.00
     Length             (m)=       48.99         40.00
     Mannings n            =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
                 0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
                 0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
                 0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
                 0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
                 0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
                 0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
                 0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
                 0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
                 0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
                 0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
                 1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
                 1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
                 1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
                 1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
                 1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
                 1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
                 1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
                 1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
                 1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
                 1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
                 1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
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       1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
       2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
       2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
       2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
       2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
       2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
       2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
       2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
       2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
       2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
       2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
       2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
       2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
       3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.55 (ii)     5.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.10          0.01         0.116 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45         86.20
     TOTAL RAINFALL   (mm)=      90.70         90.70         90.70
     RUNOFF COEFFICIENT   =       0.99          0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20052)|   Area    (ha)=   0.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23          0.06
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      43.97         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
         0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
         0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
         0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
         0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
         0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
         0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
         0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
         0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
         0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
         0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
         1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
         1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
         1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
         1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
         1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
         1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
         1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
         1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
         1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
         1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
         1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
         1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
         2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
         2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
         2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
         2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
         2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
         2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
         2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
         2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
         2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
         2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
         2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
         2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
         3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.45 (ii)     5.78 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.08          0.02         0.091 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45         84.57
     TOTAL RAINFALL   (mm)=      90.70         90.70         90.70
     RUNOFF COEFFICIENT   =       0.99          0.73          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.58          0.15
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      69.76         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
         0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
         0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
         0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
         0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
         0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
         0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
         0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
         0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
         0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
         0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
         1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
         1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
         1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
         1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
         1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
         1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
         1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
         1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
         1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
         1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
         1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
         1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
         2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
         2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
         2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
         2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
         2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
         2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
         2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
         2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
         2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
         2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
         2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
         2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
         3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.92 (ii)     6.04 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.19          0.04         0.231 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45         85.05
     TOTAL RAINFALL   (mm)=      90.70         90.70         90.70
     RUNOFF COEFFICIENT   =       0.99          0.73          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.55          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.83         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
         0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
         0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
         0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
         0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
         0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
         0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
         0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
         0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
         0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
         0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
         1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
         1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
         1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
         1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
         1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
         1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
         1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
         1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
         1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
         1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
         1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
         1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
         2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
         2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
         2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
         2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
         2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
         2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
         2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
         2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
         2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
         2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
         2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
         2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
         3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.85 (ii)     5.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.18          0.02         0.209 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45         86.21
     TOTAL RAINFALL   (mm)=      90.70         90.70         90.70
     RUNOFF COEFFICIENT   =       0.99          0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.54          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.32         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
         0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
         0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
         0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
         0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
         0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
         0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
         0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
         0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
         0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
         0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
         1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
         1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
         1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
         1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
         1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
         1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
         1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
         1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
         1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
         1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
         1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
         1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
         2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
         2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
         2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
         2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
         2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
         2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
         2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
         2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
         2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
         2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
         2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
         2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
         3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.84 (ii)     5.54 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.18          0.03         0.205 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=      89.70         66.45         85.97
     TOTAL RAINFALL   (mm)=      90.70         90.70         90.70
     RUNOFF COEFFICIENT   =       0.99          0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
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          THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.49          0.09
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      62.18         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08   3.17
                0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17   3.17
                0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25   3.17
                0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33   3.17
                0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42   3.17
                0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50   3.17
                0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58   3.17
                0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67   3.17
                0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75   3.17
                0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83   3.17
                0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92   3.17
                1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00   3.17
                1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08   1.81
                1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17   1.81
                1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25   1.81
                1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33   1.81
                1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42   1.81
                1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50   1.81
                1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58   1.81
                1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67   1.81
                1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75   1.81
                1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83   1.81
                1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92   1.81
                2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00   1.81
                2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08   1.81
                2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17   1.81
                2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25   1.81
                2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33   1.81
                2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42   1.81
                2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50   1.81
                2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58   1.81
                2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67   1.81
                2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75   1.81
                2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83   1.81
                2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92   1.81
                3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00   1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.79 (ii)     5.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.16          0.02          0.186 (iii)
     TIME TO PEAK     (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME     (mm)=      89.70         66.45         86.21
     TOTAL RAINFALL    (mm)=      90.70         90.70         90.70
     RUNOFF COEFFICIENT   =       0.99          0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.51          0.12
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      64.81         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08   3.17
                0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17   3.17
                0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25   3.17
                0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33   3.17
                0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42   3.17
                0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50   3.17
                0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58   3.17
                0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67   3.17
                0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75   3.17
                0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83   3.17
                0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92   3.17
                1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00   3.17
                1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08   1.81
                1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17   1.81
                1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25   1.81
                1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33   1.81
                1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42   1.81
                1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50   1.81
                1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58   1.81
                1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67   1.81
                1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75   1.81
                1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83   1.81
                1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92   1.81
                2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00   1.81
                2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08   1.81
                2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17   1.81
                2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25   1.81
                2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33   1.81
                2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42   1.81
                2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50   1.81
                2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58   1.81
                2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67   1.81
                2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75   1.81
                2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83   1.81
                2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92   1.81
                3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00   1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.83 (ii)     5.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.15
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.17          0.03          0.200 (iii)
     TIME TO PEAK     (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME     (mm)=      89.70         66.45         85.27
     TOTAL RAINFALL    (mm)=      90.70         90.70         90.70
     RUNOFF COEFFICIENT   =       0.99          0.73          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20091)|   Area    (ha)=   0.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.00   Dir. Conn.(%)=  77.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31          0.09
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      51.64         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08   3.17
                0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17   3.17
                0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25   3.17
                0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33   3.17
                0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42   3.17
                0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50   3.17
                0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58   3.17
                0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67   3.17
                0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75   3.17
                0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83   3.17
                0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92   3.17
                1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00   3.17
                1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08   1.81
                1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17   1.81
                1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25   1.81
                1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33   1.81
                1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42   1.81
                1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50   1.81
                1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58   1.81
                1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67   1.81
                1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75   1.81
                1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83   1.81
                1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92   1.81
                2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00   1.81
                2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08   1.81
                2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17   1.81
                2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25   1.81
                2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33   1.81
                2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42   1.81
                2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50   1.81
                2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58   1.81
                2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67   1.81
                2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75   1.81
                2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83   1.81
                2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92   1.81
                3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00   1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.60 (ii)     6.03 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.15
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.10          0.02          0.125 (iii)
     TIME TO PEAK     (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME     (mm)=      89.70         66.45         84.34
     TOTAL RAINFALL    (mm)=      90.70         90.70         90.70
     RUNOFF COEFFICIENT   =       0.99          0.73          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200812)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  70.00   Dir. Conn.(%)=  70.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.27          0.11
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      50.33         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08   3.17
                0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17   3.17
                0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25   3.17
                0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33   3.17
                0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42   3.17
                0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50   3.17
                0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58   3.17
                0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67   3.17
                0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75   3.17
                0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83   3.17
                0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92   3.17
                1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00   3.17
                1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08   1.81
                1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17   1.81
                1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25   1.81
                1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33   1.81
                1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42   1.81
                1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50   1.81
                1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58   1.81
                1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67   1.81
                1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75   1.81
                1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83   1.81
                1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92   1.81
                2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00   1.81
                2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08   1.81
                2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17   1.81
                2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25   1.81
                2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33   1.81
                2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42   1.81
                2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50   1.81
                2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58   1.81
                2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67   1.81
                2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75   1.81
                2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83   1.81
                2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92   1.81
                3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00   1.81

     Max.Eff.Inten.(mm/hr)=     119.72        102.72
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.57 (ii)     9.21 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.12
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.09          0.03          0.114 (iii)
     TIME TO PEAK     (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME     (mm)=      89.70         66.45         82.71
     TOTAL RAINFALL    (mm)=      90.70         90.70         90.70
     RUNOFF COEFFICIENT   =       0.99          0.73          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
              CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200811)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.06          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      21.60         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08   3.17
                0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17   3.17
                0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25   3.17
                0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33   3.17
                0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42   3.17
                0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50   3.17
                0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58   3.17
                0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67   3.17
                0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75   3.17
                0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83   3.17
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     0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
     1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
     1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
     1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
     1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
     1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
     1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
     1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
     1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
     1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
     1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
     1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
     1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
     2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
     2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
     2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
     2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
     2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
     2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
     2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
     2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
     2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
     2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
     2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
     2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
     3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

 Max.Eff.Inten.(mm/hr)=     119.72       102.72
            over (min)        5.00         5.00
 Storage Coeff.  (min)=       0.95 (ii)    4.65 (ii)
 Unit Hyd. Tpeak (min)=       5.00         5.00
 Unit Hyd. peak  (cms)=       0.34         0.22
                                                     *TOTALS*
 PEAK FLOW       (cms)=       0.02         0.00        0.023 (iii)
 TIME TO PEAK    (hrs)=       5.92         6.00        6.00
 RUNOFF VOLUME    (mm)=      89.70        66.45       85.97
 TOTAL RAINFALL   (mm)=      90.70        90.70       90.70
 RUNOFF COEFFICIENT   =       0.99         0.73        0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0110)|
|   1 +  2 =  3    |          AREA    QPEAK     TPEAK      R.V.
--------------------          (ha)    (cms)     (hrs)      (mm)
       ID1= 1 (200811):       0.07    0.023      6.00     85.97
     + ID2= 2 (200812):       0.38    0.114      6.00     82.71
       ================================================
       ID = 3 (  0110):       0.45    0.136      6.00     83.21

 NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD (200822)|   Area     (ha)=    0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00    Dir. Conn.(%)=  59.00
--------------------
                            IMPERVIOUS     PERVIOUS (i)
 Surface Area      (ha)=        0.23          0.16
 Dep. Storage      (mm)=        1.00          1.00
 Average Slope      (%)=        1.00          2.00
 Length             (m)=       50.99         40.00
 Mannings n            =       0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
        hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
      0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
      0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
      0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
      0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
      0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
      0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
      0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
      0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
      0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
      0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
      0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
      1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
      1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
      1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
      1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
      1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
      1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
      1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
      1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
      1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
      1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
      1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
      1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
      2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
      2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
      2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
      2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
      2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
      2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
      2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
      2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
      2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
      2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
      2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
      2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
      3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

 Max.Eff.Inten.(mm/hr)=     119.72       102.72
            over (min)        5.00        10.00
 Storage Coeff.  (min)=       1.59 (ii)    9.22 (ii)
 Unit Hyd. Tpeak (min)=       5.00        10.00
 Unit Hyd. peak  (cms)=       0.33         0.12
                                                     *TOTALS*
 PEAK FLOW       (cms)=       0.08         0.04        0.112 (iii)
 TIME TO PEAK    (hrs)=       6.00         6.00        6.00
 RUNOFF VOLUME    (mm)=      89.70        66.45       80.15
 TOTAL RAINFALL   (mm)=      90.70        90.70       90.70
 RUNOFF COEFFICIENT   =       0.99         0.73        0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200821)|   Area     (ha)=    0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00    Dir. Conn.(%)=  83.00
--------------------
                            IMPERVIOUS     PERVIOUS (i)
 Surface Area      (ha)=        0.06          0.01
 Dep. Storage      (mm)=        1.00          1.00
 Average Slope      (%)=        1.00          2.00
 Length             (m)=       21.60         40.00
 Mannings n            =       0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
        hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
      0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
      0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
      0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
      0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
      0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
      0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
      0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
      0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
      0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
      0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
      0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
      1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
      1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
      1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
      1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
      1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
      1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
      1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
      1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
      1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
      1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
      1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
      1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
      2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
      2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
      2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
      2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
      2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
      2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
      2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
      2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
      2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
      2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
      2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
      2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
      3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

 Max.Eff.Inten.(mm/hr)=     119.72       102.72
            over (min)        5.00         5.00
 Storage Coeff.  (min)=       0.95 (ii)    4.76 (ii)
 Unit Hyd. Tpeak (min)=       5.00         5.00
 Unit Hyd. peak  (cms)=       0.34         0.22
                                                     *TOTALS*
 PEAK FLOW       (cms)=       0.02         0.00        0.023 (iii)
 TIME TO PEAK    (hrs)=       5.92         6.00        6.00
 RUNOFF VOLUME    (mm)=      89.70        66.45       85.73
 TOTAL RAINFALL   (mm)=      90.70        90.70       90.70
 RUNOFF COEFFICIENT   =       0.99         0.73        0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0111)|
|   1 +  2 =  3    |          AREA    QPEAK     TPEAK      R.V.
--------------------          (ha)    (cms)     (hrs)      (mm)
       ID1= 1 (200821):       0.07    0.023      6.00     85.73
     + ID2= 2 (200822):       0.39    0.112      6.00     80.15
       ================================================
       ID = 3 (  0111):       0.46    0.134      6.00     81.00

 NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 20102)|   Area     (ha)=    0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00    Dir. Conn.(%)=  74.00
--------------------
                            IMPERVIOUS     PERVIOUS (i)
 Surface Area      (ha)=        0.35          0.12
 Dep. Storage      (mm)=        1.00          1.00
 Average Slope      (%)=        1.00          2.00
 Length             (m)=       55.98         40.00
 Mannings n            =       0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
        hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
      0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
      0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
      0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
      0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
      0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
      0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
      0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
      0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
      0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
      0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
      0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
      1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
      1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
      1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
      1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
      1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
      1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
      1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
      1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
      1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
      1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
      1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
      1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
      2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
      2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
      2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
      2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
      2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
      2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
      2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
      2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
      2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
      2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
      2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
      2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
      3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

 Max.Eff.Inten.(mm/hr)=     119.72       102.72
            over (min)        5.00        10.00
 Storage Coeff.  (min)=       1.68 (ii)    6.40 (ii)
 Unit Hyd. Tpeak (min)=       5.00        10.00
 Unit Hyd. peak  (cms)=       0.32         0.14
                                                     *TOTALS*
 PEAK FLOW       (cms)=       0.12         0.03        0.146 (iii)
 TIME TO PEAK    (hrs)=       6.00         6.00        6.00
 RUNOFF VOLUME    (mm)=      89.70        66.45       83.64
 TOTAL RAINFALL   (mm)=      90.70        90.70       90.70
 RUNOFF COEFFICIENT   =       0.99         0.73        0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20101)|   Area     (ha)=    0.25
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00    Dir. Conn.(%)=  82.00
--------------------
                            IMPERVIOUS     PERVIOUS (i)
 Surface Area      (ha)=        0.20          0.05
 Dep. Storage      (mm)=        1.00          1.00
 Average Slope      (%)=        1.00          2.00
 Length             (m)=       40.82         40.00
 Mannings n            =       0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
        hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
      0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
      0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
      0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
      0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
      0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
      0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
      0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
      0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
      0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
      0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
      0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
      1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
      1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
      1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
      1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
      1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
      1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
      1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
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            1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
            1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
            1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
            1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
            1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
            2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
            2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
            2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
            2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
            2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
            2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
            2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
            2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
            2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
            2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
            2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
            2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
            3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=      119.72         102.72
                over (min)         5.00          10.00
     Storage Coeff.  (min)=        1.39 (ii)      5.30 (ii)
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.33           0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.07           0.01         0.080 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.00         6.00
     RUNOFF VOLUME    (mm)=       89.70          66.45        85.50
     TOTAL RAINFALL   (mm)=       90.70          90.70        90.70
     RUNOFF COEFFICIENT   =        0.99           0.73         0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0121)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 20101):      0.25   0.080     6.00     85.50
      + ID2= 2 ( 20102):      0.47   0.146     6.00     83.64
        ================================================
        ID = 3 (  0121):      0.72   0.225     6.00     84.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 20111)|   Area    (ha)=   0.87
|ID= 1 DT= 5.0 min |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.58          0.29
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    76.16         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO    5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
            0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
            0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
            0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
            0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
            0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
            0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
            0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
            0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
            0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
            0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
            0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
            1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
            1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
            1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
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            1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
            1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
            1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
            1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
            1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
            1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
            1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
            1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
            1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
            2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
            2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
            2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
            2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
            2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
            2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
            2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
            2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
            2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
            2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
            2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
            2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
            3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=      119.72         102.72
                over (min)         5.00          10.00
     Storage Coeff.  (min)=        2.02 (ii)      9.65 (ii)
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.31           0.11
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.19           0.06         0.256 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.00         6.00
     RUNOFF VOLUME    (mm)=       89.70          66.45        82.02
     TOTAL RAINFALL   (mm)=       90.70          90.70        90.70
     RUNOFF COEFFICIENT   =        0.99           0.73         0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.72          0.18
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    77.46         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO    5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
            0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
            0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
            0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
            0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
            0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
            0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
            0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
            0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
            0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
            0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
            0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
            1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
            1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
            1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
            1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
            1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
            1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
            1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
            1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
            1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
            1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
            1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
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            1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
            2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
            2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
            2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
            2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
            2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
            2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
            2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
            2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
            2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
            2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
            2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
            2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
            3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=      119.72         102.72
                over (min)         5.00          10.00
     Storage Coeff.  (min)=        2.04 (ii)      6.16 (ii)
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.31           0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.24           0.04         0.284 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.00         6.00
     RUNOFF VOLUME    (mm)=       89.70          66.45        85.05
     TOTAL RAINFALL   (mm)=       90.70          90.70        90.70
     RUNOFF COEFFICIENT   =        0.99           0.73         0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.90          0.21
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    86.02         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO    5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
            0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
            0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
            0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
            0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
            0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
            0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
            0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
            0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
            0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
            0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
            0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
            1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
            1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
            1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
            1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
            1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
            1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
            1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
            1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
            1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
            1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
            1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
            1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
            2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
            2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
            2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
            2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
            2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
            2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
            2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
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            2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
            2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
            2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
            2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
            2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
            3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=      119.72         102.72
                over (min)         5.00          10.00
     Storage Coeff.  (min)=        2.17 (ii)      6.19 (ii)
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.31           0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.30           0.05         0.351 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.00         6.00
     RUNOFF VOLUME    (mm)=       89.70          66.45        85.28
     TOTAL RAINFALL   (mm)=       90.70          90.70        90.70
     RUNOFF COEFFICIENT   =        0.99           0.73         0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.40          0.07
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    55.98         40.00
     Mannings n           =    0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO    5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
            0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08    3.17
            0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17    3.17
            0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25    3.17
            0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33    3.17
            0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42    3.17
            0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50    3.17
            0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58    3.17
            0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67    3.17
            0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75    3.17
            0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83    3.17
            0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92    3.17
            1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00    3.17
            1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08    1.81
            1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17    1.81
            1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25    1.81
            1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33    1.81
            1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42    1.81
            1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50    1.81
            1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58    1.81
            1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67    1.81
            1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75    1.81
            1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83    1.81
            1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92    1.81
            2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00    1.81
            2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08    1.81
            2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17    1.81
            2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25    1.81
            2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33    1.81
            2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42    1.81
            2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50    1.81
            2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58    1.81
            2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67    1.81
            2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75    1.81
            2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83    1.81
            2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92    1.81
            3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00    1.81

     Max.Eff.Inten.(mm/hr)=      119.72         102.72
```

```
          over (min)         5.00        10.00
     Storage Coeff.  (min)=     1.68 (ii)    5.27 (ii)
     Unit Hyd. Tpeak (min)=     5.00        10.00
     Unit Hyd. peak  (cms)=     0.32         0.16
                                                     *TOTALS*
     PEAK FLOW       (cms)=     0.13         0.02     0.151 (iii)
     TIME TO PEAK    (hrs)=     6.00         6.00      6.00
     RUNOFF VOLUME    (mm)=    89.70        66.45     86.21
     TOTAL RAINFALL   (mm)=    90.70        90.70     90.70
     RUNOFF COEFFICIENT   =     0.99         0.73      0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.40         0.07
     Dep. Storage     (mm)=     1.00         1.00
     Average Slope     (%)=     1.00         2.00
     Length            (m)=    55.98        40.00
     Mannings n           =    0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                       ---- TRANSFORMED HYETOGRAPH ----
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.27	3.083	3.63	6.083	16.33	9.08	3.17
0.167	2.27	3.167	3.63	6.167	16.33	9.17	3.17
0.250	2.27	3.250	3.63	6.250	16.33	9.25	3.17
0.333	2.27	3.333	3.63	6.333	16.33	9.33	3.17
0.417	2.27	3.417	3.63	6.417	16.33	9.42	3.17
0.500	2.27	3.500	3.63	6.500	16.33	9.50	3.17
0.583	2.27	3.583	3.63	6.583	7.26	9.58	3.17
0.667	2.27	3.667	3.63	6.667	7.26	9.67	3.17
0.750	2.27	3.750	3.63	6.750	7.26	9.75	3.17
0.833	2.27	3.833	3.63	6.833	7.26	9.83	3.17
0.917	2.27	3.917	3.63	6.917	7.26	9.92	3.17
1.000	2.27	4.000	3.63	7.000	7.26	10.00	3.17
1.083	2.27	4.083	5.44	7.083	5.44	10.08	1.81
1.167	2.27	4.167	5.44	7.167	5.44	10.17	1.81
1.250	2.27	4.250	5.44	7.250	5.44	10.25	1.81
1.333	2.27	4.333	5.44	7.333	5.44	10.33	1.81
1.417	2.27	4.417	5.44	7.417	5.44	10.42	1.81
1.500	2.27	4.500	5.44	7.500	5.44	10.50	1.81
1.583	2.27	4.583	7.26	7.583	5.44	10.58	1.81
1.667	2.27	4.667	7.26	7.667	5.44	10.67	1.81
1.750	2.27	4.750	7.26	7.750	5.44	10.75	1.81
1.833	2.27	4.833	7.26	7.833	5.44	10.83	1.81
1.917	2.27	4.917	7.26	7.917	5.44	10.92	1.81
2.000	2.27	5.000	7.26	8.000	5.44	11.00	1.81
2.083	2.72	5.083	10.88	8.083	3.17	11.08	1.81
2.167	2.72	5.167	10.88	8.167	3.17	11.17	1.81
2.250	2.72	5.250	10.88	8.250	3.17	11.25	1.81
2.333	2.72	5.333	10.88	8.333	3.17	11.33	1.81
2.417	2.72	5.417	10.88	8.417	3.17	11.42	1.81
2.500	2.72	5.500	10.88	8.500	3.17	11.50	1.81
2.583	2.72	5.583	43.54	8.583	3.17	11.58	1.81
2.667	2.72	5.667	43.54	8.667	3.17	11.67	1.81
2.750	2.72	5.750	43.54	8.750	3.17	11.75	1.81
2.833	2.72	5.833	119.72	8.833	3.17	11.83	1.81
2.917	2.72	5.917	119.72	8.917	3.17	11.92	1.81
3.000	2.72	6.000	119.72	9.000	3.17	12.00	1.81

```
     Max.Eff.Inten.(mm/hr)=   119.72       102.72
               over (min)     5.00        10.00
     Storage Coeff.  (min)=     1.68 (ii)    5.27 (ii)
     Unit Hyd. Tpeak (min)=     5.00        10.00
     Unit Hyd. peak  (cms)=     0.32         0.16
                                                     *TOTALS*
     PEAK FLOW       (cms)=     0.13         0.02     0.151 (iii)
     TIME TO PEAK    (hrs)=     6.00         6.00      6.00
     RUNOFF VOLUME    (mm)=    89.70        66.45     86.21
```

```
     TOTAL RAINFALL   (mm)=    90.70        90.70          90.70
     RUNOFF COEFFICIENT   =     0.99         0.73           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0136)|
|   1 + 2 = 3      |       AREA    QPEAK     TPEAK      R.V.
--------------------       (ha)    (cms)     (hrs)      (mm)
       ID1= 1 (201021):    0.47    0.151      6.00     86.21
     + ID2= 2 (201022):    0.47    0.151      6.00     86.21
       ==================================================
       ID = 3 (  0136):    0.94    0.302      6.00     86.21

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB             |
| STANDHYD (  2005)|   Area    (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.25         0.03
     Dep. Storage     (mm)=     1.00         1.00
     Average Slope     (%)=     1.00         2.00
     Length            (m)=    43.20        40.00
     Mannings n           =    0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                       ---- TRANSFORMED HYETOGRAPH ----
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.27	3.083	3.63	6.083	16.33	9.08	3.17
0.167	2.27	3.167	3.63	6.167	16.33	9.17	3.17
0.250	2.27	3.250	3.63	6.250	16.33	9.25	3.17
0.333	2.27	3.333	3.63	6.333	16.33	9.33	3.17
0.417	2.27	3.417	3.63	6.417	16.33	9.42	3.17
0.500	2.27	3.500	3.63	6.500	16.33	9.50	3.17
0.583	2.27	3.583	3.63	6.583	7.26	9.58	3.17
0.667	2.27	3.667	3.63	6.667	7.26	9.67	3.17
0.750	2.27	3.750	3.63	6.750	7.26	9.75	3.17
0.833	2.27	3.833	3.63	6.833	7.26	9.83	3.17
0.917	2.27	3.917	3.63	6.917	7.26	9.92	3.17
1.000	2.27	4.000	3.63	7.000	7.26	10.00	3.17
1.083	2.27	4.083	5.44	7.083	5.44	10.08	1.81
1.167	2.27	4.167	5.44	7.167	5.44	10.17	1.81
1.250	2.27	4.250	5.44	7.250	5.44	10.25	1.81
1.333	2.27	4.333	5.44	7.333	5.44	10.33	1.81
1.417	2.27	4.417	5.44	7.417	5.44	10.42	1.81
1.500	2.27	4.500	5.44	7.500	5.44	10.50	1.81
1.583	2.27	4.583	7.26	7.583	5.44	10.58	1.81
1.667	2.27	4.667	7.26	7.667	5.44	10.67	1.81
1.750	2.27	4.750	7.26	7.750	5.44	10.75	1.81
1.833	2.27	4.833	7.26	7.833	5.44	10.83	1.81
1.917	2.27	4.917	7.26	7.917	5.44	10.92	1.81
2.000	2.27	5.000	7.26	8.000	5.44	11.00	1.81
2.083	2.72	5.083	10.88	8.083	3.17	11.08	1.81
2.167	2.72	5.167	10.88	8.167	3.17	11.17	1.81
2.250	2.72	5.250	10.88	8.250	3.17	11.25	1.81
2.333	2.72	5.333	10.88	8.333	3.17	11.33	1.81
2.417	2.72	5.417	10.88	8.417	3.17	11.42	1.81
2.500	2.72	5.500	10.88	8.500	3.17	11.50	1.81
2.583	2.72	5.583	43.54	8.583	3.17	11.58	1.81
2.667	2.72	5.667	43.54	8.667	3.17	11.67	1.81
2.750	2.72	5.750	43.54	8.750	3.17	11.75	1.81
2.833	2.72	5.833	119.72	8.833	3.17	11.83	1.81
2.917	2.72	5.917	119.72	8.917	3.17	11.92	1.81
3.000	2.72	6.000	119.72	9.000	3.17	12.00	1.81

```
     Max.Eff.Inten.(mm/hr)=   119.72       102.72
               over (min)     5.00         5.00
     Storage Coeff.  (min)=     1.44 (ii)    4.42 (ii)
     Unit Hyd. Tpeak (min)=     5.00         5.00
     Unit Hyd. peak  (cms)=     0.33         0.23
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                                                     *TOTALS*
     PEAK FLOW       (cms)=     0.08         0.01     0.092 (iii)
     TIME TO PEAK    (hrs)=     6.00         6.00      6.00
     RUNOFF VOLUME    (mm)=    89.70        66.45     87.36
     TOTAL RAINFALL   (mm)=    90.70        90.70     90.70
     RUNOFF COEFFICIENT   =     0.99         0.73      0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20121)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.62         0.49
     Dep. Storage     (mm)=     1.00         1.00
     Average Slope     (%)=     1.00         2.00
     Length            (m)=    86.02        40.00
     Mannings n           =    0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                       ---- TRANSFORMED HYETOGRAPH ----
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.27	3.083	3.63	6.083	16.33	9.08	3.17
0.167	2.27	3.167	3.63	6.167	16.33	9.17	3.17
0.250	2.27	3.250	3.63	6.250	16.33	9.25	3.17
0.333	2.27	3.333	3.63	6.333	16.33	9.33	3.17
0.417	2.27	3.417	3.63	6.417	16.33	9.42	3.17
0.500	2.27	3.500	3.63	6.500	16.33	9.50	3.17
0.583	2.27	3.583	3.63	6.583	7.26	9.58	3.17
0.667	2.27	3.667	3.63	6.667	7.26	9.67	3.17
0.750	2.27	3.750	3.63	6.750	7.26	9.75	3.17
0.833	2.27	3.833	3.63	6.833	7.26	9.83	3.17
0.917	2.27	3.917	3.63	6.917	7.26	9.92	3.17
1.000	2.27	4.000	3.63	7.000	7.26	10.00	3.17
1.083	2.27	4.083	5.44	7.083	5.44	10.08	1.81
1.167	2.27	4.167	5.44	7.167	5.44	10.17	1.81
1.250	2.27	4.250	5.44	7.250	5.44	10.25	1.81
1.333	2.27	4.333	5.44	7.333	5.44	10.33	1.81
1.417	2.27	4.417	5.44	7.417	5.44	10.42	1.81
1.500	2.27	4.500	5.44	7.500	5.44	10.50	1.81
1.583	2.27	4.583	7.26	7.583	5.44	10.58	1.81
1.667	2.27	4.667	7.26	7.667	5.44	10.67	1.81
1.750	2.27	4.750	7.26	7.750	5.44	10.75	1.81
1.833	2.27	4.833	7.26	7.833	5.44	10.83	1.81
1.917	2.27	4.917	7.26	7.917	5.44	10.92	1.81
2.000	2.27	5.000	7.26	8.000	5.44	11.00	1.81
2.083	2.72	5.083	10.88	8.083	3.17	11.08	1.81
2.167	2.72	5.167	10.88	8.167	3.17	11.17	1.81
2.250	2.72	5.250	10.88	8.250	3.17	11.25	1.81
2.333	2.72	5.333	10.88	8.333	3.17	11.33	1.81
2.417	2.72	5.417	10.88	8.417	3.17	11.42	1.81
2.500	2.72	5.500	10.88	8.500	3.17	11.50	1.81
2.583	2.72	5.583	43.54	8.583	3.17	11.58	1.81
2.667	2.72	5.667	43.54	8.667	3.17	11.67	1.81
2.750	2.72	5.750	43.54	8.750	3.17	11.75	1.81
2.833	2.72	5.833	119.72	8.833	3.17	11.83	1.81
2.917	2.72	5.917	119.72	8.917	3.17	11.92	1.81
3.000	2.72	6.000	119.72	9.000	3.17	12.00	1.81

```
     Max.Eff.Inten.(mm/hr)=   119.72       102.72
               over (min)     5.00        10.00
     Storage Coeff.  (min)=     2.17 (ii)    9.80 (ii)
     Unit Hyd. Tpeak (min)=     5.00        10.00
     Unit Hyd. peak  (cms)=     0.31         0.11
                                                     *TOTALS*
     PEAK FLOW       (cms)=     0.21         0.11     0.312 (iii)
     TIME TO PEAK    (hrs)=     6.00         6.00      6.00
     RUNOFF VOLUME    (mm)=    89.70        66.45     79.46
     TOTAL RAINFALL   (mm)=    90.70        90.70     90.70
     RUNOFF COEFFICIENT   =     0.99         0.73      0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
```

```
       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD (200111)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.09         0.01
     Dep. Storage     (mm)=     1.00         1.00
     Average Slope     (%)=     1.00         2.00
     Length            (m)=    25.82        40.00
     Mannings n           =    0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                       ---- TRANSFORMED HYETOGRAPH ----
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.27	3.083	3.63	6.083	16.33	9.08	3.17
0.167	2.27	3.167	3.63	6.167	16.33	9.17	3.17
0.250	2.27	3.250	3.63	6.250	16.33	9.25	3.17
0.333	2.27	3.333	3.63	6.333	16.33	9.33	3.17
0.417	2.27	3.417	3.63	6.417	16.33	9.42	3.17
0.500	2.27	3.500	3.63	6.500	16.33	9.50	3.17
0.583	2.27	3.583	3.63	6.583	7.26	9.58	3.17
0.667	2.27	3.667	3.63	6.667	7.26	9.67	3.17
0.750	2.27	3.750	3.63	6.750	7.26	9.75	3.17
0.833	2.27	3.833	3.63	6.833	7.26	9.83	3.17
0.917	2.27	3.917	3.63	6.917	7.26	9.92	3.17
1.000	2.27	4.000	3.63	7.000	7.26	10.00	3.17
1.083	2.27	4.083	5.44	7.083	5.44	10.08	1.81
1.167	2.27	4.167	5.44	7.167	5.44	10.17	1.81
1.250	2.27	4.250	5.44	7.250	5.44	10.25	1.81
1.333	2.27	4.333	5.44	7.333	5.44	10.33	1.81
1.417	2.27	4.417	5.44	7.417	5.44	10.42	1.81
1.500	2.27	4.500	5.44	7.500	5.44	10.50	1.81
1.583	2.27	4.583	7.26	7.583	5.44	10.58	1.81
1.667	2.27	4.667	7.26	7.667	5.44	10.67	1.81
1.750	2.27	4.750	7.26	7.750	5.44	10.75	1.81
1.833	2.27	4.833	7.26	7.833	5.44	10.83	1.81
1.917	2.27	4.917	7.26	7.917	5.44	10.92	1.81
2.000	2.27	5.000	7.26	8.000	5.44	11.00	1.81
2.083	2.72	5.083	10.88	8.083	3.17	11.08	1.81
2.167	2.72	5.167	10.88	8.167	3.17	11.17	1.81
2.250	2.72	5.250	10.88	8.250	3.17	11.25	1.81
2.333	2.72	5.333	10.88	8.333	3.17	11.33	1.81
2.417	2.72	5.417	10.88	8.417	3.17	11.42	1.81
2.500	2.72	5.500	10.88	8.500	3.17	11.50	1.81
2.583	2.72	5.583	43.54	8.583	3.17	11.58	1.81
2.667	2.72	5.667	43.54	8.667	3.17	11.67	1.81
2.750	2.72	5.750	43.54	8.750	3.17	11.75	1.81
2.833	2.72	5.833	119.72	8.833	3.17	11.83	1.81
2.917	2.72	5.917	119.72	8.917	3.17	11.92	1.81
3.000	2.72	6.000	119.72	9.000	3.17	12.00	1.81

```
     Max.Eff.Inten.(mm/hr)=   119.72       102.72
               over (min)     5.00         5.00
     Storage Coeff.  (min)=     1.05 (ii)    4.10 (ii)
     Unit Hyd. Tpeak (min)=     5.00         5.00
     Unit Hyd. peak  (cms)=     0.34         0.24
                                                     *TOTALS*
     PEAK FLOW       (cms)=     0.03         0.00     0.033 (iii)
     TIME TO PEAK    (hrs)=     6.00         6.00      6.00
     RUNOFF VOLUME    (mm)=    89.70        66.45     87.25
     TOTAL RAINFALL   (mm)=    90.70        90.70     90.70
     RUNOFF COEFFICIENT   =     0.99         0.73      0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200121)|   Area    (ha)=   0.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.10          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      27.08         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08   3.17
              0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17   3.17
              0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25   3.17
              0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33   3.17
              0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42   3.17
              0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50   3.17
              0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58   3.17
              0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67   3.17
              0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75   3.17
              0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83   3.17
              0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92   3.17
              1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00   3.17
              1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08   1.81
              1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17   1.81
              1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25   1.81
              1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33   1.81
              1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42   1.81
              1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50   1.81
              1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58   1.81
              1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67   1.81
              1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75   1.81
              1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83   1.81
              1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92   1.81
              2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00   1.81
              2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08   1.81
              2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17   1.81
              2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25   1.81
              2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33   1.81
              2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42   1.81
              2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50   1.81
              2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58   1.81
              2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67   1.81
              2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75   1.81
              2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83   1.81
              2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92   1.81
              3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00   1.81

     Max.Eff.Inten.(mm/hr)=      119.72        102.72
               over (min)          5.00          5.00
     Storage Coeff.  (min)=        1.09 (ii)     4.44 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.34          0.23
                                                            *TOTALS*
     PEAK FLOW        (cms)=       0.03          0.00          0.036 (iii)
     TIME TO PEAK     (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      89.70         66.45          86.67
     TOTAL RAINFALL    (mm)=      90.70         90.70          90.70
     RUNOFF COEFFICIENT   =        0.99          0.73           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0142)|
|   1 +  2 =  3    |          AREA    QPEAK     TPEAK      R.V.
--------------------          (ha)    (cms)     (hrs)      (mm)
        ID1= 1 (200111):      0.10    0.033      6.00     87.25
      + ID2= 2 (200121):      0.11    0.036      6.00     86.67
        ==================================================
        ID = 3 (  0142):      0.21    0.069      6.00     86.94

       NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB              |
| STANDHYD (200112)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.08          0.02
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      25.69         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08   3.17
              0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17   3.17
              0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25   3.17
              0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33   3.17
              0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42   3.17
              0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50   3.17
              0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58   3.17
              0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67   3.17
              0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75   3.17
              0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83   3.17
              0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92   3.17
              1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00   3.17
              1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08   1.81
              1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17   1.81
              1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25   1.81
              1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33   1.81
              1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42   1.81
              1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50   1.81
              1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58   1.81
              1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67   1.81
              1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75   1.81
              1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83   1.81
              1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92   1.81
              2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00   1.81
              2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08   1.81
              2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17   1.81
              2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25   1.81
              2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33   1.81
              2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42   1.81
              2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50   1.81
              2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58   1.81
              2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67   1.81
              2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75   1.81
              2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83   1.81
              2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92   1.81
              3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00   1.81

     Max.Eff.Inten.(mm/hr)=      119.72        102.72
               over (min)          5.00         10.00
     Storage Coeff.  (min)=        1.05 (ii)     5.28 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.34          0.16
                                                            *TOTALS*
     PEAK FLOW        (cms)=       0.03          0.01          0.031 (iii)
     TIME TO PEAK     (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      89.70         66.45          84.78
     TOTAL RAINFALL    (mm)=      90.70         90.70          90.70
     RUNOFF COEFFICIENT   =        0.99          0.73           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200122)|   Area    (ha)=   0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.11          0.02
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      29.44         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.27 | 3.083    3.63 | 6.083   16.33 |  9.08   3.17
              0.167    2.27 | 3.167    3.63 | 6.167   16.33 |  9.17   3.17
              0.250    2.27 | 3.250    3.63 | 6.250   16.33 |  9.25   3.17
              0.333    2.27 | 3.333    3.63 | 6.333   16.33 |  9.33   3.17
              0.417    2.27 | 3.417    3.63 | 6.417   16.33 |  9.42   3.17
              0.500    2.27 | 3.500    3.63 | 6.500   16.33 |  9.50   3.17
              0.583    2.27 | 3.583    3.63 | 6.583    7.26 |  9.58   3.17
              0.667    2.27 | 3.667    3.63 | 6.667    7.26 |  9.67   3.17
              0.750    2.27 | 3.750    3.63 | 6.750    7.26 |  9.75   3.17
              0.833    2.27 | 3.833    3.63 | 6.833    7.26 |  9.83   3.17
              0.917    2.27 | 3.917    3.63 | 6.917    7.26 |  9.92   3.17
              1.000    2.27 | 4.000    3.63 | 7.000    7.26 | 10.00   3.17
              1.083    2.27 | 4.083    5.44 | 7.083    5.44 | 10.08   1.81
              1.167    2.27 | 4.167    5.44 | 7.167    5.44 | 10.17   1.81
              1.250    2.27 | 4.250    5.44 | 7.250    5.44 | 10.25   1.81
              1.333    2.27 | 4.333    5.44 | 7.333    5.44 | 10.33   1.81
              1.417    2.27 | 4.417    5.44 | 7.417    5.44 | 10.42   1.81
              1.500    2.27 | 4.500    5.44 | 7.500    5.44 | 10.50   1.81
              1.583    2.27 | 4.583    7.26 | 7.583    5.44 | 10.58   1.81
              1.667    2.27 | 4.667    7.26 | 7.667    5.44 | 10.67   1.81
              1.750    2.27 | 4.750    7.26 | 7.750    5.44 | 10.75   1.81
              1.833    2.27 | 4.833    7.26 | 7.833    5.44 | 10.83   1.81
              1.917    2.27 | 4.917    7.26 | 7.917    5.44 | 10.92   1.81
              2.000    2.27 | 5.000    7.26 | 8.000    5.44 | 11.00   1.81
              2.083    2.72 | 5.083   10.88 | 8.083    3.17 | 11.08   1.81
              2.167    2.72 | 5.167   10.88 | 8.167    3.17 | 11.17   1.81
              2.250    2.72 | 5.250   10.88 | 8.250    3.17 | 11.25   1.81
              2.333    2.72 | 5.333   10.88 | 8.333    3.17 | 11.33   1.81
              2.417    2.72 | 5.417   10.88 | 8.417    3.17 | 11.42   1.81
              2.500    2.72 | 5.500   10.88 | 8.500    3.17 | 11.50   1.81
              2.583    2.72 | 5.583   43.54 | 8.583    3.17 | 11.58   1.81
              2.667    2.72 | 5.667   43.54 | 8.667    3.17 | 11.67   1.81
              2.750    2.72 | 5.750   43.54 | 8.750    3.17 | 11.75   1.81
              2.833    2.72 | 5.833  119.72 | 8.833    3.17 | 11.83   1.81
              2.917    2.72 | 5.917  119.72 | 8.917    3.17 | 11.92   1.81
              3.000    2.72 | 6.000  119.72 | 9.000    3.17 | 12.00   1.81

     Max.Eff.Inten.(mm/hr)=      119.72        102.72
               over (min)          5.00          5.00
     Storage Coeff.  (min)=        1.14 (ii)     4.61 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.34          0.22
                                                            *TOTALS*
     PEAK FLOW        (cms)=       0.04          0.01          0.042 (iii)
     TIME TO PEAK     (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      89.70         66.45          86.43
     TOTAL RAINFALL    (mm)=      90.70         90.70          90.70
     RUNOFF COEFFICIENT   =        0.99          0.73           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0145)|
|   1 +  2 =  3    |          AREA    QPEAK     TPEAK      R.V.
--------------------          (ha)    (cms)     (hrs)      (mm)
        ID1= 1 (200112):      0.10    0.031      6.00     84.78
      + ID2= 2 (200122):      0.13    0.042      6.00     86.43
        ==================================================
        ID = 3 (  0145):      0.23    0.074      6.00     85.72

       NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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====================================================================================================

       V     V   I    SSSSS  U    U    A     L                (v 6.1.2002)
       V     V   I    SS     U    U   A A    L
        V   V    I     SS    U    U  AAAAA   L
        V   V    I      SS   U    U  A   A   L
         VV      I    SSSSS  UUUUU  A     A  LLLLL

        OOO    TTTTT  TTTTT  H    H  Y    Y  M    M   OOO     TM
       O   O     T      T    H    H   Y  Y   MM  MM  O   O
       O   O     T      T    H    H    Y     M    M  O   O
        OOO      T      T    H    H    Y     M    M   OOO
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```
                  *****  D E T A I L E D   O U T P U T  *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\664943f0
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\664943f0


DATE: 05-18-2022                        TIME: 12:51:01

USER:



COMMENTS: _______________________________________________________


----------------------------------------------------------------------------------------------------
  **************************************************
  ** SIMULATION : Run 17                          **
  **************************************************


--------------------
|   READ STORM     |      Filename: C:\Users\caef070146\AppD
|                  |                ata\Local\Temp\
|                  |                a3a8b910-d519-48ad-be84-5b44b6daecc3\9894c1dc
| Ptotal=101.70 mm |      Comments: 50-Yr,12-hr SCS, City of Barrie
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.25    2.54 |  3.25    4.07 |  6.25   18.31 |  9.25   3.56
               0.50    2.54 |  3.50    4.07 |  6.50   18.31 |  9.50   3.56
               0.75    2.54 |  3.75    4.07 |  6.75    8.14 |  9.75   3.56
               1.00    2.54 |  4.00    4.07 |  7.00    8.14 | 10.00   3.56
               1.25    2.54 |  4.25    6.10 |  7.25    6.10 | 10.25   2.03
               1.50    2.54 |  4.50    6.10 |  7.50    6.10 | 10.50   2.03
               1.75    2.54 |  4.75    8.14 |  7.75    6.10 | 10.75   2.03
               2.00    2.54 |  5.00    8.14 |  8.00    6.10 | 11.00   2.03
               2.25    3.05 |  5.25   12.20 |  8.25    3.56 | 11.25   2.03
               2.50    3.05 |  5.50   12.20 |  8.50    3.56 | 11.50   2.03
               2.75    3.05 |  5.75   48.82 |  8.75    3.56 | 11.75   2.03
               3.00    3.05 |  6.00  134.24 |  9.00    3.56 | 12.00   2.03

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| CALIB              |
| STANDHYD ( 20022)|   Area    (ha)=   0.80
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.68          0.12
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      73.03         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08   3.56
              0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17   3.56
              0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25   3.56
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           0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
           0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
           0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
           0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
           0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
           0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
           0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
           0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
           1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
           1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
           1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
           1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
           1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
           1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
           1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
           1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
           1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
           1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
           1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
           1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
           2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
           2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
           2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
           2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
           2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
           2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
           2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
           2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
           2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
           2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
           2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
           2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
           3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=      134.24        117.80
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         1.88 (ii)     5.31 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.32          0.16
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.25          0.04         0.289 (iii)
     TIME TO PEAK    (hrs)=         6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=       100.70         76.77         97.11
     TOTAL RAINFALL   (mm)=       101.70        101.70        101.70
     RUNOFF COEFFICIENT   =         0.99          0.75          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20021)|   Area    (ha)=   0.70
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62          0.08
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      68.31         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
             TIME     RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
              hrs    mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
           0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
           0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
           0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
           0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
           0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
           0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
           0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
           0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
           0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
           0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
           0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
           1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
           1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
           1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
           1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
           1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
           1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
           1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
           1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
           1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
           1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
           1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
           1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
           2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
           2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
           2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
           2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
           2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
           2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
           2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
           2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
           2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
           2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
           2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
           2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
           3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=      134.24        117.80
                over (min)          5.00          5.00
     Storage Coeff.  (min)=         1.81 (ii)     4.78 (ii)
     Unit Hyd. Tpeak (min)=         5.00          5.00
     Unit Hyd. peak  (cms)=         0.32          0.22
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.23          0.02         0.257 (iii)
     TIME TO PEAK    (hrs)=         6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=       100.70         76.77         98.06
     TOTAL RAINFALL   (mm)=       101.70        101.70        101.70
     RUNOFF COEFFICIENT   =         0.99          0.75          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20031)|   Area    (ha)=   0.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.39          0.04
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      53.54         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
             TIME     RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
              hrs    mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
           0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
           0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
           0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
           0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
           0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
           0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
           0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
           0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
           0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
           0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
           0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
           1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
           1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
           1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
           1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
           1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
           1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
           1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
           1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
           1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
           1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
           1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
           1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
           2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
           2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
           2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
           2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
           2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
           2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
           2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
           2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
           2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
           2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
           2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
           2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
           3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=      134.24        117.80
                over (min)          5.00          5.00
     Storage Coeff.  (min)=         1.56 (ii)     4.41 (ii)
     Unit Hyd. Tpeak (min)=         5.00          5.00
     Unit Hyd. peak  (cms)=         0.33          0.23
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.14          0.01         0.158 (iii)
     TIME TO PEAK    (hrs)=         6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=       100.70         76.77         98.30
     TOTAL RAINFALL   (mm)=       101.70        101.70        101.70
     RUNOFF COEFFICIENT   =         0.99          0.75          0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20032)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.41          0.06
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      55.98         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
             TIME     RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
              hrs    mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
           0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
           0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
           0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
           0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
           0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
           0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
           0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
           0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
           0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
           0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
           0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
           1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
           1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
           1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
           1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
           1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
           1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
           1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
           1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
           1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
           1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
           1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
           1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
           2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
           2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
           2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
           2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
           2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
           2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
           2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
           2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
           2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
           2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
           2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
           2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
           3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=      134.24        117.80
                over (min)          5.00          5.00
     Storage Coeff.  (min)=         1.60 (ii)     4.81 (ii)
     Unit Hyd. Tpeak (min)=         5.00          5.00
     Unit Hyd. peak  (cms)=         0.32          0.22
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.15          0.02         0.172 (iii)
     TIME TO PEAK    (hrs)=         6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=       100.70         76.77         97.58
     TOTAL RAINFALL   (mm)=       101.70        101.70        101.70
     RUNOFF COEFFICIENT   =         0.99          0.75          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31          0.04
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      48.30         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
             TIME     RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
              hrs    mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
           0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
           0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
           0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
           0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
           0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
           0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
           0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
           0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
           0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
           0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
           0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
           1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
           1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
           1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
           1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
           1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
           1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
           1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
           1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
           1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
           1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
           1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
           1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
           2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
           2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
           2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
           2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
           2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
           2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
           2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
           2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
           2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
           2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
           2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
           2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
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            3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24       117.80
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.47 (ii)    4.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.23
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.12         0.01          0.128 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=     100.70        76.77          98.06
     TOTAL RAINFALL   (mm)=     101.70       101.70         101.70
     RUNOFF COEFFICIENT   =       0.99         0.75           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20042)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31          0.05
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      48.99         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
             0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
             0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
             0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
             0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
             0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
             0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
             0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
             0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
             0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
             0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
             1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
             1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
             1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
             1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
             1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
             1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
             1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
             1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
             1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
             1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
             1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
             1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
             2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
             2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
             2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
             2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
             2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
             2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
             2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
             2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
             2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
             2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
             2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
             2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
             3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24       117.80
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.48 (ii)    4.91 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.22
                                                          *TOTALS*
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     PEAK FLOW       (cms)=       0.11         0.02          0.131 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=     100.70        76.77          97.11
     TOTAL RAINFALL   (mm)=     101.70       101.70         101.70
     RUNOFF COEFFICIENT   =       0.99         0.75           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20052)|   Area    (ha)=   0.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23          0.06
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      43.97         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
             0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
             0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
             0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
             0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
             0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
             0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
             0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
             0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
             0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
             0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
             1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
             1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
             1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
             1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
             1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
             1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
             1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
             1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
             1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
             1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
             1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
             1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
             2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
             2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
             2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
             2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
             2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
             2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
             2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
             2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
             2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
             2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
             2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
             2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
             3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24       117.80
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.39 (ii)    5.52 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.08         0.02          0.103 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=     100.70        76.77          95.43
     TOTAL RAINFALL   (mm)=     101.70       101.70         101.70
     RUNOFF COEFFICIENT   =       0.99         0.75           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
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```
       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.58          0.15
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      69.76         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
             0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
             0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
             0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
             0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
             0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
             0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
             0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
             0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
             0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
             0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
             1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
             1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
             1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
             1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
             1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
             1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
             1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
             1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
             1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
             1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
             1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
             1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
             2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
             2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
             2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
             2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
             2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
             2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
             2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
             2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
             2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
             2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
             2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
             2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
             3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24       117.80
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.83 (ii)    5.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.22         0.04          0.260 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=     100.70        76.77          95.91
     TOTAL RAINFALL   (mm)=     101.70       101.70         101.70
     RUNOFF COEFFICIENT   =       0.99         0.75           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.55          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.83         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
             0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
             0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
             0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
             0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
             0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
             0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
             0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
             0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
             0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
             0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
             1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
             1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
             1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
             1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
             1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
             1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
             1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
             1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
             1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
             1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
             1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
             1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
             2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
             2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
             2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
             2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
             2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
             2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
             2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
             2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
             2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
             2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
             2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
             2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
             3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24       117.80
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.77 (ii)    5.19 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.21         0.03          0.235 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=     100.70        76.77          97.11
     TOTAL RAINFALL   (mm)=     101.70       101.70         101.70
     RUNOFF COEFFICIENT   =       0.99         0.75           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.54          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
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     Length          (m)=      65.32        40.00
     Mannings n            =     0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
              0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
              0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
              0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
              0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
              0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
              0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
              0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
              0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
              0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
              0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
              1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
              1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
              1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
              1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
              1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
              1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
              1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
              1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
              1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
              1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
              1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
              1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
              2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
              2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
              2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
              2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
              2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
              2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
              2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
              2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
              2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
              2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
              2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
              2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
              3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24       117.80
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.76 (ii)    5.29 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.20         0.03          0.231 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     100.70        76.77         96.87
     TOTAL RAINFALL   (mm)=     101.70       101.70        101.70
     RUNOFF COEFFICIENT   =       0.99         0.75          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.49         0.09
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      62.18        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
              0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
              0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
              0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
              0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
              0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
              0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
              0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
              0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
              0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
              0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
              1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
              1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
              1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
              1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
              1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
              1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
              1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
              1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
              1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
              1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
              1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
              1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
              2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
              2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
              2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
              2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
              2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
              2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
              2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
              2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
              2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
              2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
              2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
              2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
              3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24       117.80
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.71 (ii)    5.13 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.18         0.03          0.210 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     100.70        76.77         97.11
     TOTAL RAINFALL   (mm)=     101.70       101.70        101.70
     RUNOFF COEFFICIENT   =       0.99         0.75          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
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                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.51         0.12
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      64.81        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
              0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
              0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
              0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
              0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
              0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
              0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
              0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
              0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
              0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
              0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
              1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
              1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
              1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
              1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
              1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
              1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
              1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
              1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
              1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
              1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
              1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
              1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
              2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
              2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
              2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
              2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
              2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
              2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
              2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
              2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
              2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
              2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
              2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
              2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
              3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24       117.80
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.75 (ii)    5.59 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.19         0.03          0.225 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     100.70        76.77         96.15
     TOTAL RAINFALL   (mm)=     101.70       101.70        101.70
     RUNOFF COEFFICIENT   =       0.99         0.75          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20091)|   Area    (ha)=   0.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.00   Dir. Conn.(%)=  77.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31         0.09
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      51.64        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
              0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
              0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
              0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
              0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
              0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
              0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
              0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
              0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
              0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
              0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
              1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
              1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
              1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
              1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
              1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
              1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
              1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
              1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
              1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
              1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
              1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
              1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
              2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
              2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
              2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
              2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
              2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
              2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
              2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
              2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
              2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
              2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
              2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
              2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
              3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24       117.80
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.53 (ii)    5.76 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.11         0.03          0.142 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     100.70        76.77         95.19
     TOTAL RAINFALL   (mm)=     101.70       101.70        101.70
     RUNOFF COEFFICIENT   =       0.99         0.75          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD (200812)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  70.00   Dir. Conn.(%)=  70.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.27         0.11
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      50.33        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
              0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
              0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
              0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
              0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
              0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
              0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
              0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
              0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
              0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
              0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
              1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
              1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
              1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
              1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
              1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
              1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
              1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
              1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
              1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
              1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
              1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
              1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
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      2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
      2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
      2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
      2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
      2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
      2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
      2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
      2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
      2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
      2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
      2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
      2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
      3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
               over (min)          5.00         10.00
     Storage Coeff.  (min)=        1.50 (ii)     6.39 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=        0.10          0.03        0.131 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      100.70         76.77       93.51
     TOTAL RAINFALL   (mm)=      101.70        101.70      101.70
     RUNOFF COEFFICIENT   =        0.99          0.75        0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200811)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.06          0.01
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     21.60         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
        hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
      0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08   3.56
      0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17   3.56
      0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25   3.56
      0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33   3.56
      0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42   3.56
      0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50   3.56
      0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58   3.56
      0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67   3.56
      0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75   3.56
      0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83   3.56
      0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92   3.56
      1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00   3.56
      1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08   2.03
      1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17   2.03
      1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25   2.03
      1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33   2.03
      1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42   2.03
      1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50   2.03
      1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58   2.03
      1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67   2.03
      1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75   2.03
      1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83   2.03
      1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92   2.03
      2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00   2.03
      2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08   2.03
      2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17   2.03
      2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25   2.03
      2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33   2.03
      2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42   2.03
      2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50   2.03
      2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58   2.03
      2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67   2.03
      2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75   2.03
      2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83   2.03
      2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92   2.03
      3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00   2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
               over (min)          5.00          5.00
     Storage Coeff.  (min)=        0.91 (ii)     4.44 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.34          0.23
                                                         *TOTALS*
     PEAK FLOW       (cms)=        0.02          0.00        0.026 (iii)
     TIME TO PEAK    (hrs)=        5.92          6.00        6.00
     RUNOFF VOLUME    (mm)=      100.70         76.77       96.86
     TOTAL RAINFALL   (mm)=      101.70        101.70      101.70
     RUNOFF COEFFICIENT   =        0.99          0.75        0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0110)|
|   1 +  2 =  3    |         AREA    QPEAK     TPEAK      R.V.
--------------------         (ha)    (cms)     (hrs)      (mm)
       ID1= 1 (200811):      0.07    0.026      6.00     96.86
     + ID2= 2 (200812):      0.38    0.131      6.00     93.51
       ==================================================
       ID = 3 (  0110):      0.45    0.157      6.00     94.03

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB              |
| STANDHYD (200822)|   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.23          0.16
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     50.99         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
        hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
      0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08   3.56
      0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17   3.56
      0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25   3.56
      0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33   3.56
      0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42   3.56
      0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50   3.56
      0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58   3.56
      0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67   3.56
      0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75   3.56
      0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83   3.56
      0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92   3.56
      1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00   3.56
      1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08   2.03
      1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17   2.03
      1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25   2.03
      1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33   2.03
      1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42   2.03
      1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50   2.03
      1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58   2.03
      1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67   2.03
      1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75   2.03
      1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83   2.03
      1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92   2.03
      2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00   2.03
      2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08   2.03
      2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17   2.03
      2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25   2.03
      2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33   2.03
      2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42   2.03
      2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50   2.03
      2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58   2.03
      2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67   2.03
      2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75   2.03
      2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83   2.03
      2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92   2.03
      3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00   2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
               over (min)          5.00         10.00
     Storage Coeff.  (min)=        1.52 (ii)     8.74 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.12
                                                         *TOTALS*
     PEAK FLOW       (cms)=        0.09          0.04        0.127 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00        6.00
     RUNOFF VOLUME    (mm)=      100.70         76.77       90.88
     TOTAL RAINFALL   (mm)=      101.70        101.70      101.70
     RUNOFF COEFFICIENT   =        0.99          0.75        0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200821)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00   Dir. Conn.(%)=  83.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.06          0.01
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     21.60         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
        hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
      0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08   3.56
      0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17   3.56
      0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25   3.56
      0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33   3.56
      0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42   3.56
      0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50   3.56
      0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58   3.56
      0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67   3.56
      0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75   3.56
      0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83   3.56
      0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92   3.56
      1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00   3.56
      1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08   2.03
      1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17   2.03
      1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25   2.03
      1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33   2.03
      1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42   2.03
      1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50   2.03
      1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58   2.03
      1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67   2.03
      1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75   2.03
      1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83   2.03
      1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92   2.03
      2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00   2.03
      2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08   2.03
      2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17   2.03
      2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25   2.03
      2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33   2.03
      2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42   2.03
      2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50   2.03
      2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58   2.03
      2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67   2.03
      2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75   2.03
      2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83   2.03
      2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92   2.03
      3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00   2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
               over (min)          5.00          5.00
     Storage Coeff.  (min)=        0.91 (ii)     4.54 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.34          0.23
                                                         *TOTALS*
     PEAK FLOW       (cms)=        0.02          0.00        0.025 (iii)
     TIME TO PEAK    (hrs)=        5.92          6.00        6.00
     RUNOFF VOLUME    (mm)=      100.70         76.77       96.62
     TOTAL RAINFALL   (mm)=      101.70        101.70      101.70
     RUNOFF COEFFICIENT   =        0.99          0.75        0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

----------------------------------------------------------------------------

--------------------
| ADD HYD  (  0111)|
|   1 +  2 =  3    |         AREA    QPEAK     TPEAK      R.V.
--------------------         (ha)    (cms)     (hrs)      (mm)
       ID1= 1 (200821):      0.07    0.025      6.00     96.62
     + ID2= 2 (200822):      0.39    0.127      6.00     90.88
       ==================================================
       ID = 3 (  0111):      0.46    0.153      6.00     91.75

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
----------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20102)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.35          0.12
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN | TIME    RAIN |' TIME    RAIN | TIME    RAIN
        hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |  hrs   mm/hr
      0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08   3.56
      0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17   3.56
      0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25   3.56
      0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33   3.56
      0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42   3.56
      0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50   3.56
      0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58   3.56
      0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67   3.56
      0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75   3.56
      0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83   3.56
      0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92   3.56
      1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00   3.56
      1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08   2.03
      1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17   2.03
      1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25   2.03
      1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33   2.03
      1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42   2.03
      1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50   2.03
      1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58   2.03
      1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67   2.03
      1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75   2.03
      1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83   2.03
      1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92   2.03
      2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00   2.03
      2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08   2.03
      2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17   2.03
      2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25   2.03
      2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33   2.03
      2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42   2.03
      2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50   2.03
      2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58   2.03
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           2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
           2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
           2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
           2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
           3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=      134.24         117.80
                over (min)         5.00          10.00
     Storage Coeff.  (min)=        1.60 (ii)      6.12 (ii)
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.32           0.15
                                                               *TOTALS*
     PEAK FLOW       (cms)=        0.13           0.03           0.165 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.00            6.00
     RUNOFF VOLUME    (mm)=      100.70          76.77           94.47
     TOTAL RAINFALL   (mm)=      101.70         101.70          101.70
     RUNOFF COEFFICIENT   =        0.99           0.75            0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20101)|   Area    (ha)=   0.25
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  82.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.20          0.05
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     40.82         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
           0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
           0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
           0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
           0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
           0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
           0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
           0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
           0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
           0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
           0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
           1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
           1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
           1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
           1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
           1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
           1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
           1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
           1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
           1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
           1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
           1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
           1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
           2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
           2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
           2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
           2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
           2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
           2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
           2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
           2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
           2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
           2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
           2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
           2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
           3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=      134.24         117.80
                over (min)         5.00          10.00
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```
     Storage Coeff.  (min)=        1.33 (ii)      5.07 (ii)
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.33           0.16
                                                               *TOTALS*
     PEAK FLOW       (cms)=        0.08           0.01           0.090 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.00            6.00
     RUNOFF VOLUME    (mm)=      100.70          76.77           96.38
     TOTAL RAINFALL   (mm)=      101.70         101.70          101.70
     RUNOFF COEFFICIENT   =        0.99           0.75            0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0121)|
|   1 +  2 =  3    |          AREA     QPEAK      TPEAK      R.V.
--------------------          (ha)     (cms)      (hrs)      (mm)
         ID1= 1 ( 20101):     0.25    0.090       6.00     96.38
       + ID2= 2 ( 20102):     0.47    0.165       6.00     94.47
         ===============================================
         ID = 3 (  0121):     0.72    0.255       6.00     95.13

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20111)|   Area    (ha)=   0.87
|ID= 1 DT= 5.0 min |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.58          0.29
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     76.16         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
           0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
           0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
           0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
           0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
           0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
           0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
           0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
           0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
           0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
           0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
           1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
           1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
           1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
           1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
           1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
           1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
           1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
           1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
           1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
           1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
           1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
           1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
           2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
           2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
           2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
           2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
           2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
           2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
           2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
           2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
           2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
           2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
           2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
           2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
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           3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=      134.24         117.80
                over (min)         5.00          10.00
     Storage Coeff.  (min)=        1.93 (ii)      9.15 (ii)
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.31           0.12
                                                               *TOTALS*
     PEAK FLOW       (cms)=        0.22           0.07           0.291 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.00            6.00
     RUNOFF VOLUME    (mm)=      100.70          76.77           92.80
     TOTAL RAINFALL   (mm)=      101.70         101.70          101.70
     RUNOFF COEFFICIENT   =        0.99           0.75            0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.72          0.18
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     77.46         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
           0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
           0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
           0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
           0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
           0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
           0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
           0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
           0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
           0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
           0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
           1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
           1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
           1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
           1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
           1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
           1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
           1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
           1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
           1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
           1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
           1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
           1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
           2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
           2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
           2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
           2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
           2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
           2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
           2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
           2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
           2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
           2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
           2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
           2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
           3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=      134.24         117.80
                over (min)         5.00          10.00
     Storage Coeff.  (min)=        1.95 (ii)      5.89 (ii)
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.31           0.15
                                                               *TOTALS*
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     PEAK FLOW       (cms)=        0.27           0.05           0.320 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.00            6.00
     RUNOFF VOLUME    (mm)=      100.70          76.77           95.91
     TOTAL RAINFALL   (mm)=      101.70         101.70          101.70
     RUNOFF COEFFICIENT   =        0.99           0.75            0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.90          0.21
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     86.02         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
           0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
           0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
           0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
           0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
           0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
           0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
           0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
           0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
           0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
           0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
           1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
           1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
           1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
           1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
           1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
           1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
           1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
           1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
           1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
           1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
           1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
           1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
           2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
           2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
           2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
           2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
           2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
           2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
           2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
           2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
           2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
           2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
           2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
           2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
           3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=      134.24         117.80
                over (min)         5.00          10.00
     Storage Coeff.  (min)=        2.07 (ii)      5.91 (ii)
     Unit Hyd. Tpeak (min)=        5.00          10.00
     Unit Hyd. peak  (cms)=        0.31           0.15
                                                               *TOTALS*
     PEAK FLOW       (cms)=        0.34           0.06           0.396 (iii)
     TIME TO PEAK    (hrs)=        6.00           6.00            6.00
     RUNOFF VOLUME    (mm)=      100.70          76.77           96.15
     TOTAL RAINFALL   (mm)=      101.70         101.70          101.70
     RUNOFF COEFFICIENT   =        0.99           0.75            0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
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```
      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.40          0.07
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
                0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
                0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
                0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
                0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
                0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
                0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
                0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
                0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
                0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
                0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
                1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
                1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
                1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
                1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
                1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
                1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
                1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
                1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
                1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
                1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
                1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
                1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
                2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
                2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
                2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
                2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
                2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
                2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
                2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
                2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
                2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
                2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
                2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
                2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
                3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.60 (ii)     5.03 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.15          0.02          0.170 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=     100.70         76.77          97.11
     TOTAL RAINFALL   (mm)=     101.70        101.70         101.70
     RUNOFF COEFFICIENT   =       0.99          0.75           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.40          0.07
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
                0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
                0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
                0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
                0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
                0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
                0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
                0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
                0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
                0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
                0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
                1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
                1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
                1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
                1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
                1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
                1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
                1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
                1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
                1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
                1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
                1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
                1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
                2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
                2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
                2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
                2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
                2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
                2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
                2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
                2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
                2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
                2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
                2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
                2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
                3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.60 (ii)     5.03 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.15          0.02          0.170 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=     100.70         76.77          97.11
     TOTAL RAINFALL   (mm)=     101.70        101.70         101.70
     RUNOFF COEFFICIENT   =       0.99          0.75           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0136)|
|   1 + 2 = 3      |         AREA     QPEAK     TPEAK      R.V.
--------------------         (ha)     (cms)     (hrs)      (mm)
        ID1= 1 (201021):     0.47     0.170      6.00     97.11
      + ID2= 2 (201022):     0.47     0.170      6.00     97.11
        ==================================================
        ID = 3 (  0136):     0.94     0.340      6.00     97.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD (  2005)|   Area    (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.25          0.03
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     43.20         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
                0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
                0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
                0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
                0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
                0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
                0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
                0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
                0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
                0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
                0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
                1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
                1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
                1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
                1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
                1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
                1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
                1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
                1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
                1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
                1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
                1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
                1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
                2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
                2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
                2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
                2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
                2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
                2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
                2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
                2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
                2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
                2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
                2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
                2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
                3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.37 (ii)     4.22 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.24
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.01          0.103 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=     100.70         76.77          98.30
     TOTAL RAINFALL   (mm)=     101.70        101.70         101.70
     RUNOFF COEFFICIENT   =       0.99          0.75           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 20121)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
--------------------

                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.62          0.49
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     86.02         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
                0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
                0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
                0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
                0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
                0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
                0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
                0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
                0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
                0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
                0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
                1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
                1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
                1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
                1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
                1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
                1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
                1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
                1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
                1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
                1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
                1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
                1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
                2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
                2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
                2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
                2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
                2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
                2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
                2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
                2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
                2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
                2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
                2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
                2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
                3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

     Max.Eff.Inten.(mm/hr)=     134.24        117.80
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.07 (ii)     9.30 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.12
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.23          0.12          0.356 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=     100.70         76.77          90.16
     TOTAL RAINFALL   (mm)=     101.70        101.70         101.70
     RUNOFF COEFFICIENT   =       0.99          0.75           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200111)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.09          0.01
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     25.82         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

```
                ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
    0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
    0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
    0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
    0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
    0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
    0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
    0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
    0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
    0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
    0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
    1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
    1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
    1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
    1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
    1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
    1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
    1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
    1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
    1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
    1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
    1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
    1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
    2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
    2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
    2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
    2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
    2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
    2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
    2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
    2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
    2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
    2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
    2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
    2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
    3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

Max.Eff.Inten.(mm/hr)=     134.24        117.80
           over (min)        5.00          5.00
Storage Coeff.  (min)=       1.01 (ii)     3.92 (ii)
Unit Hyd. Tpeak (min)=       5.00          5.00
Unit Hyd. peak  (cms)=       0.34          0.24
                                                    *TOTALS*
PEAK FLOW       (cms)=       0.03          0.00       0.037 (iii)
TIME TO PEAK    (hrs)=       6.00          6.00        6.00
RUNOFF VOLUME    (mm)=     100.70         76.77       98.18
TOTAL RAINFALL   (mm)=     101.70        101.70      101.70
RUNOFF COEFFICIENT   =       0.99          0.75        0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200121)|   Area    (ha)=   0.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.10          0.01
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     27.08         40.00
     Mannings n          =     0.013         0.290

      NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
    0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
    0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
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    0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
    0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
    0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
    0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
    0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
    0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
    0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
    0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
    1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
    1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
    1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
    1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
    1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
    1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
    1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
    1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
    1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
    1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
    1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
    1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
    2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
    2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
    2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
    2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
    2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
    2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
    2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
    2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
    2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
    2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
    2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
    2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
    3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

Max.Eff.Inten.(mm/hr)=     134.24        117.80
           over (min)        5.00          5.00
Storage Coeff.  (min)=       1.04 (ii)     4.24 (ii)
Unit Hyd. Tpeak (min)=       5.00          5.00
Unit Hyd. peak  (cms)=       0.34          0.24
                                                    *TOTALS*
PEAK FLOW       (cms)=       0.04          0.00       0.040 (iii)
TIME TO PEAK    (hrs)=       6.00          6.00        6.00
RUNOFF VOLUME    (mm)=     100.70         76.77       97.58
TOTAL RAINFALL   (mm)=     101.70        101.70      101.70
RUNOFF COEFFICIENT   =       0.99          0.75        0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0142)|
|   1 + 2 =  3     |        AREA     QPEAK     TPEAK      R.V.
--------------------        (ha)     (cms)     (hrs)      (mm)
        ID1= 1 (200111):    0.10     0.037      6.00     98.18
      + ID2= 2 (200121):    0.11     0.040      6.00     97.58
        ===================================================
        ID = 3 (  0142):    0.21     0.077      6.00     97.86

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| STANDHYD (200112)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.08          0.02
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     25.69         40.00
     Mannings n          =     0.013         0.290

      NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
```

```
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
    0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
    0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
    0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
    0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
    0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
    0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
    0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
    0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
    0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
    0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
    1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
    1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
    1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
    1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
    1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
    1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
    1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
    1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
    1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
    1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
    1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
    1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
    2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
    2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
    2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
    2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
    2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
    2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
    2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
    2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
    2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
    2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
    2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
    2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
    3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

Max.Eff.Inten.(mm/hr)=     134.24        117.80
           over (min)        5.00         10.00
Storage Coeff.  (min)=       1.00 (ii)     5.04 (ii)
Unit Hyd. Tpeak (min)=       5.00         10.00
Unit Hyd. peak  (cms)=       0.34          0.16
                                                    *TOTALS*
PEAK FLOW       (cms)=       0.03          0.01       0.035 (iii)
TIME TO PEAK    (hrs)=       6.00          6.00        6.00
RUNOFF VOLUME    (mm)=     100.70         76.77       95.63
TOTAL RAINFALL   (mm)=     101.70        101.70      101.70
RUNOFF COEFFICIENT   =       0.99          0.75        0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200122)|   Area    (ha)=   0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.11          0.02
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     29.44         40.00
     Mannings n          =     0.013         0.290

      NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                ---- TRANSFORMED HYETOGRAPH ----
     TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
      hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
    0.083    2.54 | 3.083    4.07 | 6.083   18.31 |  9.08    3.56
    0.167    2.54 | 3.167    4.07 | 6.167   18.31 |  9.17    3.56
    0.250    2.54 | 3.250    4.07 | 6.250   18.31 |  9.25    3.56
    0.333    2.54 | 3.333    4.07 | 6.333   18.31 |  9.33    3.56
    0.417    2.54 | 3.417    4.07 | 6.417   18.31 |  9.42    3.56
    0.500    2.54 | 3.500    4.07 | 6.500   18.31 |  9.50    3.56
    0.583    2.54 | 3.583    4.07 | 6.583    8.14 |  9.58    3.56
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    0.667    2.54 | 3.667    4.07 | 6.667    8.14 |  9.67    3.56
    0.750    2.54 | 3.750    4.07 | 6.750    8.14 |  9.75    3.56
    0.833    2.54 | 3.833    4.07 | 6.833    8.14 |  9.83    3.56
    0.917    2.54 | 3.917    4.07 | 6.917    8.14 |  9.92    3.56
    1.000    2.54 | 4.000    4.07 | 7.000    8.14 | 10.00    3.56
    1.083    2.54 | 4.083    6.10 | 7.083    6.10 | 10.08    2.03
    1.167    2.54 | 4.167    6.10 | 7.167    6.10 | 10.17    2.03
    1.250    2.54 | 4.250    6.10 | 7.250    6.10 | 10.25    2.03
    1.333    2.54 | 4.333    6.10 | 7.333    6.10 | 10.33    2.03
    1.417    2.54 | 4.417    6.10 | 7.417    6.10 | 10.42    2.03
    1.500    2.54 | 4.500    6.10 | 7.500    6.10 | 10.50    2.03
    1.583    2.54 | 4.583    8.14 | 7.583    6.10 | 10.58    2.03
    1.667    2.54 | 4.667    8.14 | 7.667    6.10 | 10.67    2.03
    1.750    2.54 | 4.750    8.14 | 7.750    6.10 | 10.75    2.03
    1.833    2.54 | 4.833    8.14 | 7.833    6.10 | 10.83    2.03
    1.917    2.54 | 4.917    8.14 | 7.917    6.10 | 10.92    2.03
    2.000    2.54 | 5.000    8.14 | 8.000    6.10 | 11.00    2.03
    2.083    3.05 | 5.083   12.20 | 8.083    3.56 | 11.08    2.03
    2.167    3.05 | 5.167   12.20 | 8.167    3.56 | 11.17    2.03
    2.250    3.05 | 5.250   12.20 | 8.250    3.56 | 11.25    2.03
    2.333    3.05 | 5.333   12.20 | 8.333    3.56 | 11.33    2.03
    2.417    3.05 | 5.417   12.20 | 8.417    3.56 | 11.42    2.03
    2.500    3.05 | 5.500   12.20 | 8.500    3.56 | 11.50    2.03
    2.583    3.05 | 5.583   48.82 | 8.583    3.56 | 11.58    2.03
    2.667    3.05 | 5.667   48.82 | 8.667    3.56 | 11.67    2.03
    2.750    3.05 | 5.750   48.82 | 8.750    3.56 | 11.75    2.03
    2.833    3.05 | 5.833  134.24 | 8.833    3.56 | 11.83    2.03
    2.917    3.05 | 5.917  134.24 | 8.917    3.56 | 11.92    2.03
    3.000    3.05 | 6.000  134.24 | 9.000    3.56 | 12.00    2.03

Max.Eff.Inten.(mm/hr)=     134.24        117.80
           over (min)        5.00          5.00
Storage Coeff.  (min)=       1.09 (ii)     4.41 (ii)
Unit Hyd. Tpeak (min)=       5.00          5.00
Unit Hyd. peak  (cms)=       0.34          0.23
                                                    *TOTALS*
PEAK FLOW       (cms)=       0.04          0.01       0.048 (iii)
TIME TO PEAK    (hrs)=       6.00          6.00        6.00
RUNOFF VOLUME    (mm)=     100.70         76.77       97.34
TOTAL RAINFALL   (mm)=     101.70        101.70      101.70
RUNOFF COEFFICIENT   =       0.99          0.75        0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0145)|
|   1 + 2 =  3     |        AREA     QPEAK     TPEAK      R.V.
--------------------        (ha)     (cms)     (hrs)      (mm)
        ID1= 1 (200112):    0.10     0.035      6.00     95.63
      + ID2= 2 (200122):    0.13     0.048      6.00     97.34
        ===================================================
        ID = 3 (  0145):    0.23     0.083      6.00     96.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
==========================================================================================

      V    V   I    SSSSS  U   U    A    L                    (v 6.1.2002)
      V    V   I    SS     U   U   A A   L
       V  V    I     SS    U   U  AAAAA  L
       V  V    I      SS   U   U  A   A  L
        VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO     TM
      O   O    T      T    H   H   Y Y   MM MM  O   O
      O   O    T      T    H   H    Y    M   M  O   O
       OOO     T      T    H   H    Y    M   M   OOO
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                  ***** D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
```

```
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\901f06fc
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\901f06fc


DATE: 05-18-2022                          TIME: 12:51:03

USER:



COMMENTS: ____________________________________________________


------------------------------------------------------------------------------------------------
  **********************************************
  ** SIMULATION : Run 18                     **
  **********************************************


--------------------
|   READ STORM      |     Filename: C:\Users\caef070146\AppD
|                   |               ata\Local\Temp\
|                   |               a3a8b910-d519-48ad-be84-5b44b6daecc3\13bf36c4
| Ptotal=112.50 mm  |     Comments: 100-Yr,12-hr SCS, City of Barrie
--------------------
                 TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                 0.25    2.81 |  3.25    4.50 |  6.25   20.25 |  9.25    3.94
                 0.50    2.81 |  3.50    4.50 |  6.50   20.25 |  9.50    3.94
                 0.75    2.81 |  3.75    4.50 |  6.75    9.00 |  9.75    3.94
                 1.00    2.81 |  4.00    4.50 |  7.00    9.00 | 10.00    3.94
                 1.25    2.81 |  4.25    6.75 |  7.25    6.75 | 10.25    2.25
                 1.50    2.81 |  4.50    6.75 |  7.50    6.75 | 10.50    2.25
                 1.75    2.81 |  4.75    9.00 |  7.75    6.75 | 10.75    2.25
                 2.00    2.81 |  5.00    9.00 |  8.00    6.75 | 11.00    2.25
                 2.25    3.37 |  5.25   13.50 |  8.25    3.94 | 11.25    2.25
                 2.50    3.37 |  5.50   13.50 |  8.50    3.94 | 11.50    2.25
                 2.75    3.37 |  5.75   54.00 |  8.75    3.94 | 11.75    2.25
                 3.00    3.37 |  6.00  148.50 |  9.00    3.94 | 12.00    2.25

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| CALIB             |
| STANDHYD ( 20022) |   Area    (ha)=   0.80
|ID= 1 DT= 5.0 min  |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.68         0.12
     Dep. Storage     (mm)=     1.00         1.00
     Average Slope     (%)=     1.00         2.00
     Length            (m)=    73.03        40.00
     Mannings n          =     0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
               0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
               0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
               0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
               0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
               0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
               0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
               0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
               0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
               0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
               0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
               0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
               1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
               1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
               1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
               1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
               1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
               1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
               1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
               1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
               1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
               1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
               1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
               1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
               2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
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               2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
               2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
               2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
               2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
               2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
               2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
               2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
               2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
               2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
               2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
               2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
               3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.81 (ii)    5.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.28         0.04        0.321 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00         6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00       107.82
     TOTAL RAINFALL   (mm)=     112.50       112.50       112.50
     RUNOFF COEFFICIENT   =       0.99         0.77         0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20021)|   Area    (ha)=   0.70
|ID= 1 DT= 5.0 min  |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.62         0.08
     Dep. Storage     (mm)=     1.00         1.00
     Average Slope     (%)=     1.00         2.00
     Length            (m)=    68.31        40.00
     Mannings n          =     0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
               0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
               0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
               0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
               0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
               0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
               0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
               0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
               0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
               0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
               0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
               0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
               1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
               1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
               1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
               1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
               1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
               1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
               1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
               1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
               1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
               1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
               1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
               1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
               2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
               2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
               2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
               2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
               2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
               2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
               2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
               2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
               2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
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               2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
               2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
               2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
               3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.74 (ii)    4.59 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.32         0.23
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.26         0.03        0.285 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00         6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00       108.80
     TOTAL RAINFALL   (mm)=     112.50       112.50       112.50
     RUNOFF COEFFICIENT   =       0.99         0.77         0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20031) |   Area    (ha)=   0.43
|ID= 1 DT= 5.0 min  |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.39         0.04
     Dep. Storage     (mm)=     1.00         1.00
     Average Slope     (%)=     1.00         2.00
     Length            (m)=    53.54        40.00
     Mannings n          =     0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
               0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
               0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
               0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
               0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
               0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
               0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
               0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
               0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
               0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
               0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
               0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
               1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
               1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
               1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
               1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
               1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
               1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
               1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
               1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
               1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
               1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
               1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
               1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
               2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
               2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
               2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
               2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
               2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
               2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
               2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
               2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
               2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
               2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
               2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
               2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
               3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.50 (ii)    4.23 (ii)
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```
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.24
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.16         0.02        0.175 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00         6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00       109.05
     TOTAL RAINFALL   (mm)=     112.50       112.50       112.50
     RUNOFF COEFFICIENT   =       0.99         0.77         0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20032)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min  |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.41         0.06
     Dep. Storage     (mm)=     1.00         1.00
     Average Slope     (%)=     1.00         2.00
     Length            (m)=    55.98        40.00
     Mannings n          =     0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
               0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
               0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
               0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
               0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
               0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
               0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
               0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
               0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
               0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
               0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
               0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
               1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
               1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
               1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
               1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
               1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
               1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
               1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
               1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
               1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
               1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
               1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
               1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
               2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
               2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
               2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
               2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
               2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
               2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
               2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
               2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
               2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
               2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
               2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
               2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
               3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.54 (ii)    4.62 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.22
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.17         0.02        0.191 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00         6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00       108.31
     TOTAL RAINFALL   (mm)=     112.50       112.50       112.50
     RUNOFF COEFFICIENT   =       0.99         0.77         0.96
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***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31          0.04
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      48.30         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08   3.94
                0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17   3.94
                0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25   3.94
                0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33   3.94
                0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42   3.94
                0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50   3.94
                0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58   3.94
                0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67   3.94
                0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75   3.94
                0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83   3.94
                0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92   3.94
                1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00   3.94
                1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08   2.25
                1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17   2.25
                1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25   2.25
                1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33   2.25
                1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42   2.25
                1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50   2.25
                1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58   2.25
                1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67   2.25
                1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75   2.25
                1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83   2.25
                1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92   2.25
                2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00   2.25
                2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08   2.25
                2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17   2.25
                2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25   2.25
                2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33   2.25
                2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42   2.25
                2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50   2.25
                2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58   2.25
                2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67   2.25
                2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75   2.25
                2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83   2.25
                2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92   2.25
                3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00   2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.41 (ii)     4.26 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.23
                                                            *TOTALS*
     PEAK FLOW        (cms)=        0.13          0.01          0.142 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      111.50         87.00         108.80
     TOTAL RAINFALL    (mm)=      112.50        112.50         112.50
     RUNOFF COEFFICIENT   =        0.99          0.77           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB              |
| STANDHYD ( 20042)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
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                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31          0.05
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      48.99         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08   3.94
                0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17   3.94
                0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25   3.94
                0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33   3.94
                0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42   3.94
                0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50   3.94
                0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58   3.94
                0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67   3.94
                0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75   3.94
                0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83   3.94
                0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92   3.94
                1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00   3.94
                1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08   2.25
                1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17   2.25
                1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25   2.25
                1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33   2.25
                1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42   2.25
                1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50   2.25
                1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58   2.25
                1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67   2.25
                1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75   2.25
                1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83   2.25
                1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92   2.25
                2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00   2.25
                2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08   2.25
                2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17   2.25
                2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25   2.25
                2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33   2.25
                2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42   2.25
                2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50   2.25
                2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58   2.25
                2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67   2.25
                2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75   2.25
                2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83   2.25
                2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92   2.25
                3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00   2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.42 (ii)     4.71 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.22
                                                            *TOTALS*
     PEAK FLOW        (cms)=        0.13          0.02          0.146 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      111.50         87.00         107.82
     TOTAL RAINFALL    (mm)=      112.50        112.50         112.50
     RUNOFF COEFFICIENT   =        0.99          0.77           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20052)|   Area    (ha)=   0.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
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                          IMPERVIOUS    PERVIOUS (i)
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     Surface Area     (ha)=       0.23          0.06
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      43.97         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08   3.94
                0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17   3.94
                0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25   3.94
                0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33   3.94
                0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42   3.94
                0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50   3.94
                0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58   3.94
                0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67   3.94
                0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75   3.94
                0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83   3.94
                0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92   3.94
                1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00   3.94
                1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08   2.25
                1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17   2.25
                1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25   2.25
                1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33   2.25
                1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42   2.25
                1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50   2.25
                1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58   2.25
                1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67   2.25
                1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75   2.25
                1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83   2.25
                1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92   2.25
                2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00   2.25
                2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08   2.25
                2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17   2.25
                2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25   2.25
                2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33   2.25
                2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42   2.25
                2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50   2.25
                2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58   2.25
                2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67   2.25
                2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75   2.25
                2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83   2.25
                2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92   2.25
                3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00   2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.33 (ii)     5.30 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.16
                                                            *TOTALS*
     PEAK FLOW        (cms)=        0.09          0.02          0.115 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      111.50         87.00         106.10
     TOTAL RAINFALL    (mm)=      112.50        112.50         112.50
     RUNOFF COEFFICIENT   =        0.99          0.77           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.58          0.15
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      69.76         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                        ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08   3.94
                0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17   3.94
                0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25   3.94
                0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33   3.94
                0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42   3.94
                0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50   3.94
                0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58   3.94
                0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67   3.94
                0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75   3.94
                0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83   3.94
                0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92   3.94
                1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00   3.94
                1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08   2.25
                1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17   2.25
                1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25   2.25
                1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33   2.25
                1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42   2.25
                1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50   2.25
                1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58   2.25
                1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67   2.25
                1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75   2.25
                1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83   2.25
                1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92   2.25
                2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00   2.25
                2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08   2.25
                2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17   2.25
                2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25   2.25
                2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33   2.25
                2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42   2.25
                2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50   2.25
                2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58   2.25
                2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67   2.25
                2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75   2.25
                2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83   2.25
                2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92   2.25
                3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00   2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.76 (ii)     5.54 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.16
                                                            *TOTALS*
     PEAK FLOW        (cms)=        0.24          0.05          0.289 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      111.50         87.00         106.60
     TOTAL RAINFALL    (mm)=      112.50        112.50         112.50
     RUNOFF COEFFICIENT   =        0.99          0.77           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.55          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.83         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08   3.94
                0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17   3.94
                0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25   3.94
                0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33   3.94
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     0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
     0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
     0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
     0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
     0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
     0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
     0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
     1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
     1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
     1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
     1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
     1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
     1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
     1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
     1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
     1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
     1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
     1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
     1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
     2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
     2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
     2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
     2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
     2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
     2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
     2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
     2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
     2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
     2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
     2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
     2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
     3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

 Max.Eff.Inten.(mm/hr)=     148.50        132.61
            over (min)        5.00          5.00
 Storage Coeff.  (min)=       1.70 (ii)     4.99 (ii)
 Unit Hyd. Tpeak (min)=       5.00          5.00
 Unit Hyd. peak  (cms)=       0.32          0.22
                                                      *TOTALS*
 PEAK FLOW       (cms)=       0.23          0.03         0.263 (iii)
 TIME TO PEAK    (hrs)=       6.00          6.00          6.00
 RUNOFF VOLUME    (mm)=     111.50         87.00        107.82
 TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
 RUNOFF COEFFICIENT   =       0.99          0.77          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
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                        IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.54          0.10
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     65.32         40.00
     Mannings n           =     0.013         0.290

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
        hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
      0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
      0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
      0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
      0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
      0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
      0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
      0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
      0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
      0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
      0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
      0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
      1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
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     1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
     1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
     1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
     1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
     1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
     1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
     1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
     1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
     1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
     1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
     1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
     2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
     2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
     2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
     2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
     2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
     2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
     2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
     2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
     2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
     2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
     2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
     2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
     3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

 Max.Eff.Inten.(mm/hr)=     148.50        132.61
            over (min)        5.00         10.00
 Storage Coeff.  (min)=       1.69 (ii)     5.08 (ii)
 Unit Hyd. Tpeak (min)=       5.00         10.00
 Unit Hyd. peak  (cms)=       0.32          0.16
                                                      *TOTALS*
 PEAK FLOW       (cms)=       0.22          0.03         0.256 (iii)
 TIME TO PEAK    (hrs)=       6.00          6.00          6.00
 RUNOFF VOLUME    (mm)=     111.50         87.00        107.58
 TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
 RUNOFF COEFFICIENT   =       0.99          0.77          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
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                        IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.49          0.09
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     62.18         40.00
     Mannings n           =     0.013         0.290

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
        hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
      0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
      0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
      0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
      0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
      0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
      0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
      0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
      0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
      0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
      0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
      0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
      1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
      1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
      1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
      1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
      1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
      1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
      1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
      1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
      1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
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     1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
     1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
     1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
     2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
     2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
     2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
     2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
     2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
     2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
     2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
     2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
     2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
     2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
     2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
     2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
     3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

 Max.Eff.Inten.(mm/hr)=     148.50        132.61
            over (min)        5.00          5.00
 Storage Coeff.  (min)=       1.64 (ii)     4.93 (ii)
 Unit Hyd. Tpeak (min)=       5.00          5.00
 Unit Hyd. peak  (cms)=       0.32          0.22
                                                      *TOTALS*
 PEAK FLOW       (cms)=       0.20          0.03         0.234 (iii)
 TIME TO PEAK    (hrs)=       6.00          6.00          6.00
 RUNOFF VOLUME    (mm)=     111.50         87.00        107.82
 TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
 RUNOFF COEFFICIENT   =       0.99          0.77          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                        IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.51          0.12
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     64.81         40.00
     Mannings n           =     0.013         0.290

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
        hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
      0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
      0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
      0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
      0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
      0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
      0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
      0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
      0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
      0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
      0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
      0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
      1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
      1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
      1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
      1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
      1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
      1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
      1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
      1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
      1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
      1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
      1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
      1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
      2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
      2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
      2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
      2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
      2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
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     2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
     2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
     2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
     2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
     2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
     2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
     2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
     3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

 Max.Eff.Inten.(mm/hr)=     148.50        132.61
            over (min)        5.00         10.00
 Storage Coeff.  (min)=       1.68 (ii)     5.37 (ii)
 Unit Hyd. Tpeak (min)=       5.00         10.00
 Unit Hyd. peak  (cms)=       0.32          0.16
                                                      *TOTALS*
 PEAK FLOW       (cms)=       0.21          0.04         0.250 (iii)
 TIME TO PEAK    (hrs)=       6.00          6.00          6.00
 RUNOFF VOLUME    (mm)=     111.50         87.00        106.84
 TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
 RUNOFF COEFFICIENT   =       0.99          0.77          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20091)|   Area    (ha)=   0.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.00   Dir. Conn.(%)=  77.00
--------------------
                        IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.31          0.09
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     51.64         40.00
     Mannings n           =     0.013         0.290

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
       TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
        hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
      0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
      0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
      0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
      0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
      0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
      0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
      0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
      0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
      0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
      0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
      0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
      1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
      1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
      1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
      1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
      1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
      1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
      1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
      1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
      1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
      1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
      1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
      1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
      2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
      2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
      2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
      2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
      2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
      2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
      2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
      2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
      2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
      2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
      2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
      2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
      3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25
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     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.47 (ii)     5.53 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.13         0.03         0.157 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        105.86
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200812)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  70.00   Dir. Conn.(%)=  70.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.27         0.11
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      50.33        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN | TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |  hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.81 | 3.083   4.50 | 6.083   20.25 |  9.08    3.94
                0.167    2.81 | 3.167   4.50 | 6.167   20.25 |  9.17    3.94
                0.250    2.81 | 3.250   4.50 | 6.250   20.25 |  9.25    3.94
                0.333    2.81 | 3.333   4.50 | 6.333   20.25 |  9.33    3.94
                0.417    2.81 | 3.417   4.50 | 6.417   20.25 |  9.42    3.94
                0.500    2.81 | 3.500   4.50 | 6.500   20.25 |  9.50    3.94
                0.583    2.81 | 3.583   4.50 | 6.583    9.00 |  9.58    3.94
                0.667    2.81 | 3.667   4.50 | 6.667    9.00 |  9.67    3.94
                0.750    2.81 | 3.750   4.50 | 6.750    9.00 |  9.75    3.94
                0.833    2.81 | 3.833   4.50 | 6.833    9.00 |  9.83    3.94
                0.917    2.81 | 3.917   4.50 | 6.917    9.00 |  9.92    3.94
                1.000    2.81 | 4.000   4.50 | 7.000    9.00 | 10.00    3.94
                1.083    2.81 | 4.083   6.75 | 7.083    6.75 | 10.08    2.25
                1.167    2.81 | 4.167   6.75 | 7.167    6.75 | 10.17    2.25
                1.250    2.81 | 4.250   6.75 | 7.250    6.75 | 10.25    2.25
                1.333    2.81 | 4.333   6.75 | 7.333    6.75 | 10.33    2.25
                1.417    2.81 | 4.417   6.75 | 7.417    6.75 | 10.42    2.25
                1.500    2.81 | 4.500   6.75 | 7.500    6.75 | 10.50    2.25
                1.583    2.81 | 4.583   9.00 | 7.583    6.75 | 10.58    2.25
                1.667    2.81 | 4.667   9.00 | 7.667    6.75 | 10.67    2.25
                1.750    2.81 | 4.750   9.00 | 7.750    6.75 | 10.75    2.25
                1.833    2.81 | 4.833   9.00 | 7.833    6.75 | 10.83    2.25
                1.917    2.81 | 4.917   9.00 | 7.917    6.75 | 10.92    2.25
                2.000    2.81 | 5.000   9.00 | 8.000    6.75 | 11.00    2.25
                2.083    3.37 | 5.083  13.50 | 8.083    3.94 | 11.08    2.25
                2.167    3.37 | 5.167  13.50 | 8.167    3.94 | 11.17    2.25
                2.250    3.37 | 5.250  13.50 | 8.250    3.94 | 11.25    2.25
                2.333    3.37 | 5.333  13.50 | 8.333    3.94 | 11.33    2.25
                2.417    3.37 | 5.417  13.50 | 8.417    3.94 | 11.42    2.25
                2.500    3.37 | 5.500  13.50 | 8.500    3.94 | 11.50    2.25
                2.583    3.37 | 5.583  54.00 | 8.583    3.94 | 11.58    2.25
                2.667    3.37 | 5.667  54.00 | 8.667    3.94 | 11.67    2.25
                2.750    3.37 | 5.750  54.00 | 8.750    3.94 | 11.75    2.25
                2.833    3.37 | 5.833 148.50 | 8.833    3.94 | 11.83    2.25
                2.917    3.37 | 5.917 148.50 | 8.917    3.94 | 11.92    2.25
                3.000    3.37 | 6.000 148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.44 (ii)     6.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.11         0.04         0.147 (iii)
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```
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        104.14
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200811)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.06         0.01
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      21.60        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN | TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |  hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.81 | 3.083   4.50 | 6.083   20.25 |  9.08    3.94
                0.167    2.81 | 3.167   4.50 | 6.167   20.25 |  9.17    3.94
                0.250    2.81 | 3.250   4.50 | 6.250   20.25 |  9.25    3.94
                0.333    2.81 | 3.333   4.50 | 6.333   20.25 |  9.33    3.94
                0.417    2.81 | 3.417   4.50 | 6.417   20.25 |  9.42    3.94
                0.500    2.81 | 3.500   4.50 | 6.500   20.25 |  9.50    3.94
                0.583    2.81 | 3.583   4.50 | 6.583    9.00 |  9.58    3.94
                0.667    2.81 | 3.667   4.50 | 6.667    9.00 |  9.67    3.94
                0.750    2.81 | 3.750   4.50 | 6.750    9.00 |  9.75    3.94
                0.833    2.81 | 3.833   4.50 | 6.833    9.00 |  9.83    3.94
                0.917    2.81 | 3.917   4.50 | 6.917    9.00 |  9.92    3.94
                1.000    2.81 | 4.000   4.50 | 7.000    9.00 | 10.00    3.94
                1.083    2.81 | 4.083   6.75 | 7.083    6.75 | 10.08    2.25
                1.167    2.81 | 4.167   6.75 | 7.167    6.75 | 10.17    2.25
                1.250    2.81 | 4.250   6.75 | 7.250    6.75 | 10.25    2.25
                1.333    2.81 | 4.333   6.75 | 7.333    6.75 | 10.33    2.25
                1.417    2.81 | 4.417   6.75 | 7.417    6.75 | 10.42    2.25
                1.500    2.81 | 4.500   6.75 | 7.500    6.75 | 10.50    2.25
                1.583    2.81 | 4.583   9.00 | 7.583    6.75 | 10.58    2.25
                1.667    2.81 | 4.667   9.00 | 7.667    6.75 | 10.67    2.25
                1.750    2.81 | 4.750   9.00 | 7.750    6.75 | 10.75    2.25
                1.833    2.81 | 4.833   9.00 | 7.833    6.75 | 10.83    2.25
                1.917    2.81 | 4.917   9.00 | 7.917    6.75 | 10.92    2.25
                2.000    2.81 | 5.000   9.00 | 8.000    6.75 | 11.00    2.25
                2.083    3.37 | 5.083  13.50 | 8.083    3.94 | 11.08    2.25
                2.167    3.37 | 5.167  13.50 | 8.167    3.94 | 11.17    2.25
                2.250    3.37 | 5.250  13.50 | 8.250    3.94 | 11.25    2.25
                2.333    3.37 | 5.333  13.50 | 8.333    3.94 | 11.33    2.25
                2.417    3.37 | 5.417  13.50 | 8.417    3.94 | 11.42    2.25
                2.500    3.37 | 5.500  13.50 | 8.500    3.94 | 11.50    2.25
                2.583    3.37 | 5.583  54.00 | 8.583    3.94 | 11.58    2.25
                2.667    3.37 | 5.667  54.00 | 8.667    3.94 | 11.67    2.25
                2.750    3.37 | 5.750  54.00 | 8.750    3.94 | 11.75    2.25
                2.833    3.37 | 5.833 148.50 | 8.833    3.94 | 11.83    2.25
                2.917    3.37 | 5.917 148.50 | 8.917    3.94 | 11.92    2.25
                3.000    3.37 | 6.000 148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       0.87 (ii)     4.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.23
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.02         0.00         0.028 (iii)
     TIME TO PEAK    (hrs)=       5.92         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        107.57
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
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```
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0110)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (200811):    0.07    0.028     6.00   107.57
      + ID2= 2 (200812):    0.38    0.147     6.00   104.14
        ===============================================
        ID = 3 (  0110):    0.45    0.175     6.00   104.68

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| STANDHYD (200822)|   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23         0.16
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      50.99        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN | TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |  hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.81 | 3.083   4.50 | 6.083   20.25 |  9.08    3.94
                0.167    2.81 | 3.167   4.50 | 6.167   20.25 |  9.17    3.94
                0.250    2.81 | 3.250   4.50 | 6.250   20.25 |  9.25    3.94
                0.333    2.81 | 3.333   4.50 | 6.333   20.25 |  9.33    3.94
                0.417    2.81 | 3.417   4.50 | 6.417   20.25 |  9.42    3.94
                0.500    2.81 | 3.500   4.50 | 6.500   20.25 |  9.50    3.94
                0.583    2.81 | 3.583   4.50 | 6.583    9.00 |  9.58    3.94
                0.667    2.81 | 3.667   4.50 | 6.667    9.00 |  9.67    3.94
                0.750    2.81 | 3.750   4.50 | 6.750    9.00 |  9.75    3.94
                0.833    2.81 | 3.833   4.50 | 6.833    9.00 |  9.83    3.94
                0.917    2.81 | 3.917   4.50 | 6.917    9.00 |  9.92    3.94
                1.000    2.81 | 4.000   4.50 | 7.000    9.00 | 10.00    3.94
                1.083    2.81 | 4.083   6.75 | 7.083    6.75 | 10.08    2.25
                1.167    2.81 | 4.167   6.75 | 7.167    6.75 | 10.17    2.25
                1.250    2.81 | 4.250   6.75 | 7.250    6.75 | 10.25    2.25
                1.333    2.81 | 4.333   6.75 | 7.333    6.75 | 10.33    2.25
                1.417    2.81 | 4.417   6.75 | 7.417    6.75 | 10.42    2.25
                1.500    2.81 | 4.500   6.75 | 7.500    6.75 | 10.50    2.25
                1.583    2.81 | 4.583   9.00 | 7.583    6.75 | 10.58    2.25
                1.667    2.81 | 4.667   9.00 | 7.667    6.75 | 10.67    2.25
                1.750    2.81 | 4.750   9.00 | 7.750    6.75 | 10.75    2.25
                1.833    2.81 | 4.833   9.00 | 7.833    6.75 | 10.83    2.25
                1.917    2.81 | 4.917   9.00 | 7.917    6.75 | 10.92    2.25
                2.000    2.81 | 5.000   9.00 | 8.000    6.75 | 11.00    2.25
                2.083    3.37 | 5.083  13.50 | 8.083    3.94 | 11.08    2.25
                2.167    3.37 | 5.167  13.50 | 8.167    3.94 | 11.17    2.25
                2.250    3.37 | 5.250  13.50 | 8.250    3.94 | 11.25    2.25
                2.333    3.37 | 5.333  13.50 | 8.333    3.94 | 11.33    2.25
                2.417    3.37 | 5.417  13.50 | 8.417    3.94 | 11.42    2.25
                2.500    3.37 | 5.500  13.50 | 8.500    3.94 | 11.50    2.25
                2.583    3.37 | 5.583  54.00 | 8.583    3.94 | 11.58    2.25
                2.667    3.37 | 5.667  54.00 | 8.667    3.94 | 11.67    2.25
                2.750    3.37 | 5.750  54.00 | 8.750    3.94 | 11.75    2.25
                2.833    3.37 | 5.833 148.50 | 8.833    3.94 | 11.83    2.25
                2.917    3.37 | 5.917 148.50 | 8.917    3.94 | 11.92    2.25
                3.000    3.37 | 6.000 148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.46 (ii)     8.35 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.09         0.05         0.142 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        101.44
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.90
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***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200821)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00   Dir. Conn.(%)=  83.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.06         0.01
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      21.60        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                              ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN | TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |  hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.81 | 3.083   4.50 | 6.083   20.25 |  9.08    3.94
                0.167    2.81 | 3.167   4.50 | 6.167   20.25 |  9.17    3.94
                0.250    2.81 | 3.250   4.50 | 6.250   20.25 |  9.25    3.94
                0.333    2.81 | 3.333   4.50 | 6.333   20.25 |  9.33    3.94
                0.417    2.81 | 3.417   4.50 | 6.417   20.25 |  9.42    3.94
                0.500    2.81 | 3.500   4.50 | 6.500   20.25 |  9.50    3.94
                0.583    2.81 | 3.583   4.50 | 6.583    9.00 |  9.58    3.94
                0.667    2.81 | 3.667   4.50 | 6.667    9.00 |  9.67    3.94
                0.750    2.81 | 3.750   4.50 | 6.750    9.00 |  9.75    3.94
                0.833    2.81 | 3.833   4.50 | 6.833    9.00 |  9.83    3.94
                0.917    2.81 | 3.917   4.50 | 6.917    9.00 |  9.92    3.94
                1.000    2.81 | 4.000   4.50 | 7.000    9.00 | 10.00    3.94
                1.083    2.81 | 4.083   6.75 | 7.083    6.75 | 10.08    2.25
                1.167    2.81 | 4.167   6.75 | 7.167    6.75 | 10.17    2.25
                1.250    2.81 | 4.250   6.75 | 7.250    6.75 | 10.25    2.25
                1.333    2.81 | 4.333   6.75 | 7.333    6.75 | 10.33    2.25
                1.417    2.81 | 4.417   6.75 | 7.417    6.75 | 10.42    2.25
                1.500    2.81 | 4.500   6.75 | 7.500    6.75 | 10.50    2.25
                1.583    2.81 | 4.583   9.00 | 7.583    6.75 | 10.58    2.25
                1.667    2.81 | 4.667   9.00 | 7.667    6.75 | 10.67    2.25
                1.750    2.81 | 4.750   9.00 | 7.750    6.75 | 10.75    2.25
                1.833    2.81 | 4.833   9.00 | 7.833    6.75 | 10.83    2.25
                1.917    2.81 | 4.917   9.00 | 7.917    6.75 | 10.92    2.25
                2.000    2.81 | 5.000   9.00 | 8.000    6.75 | 11.00    2.25
                2.083    3.37 | 5.083  13.50 | 8.083    3.94 | 11.08    2.25
                2.167    3.37 | 5.167  13.50 | 8.167    3.94 | 11.17    2.25
                2.250    3.37 | 5.250  13.50 | 8.250    3.94 | 11.25    2.25
                2.333    3.37 | 5.333  13.50 | 8.333    3.94 | 11.33    2.25
                2.417    3.37 | 5.417  13.50 | 8.417    3.94 | 11.42    2.25
                2.500    3.37 | 5.500  13.50 | 8.500    3.94 | 11.50    2.25
                2.583    3.37 | 5.583  54.00 | 8.583    3.94 | 11.58    2.25
                2.667    3.37 | 5.667  54.00 | 8.667    3.94 | 11.67    2.25
                2.750    3.37 | 5.750  54.00 | 8.750    3.94 | 11.75    2.25
                2.833    3.37 | 5.833 148.50 | 8.833    3.94 | 11.83    2.25
                2.917    3.37 | 5.917 148.50 | 8.917    3.94 | 11.92    2.25
                3.000    3.37 | 6.000 148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       0.87 (ii)     4.36 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.23
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.02         0.00         0.028 (iii)
     TIME TO PEAK    (hrs)=       5.92         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        107.32
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| ADD HYD  (  0111)|
|  1 +  2 =  3     |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (200821):     0.07   0.028     6.00   107.32
     + ID2= 2 (200822):     0.39   0.142     6.00   101.44
       ===============================================
       ID = 3 (  0111):     0.46   0.171     6.00   102.34

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 20102)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.35          0.12
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       55.98         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
               0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
               0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
               0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
               0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
               0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
               0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
               0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
               0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
               0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
               0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
               1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
               1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
               1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
               1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
               1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
               1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
               1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
               1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
               1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
               1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
               1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
               1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
               2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
               2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
               2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
               2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
               2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
               2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
               2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
               2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
               2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
               2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
               2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
               2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
               3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.54 (ii)     5.87 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.15
                                                             *TOTALS*
     PEAK FLOW        (cms)=        0.14          0.04          0.183 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      111.50         87.00         105.13
     TOTAL RAINFALL    (mm)=      112.50        112.50         112.50
     RUNOFF COEFFICIENT   =        0.99          0.77           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
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             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20101)|   Area    (ha)=   0.25
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  82.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.20          0.05
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       40.82         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
               0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
               0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
               0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
               0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
               0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
               0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
               0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
               0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
               0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
               0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
               1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
               1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
               1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
               1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
               1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
               1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
               1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
               1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
               1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
               1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
               1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
               1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
               2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
               2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
               2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
               2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
               2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
               2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
               2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
               2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
               2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
               2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
               2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
               2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
               3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.27 (ii)     4.87 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.22
                                                             *TOTALS*
     PEAK FLOW        (cms)=        0.08          0.02          0.101 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      111.50         87.00         107.08
     TOTAL RAINFALL    (mm)=      112.50        112.50         112.50
     RUNOFF COEFFICIENT   =        0.99          0.77           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0121)|
|  1 +  2 =  3     |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 ( 20101):     0.25   0.101     6.00   107.08
     + ID2= 2 ( 20102):     0.47   0.183     6.00   105.13
       ===============================================
       ID = 3 (  0121):     0.72   0.284     6.00   105.81

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 20111)|   Area    (ha)=   0.87
|ID= 1 DT= 5.0 min |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.58          0.29
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       76.16         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
               0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
               0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
               0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
               0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
               0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
               0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
               0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
               0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
               0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
               0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
               1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
               1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
               1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
               1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
               1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
               1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
               1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
               1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
               1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
               1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
               1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
               1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
               2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
               2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
               2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
               2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
               2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
               2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
               2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
               2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
               2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
               2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
               2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
               2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
               3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.85 (ii)     6.81 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.14
                                                             *TOTALS*
     PEAK FLOW        (cms)=        0.24          0.09          0.331 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      111.50         87.00         103.41
     TOTAL RAINFALL    (mm)=      112.50        112.50         112.50
     RUNOFF COEFFICIENT   =        0.99          0.77           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB            |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.72          0.18
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       77.46         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
               0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
               0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
               0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
               0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
               0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
               0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
               0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
               0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
               0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
               0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
               1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
               1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
               1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
               1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
               1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
               1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
               1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
               1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
               1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
               1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
               1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
               1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
               2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
               2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
               2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
               2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
               2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
               2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
               2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
               2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
               2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
               2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
               2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
               2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
               3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.87 (ii)     5.65 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.15
                                                             *TOTALS*
     PEAK FLOW        (cms)=        0.30          0.06          0.356 (iii)
     TIME TO PEAK     (hrs)=        6.00          6.00           6.00
     RUNOFF VOLUME     (mm)=      111.50         87.00         106.60
     TOTAL RAINFALL    (mm)=      112.50        112.50         112.50
     RUNOFF COEFFICIENT   =        0.99          0.77           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
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                              IMPERVIOUS    PERVIOUS (i)
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     Surface Area     (ha)=       0.90          0.21
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope    (%)=        1.00          2.00
     Length           (m)=       86.02         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                   0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
                   0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
                   0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
                   0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
                   0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
                   0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
                   0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
                   0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
                   0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
                   0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
                   0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
                   1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
                   1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
                   1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
                   1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
                   1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
                   1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
                   1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
                   1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
                   1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
                   1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
                   1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
                   1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
                   2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
                   2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
                   2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
                   2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
                   2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
                   2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
                   2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
                   2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
                   2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
                   2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
                   2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
                   2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
                   3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.99 (ii)     5.68 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                            *TOTALS*
     PEAK FLOW        (cms)=      0.37          0.07           0.440 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00            6.00
     RUNOFF VOLUME     (mm)=    111.50         87.00          106.84
     TOTAL RAINFALL    (mm)=    112.50        112.50          112.50
     RUNOFF COEFFICIENT   =       0.99          0.77            0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

         (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
        (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
       (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40          0.07
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope    (%)=        1.00          2.00
     Length           (m)=       55.98         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                              ---- TRANSFORMED HYETOGRAPH ----
                    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                   0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
                   0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
                   0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
                   0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
                   0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
                   0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
                   0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
                   0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
                   0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
                   0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
                   0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
                   1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
                   1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
                   1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
                   1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
                   1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
                   1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
                   1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
                   1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
                   1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
                   1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
                   1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
                   1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
                   2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
                   2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
                   2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
                   2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
                   2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
                   2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
                   2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
                   2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
                   2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
                   2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
                   2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
                   2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
                   3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.54 (ii)     4.83 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.22
                                                            *TOTALS*
     PEAK FLOW        (cms)=      0.16          0.03           0.190 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00            6.00
     RUNOFF VOLUME     (mm)=    111.50         87.00          107.82
     TOTAL RAINFALL    (mm)=    112.50        112.50          112.50
     RUNOFF COEFFICIENT   =       0.99          0.77            0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

         (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
        (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
       (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40          0.07
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope    (%)=        1.00          2.00
     Length           (m)=       55.98         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                   0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
                   0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
                   0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
                   0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
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                   0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
                   0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
                   0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
                   0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
                   0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
                   0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
                   0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
                   1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
                   1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
                   1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
                   1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
                   1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
                   1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
                   1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
                   1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
                   1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
                   1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
                   1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
                   1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
                   2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
                   2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
                   2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
                   2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
                   2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
                   2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
                   2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
                   2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
                   2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
                   2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
                   2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
                   2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
                   3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.54 (ii)     4.83 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.22
                                                            *TOTALS*
     PEAK FLOW        (cms)=      0.16          0.03           0.190 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00            6.00
     RUNOFF VOLUME     (mm)=    111.50         87.00          107.82
     TOTAL RAINFALL    (mm)=    112.50        112.50          112.50
     RUNOFF COEFFICIENT   =       0.99          0.77            0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

         (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
        (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
       (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0136)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
         ID1= 1 (201021):     0.47    0.190     6.00   107.82
       + ID2= 2 (201022):     0.47    0.190     6.00   107.82
         ===============================================
         ID = 3 (  0136):     0.94    0.380     6.00   107.82

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB             |
| STANDHYD (  2005)|   Area    (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.25          0.03
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope    (%)=        1.00          2.00
     Length           (m)=       43.20         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
```

```
                   0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
                   0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
                   0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
                   0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
                   0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
                   0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
                   0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
                   0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
                   0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
                   0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
                   0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
                   1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
                   1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
                   1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
                   1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
                   1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
                   1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
                   1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
                   1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
                   1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
                   1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
                   1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
                   1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
                   2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
                   2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
                   2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
                   2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
                   2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
                   2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
                   2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
                   2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
                   2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
                   2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
                   2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
                   2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
                   3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.32 (ii)     4.05 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.24
                                                            *TOTALS*
     PEAK FLOW        (cms)=      0.10          0.01           0.114 (iii)
     TIME TO PEAK     (hrs)=      6.00          6.00            6.00
     RUNOFF VOLUME     (mm)=    111.50         87.00          109.04
     TOTAL RAINFALL    (mm)=    112.50        112.50          112.50
     RUNOFF COEFFICIENT   =       0.99          0.77            0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

         (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
        (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
       (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20121)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62          0.49
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope    (%)=        1.00          2.00
     Length           (m)=       86.02         40.00
     Mannings n          =        0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                   0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
                   0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
                   0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
                   0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
                   0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
                   0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
                   0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
                   0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
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     0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
     0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
     0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
     1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
     1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
     1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
     1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
     1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
     1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
     1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
     1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
     1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
     1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
     1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
     1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
     2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
     2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
     2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
     2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
     2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
     2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
     2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
     2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
     2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
     2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
     2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
     2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
     3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

 Max.Eff.Inten.(mm/hr)=     148.50       132.61
            over (min)        5.00        10.00
 Storage Coeff.  (min)=       1.99 (ii)    8.88 (ii)
 Unit Hyd. Tpeak (min)=       5.00        10.00
 Unit Hyd. peak  (cms)=       0.31         0.12
                                                      *TOTALS*
 PEAK FLOW       (cms)=       0.26         0.14         0.398 (iii)
 TIME TO PEAK    (hrs)=       6.00         6.00          6.00
 RUNOFF VOLUME    (mm)=     111.50        87.00        100.72
 TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
 RUNOFF COEFFICIENT   =       0.99         0.77          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD (200111)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                             IMPERVIOUS    PERVIOUS (i)
 Surface Area     (ha)=        0.09          0.01
 Dep. Storage     (mm)=        1.00          1.00
 Average Slope     (%)=        1.00          2.00
 Length            (m)=       25.82         40.00
 Mannings n          =        0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
         0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
         0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
         0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
         0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
         0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
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     1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
     1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
     1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
     1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
     1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
     1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
     1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
     2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
     2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
     2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
     2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
     2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
     2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
     2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
     2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
     2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
     2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
     2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
     2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
     3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

 Max.Eff.Inten.(mm/hr)=     148.50       132.61
            over (min)        5.00         5.00
 Storage Coeff.  (min)=       0.97 (ii)    3.76 (ii)
 Unit Hyd. Tpeak (min)=       5.00         5.00
 Unit Hyd. peak  (cms)=       0.34         0.25
                                                      *TOTALS*
 PEAK FLOW       (cms)=       0.04         0.00         0.041 (iii)
 TIME TO PEAK    (hrs)=       6.00         6.00          6.00
 RUNOFF VOLUME    (mm)=     111.50        87.00        108.92
 TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
 RUNOFF COEFFICIENT   =       0.99         0.77          0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD (200121)|   Area    (ha)=   0.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
 Surface Area     (ha)=        0.10          0.01
 Dep. Storage     (mm)=        1.00          1.00
 Average Slope     (%)=        1.00          2.00
 Length            (m)=       27.08         40.00
 Mannings n          =        0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
         0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
         0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
         0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
         0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
         0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
         1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
         1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
         1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
         1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
         1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
         1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
         1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
         2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
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     2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
     2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
     2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
     2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
     2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
     2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
     2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
     2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
     2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
     2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
     2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
     3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

 Max.Eff.Inten.(mm/hr)=     148.50       132.61
            over (min)        5.00         5.00
 Storage Coeff.  (min)=       1.00 (ii)    4.08 (ii)
 Unit Hyd. Tpeak (min)=       5.00         5.00
 Unit Hyd. peak  (cms)=       0.34         0.24
                                                      *TOTALS*
 PEAK FLOW       (cms)=       0.04         0.01         0.045 (iii)
 TIME TO PEAK    (hrs)=       6.00         6.00          6.00
 RUNOFF VOLUME    (mm)=     111.50        87.00        108.30
 TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
 RUNOFF COEFFICIENT   =       0.99         0.77          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0142)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (200111):      0.10   0.041     6.00   108.92
     + ID2= 2 (200121):      0.11   0.045     6.00   108.30
       ===============================================
       ID = 3 (  0142):      0.21   0.085     6.00   108.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB             |
| STANDHYD (200112)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
 Surface Area     (ha)=        0.08          0.02
 Dep. Storage     (mm)=        1.00          1.00
 Average Slope     (%)=        1.00          2.00
 Length            (m)=       25.69         40.00
 Mannings n          =        0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
         0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
         0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
         0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
         0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
         0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
         1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
         1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
         1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
         1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
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     1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
     1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
     1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
     2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
     2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
     2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
     2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
     2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
     2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
     2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
     2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
     2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
     2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
     2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
     2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
     3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

 Max.Eff.Inten.(mm/hr)=     148.50       132.61
            over (min)        5.00         5.00
 Storage Coeff.  (min)=       0.96 (ii)    4.84 (ii)
 Unit Hyd. Tpeak (min)=       5.00         5.00
 Unit Hyd. peak  (cms)=       0.34         0.22
                                                      *TOTALS*
 PEAK FLOW       (cms)=       0.03         0.01         0.040 (iii)
 TIME TO PEAK    (hrs)=       6.00         6.00          6.00
 RUNOFF VOLUME    (mm)=     111.50        87.00        106.33
 TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
 RUNOFF COEFFICIENT   =       0.99         0.77          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (200122)|   Area    (ha)=   0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
 Surface Area     (ha)=        0.11          0.02
 Dep. Storage     (mm)=        1.00          1.00
 Average Slope     (%)=        1.00          2.00
 Length            (m)=       29.44         40.00
 Mannings n          =        0.013         0.290

     NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
         0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
         0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
         0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
         0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
         0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
         1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
         1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
         1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
         1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
         1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
         1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
         1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
         2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
         2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
         2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
         2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
         2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
```

```
               2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
               2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
               2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
               2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
               2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
               2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
               2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
               3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.05 (ii)    4.23 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.24
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.05         0.01           0.053 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00           6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00         108.06
     TOTAL RAINFALL   (mm)=     112.50       112.50         112.50
     RUNOFF COEFFICIENT   =       0.99         0.77           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0145)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (200112):     0.10   0.040     6.00   106.33
      + ID2= 2 (200122):     0.13   0.053     6.00   108.06
        ==================================================
        ID = 3 (  0145):     0.23   0.092     6.00   107.31

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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 FINISH
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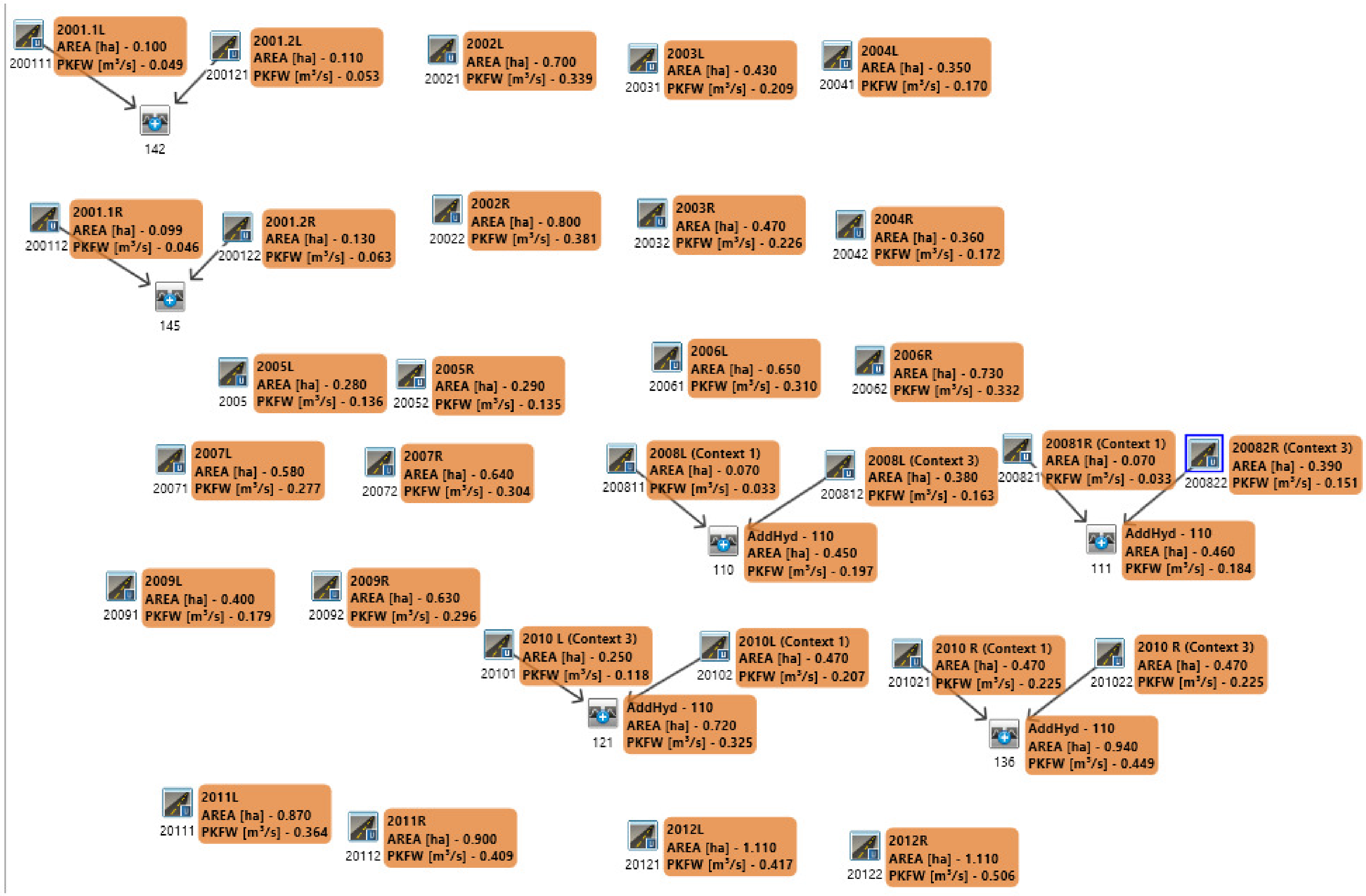
100-yr Post-Developmet Roadway Drainage Area Flows (4-hr Chicao Storm)



```
================================================================================================

      V    V   I    SSSSS  U    U    A     L              (v 6.1.2002)
      V    V   I    SS     U    U   A A    L
       V  V    I     SS    U    U  AAAAA   L
       V  V    I      SS   U    U  A   A   L
        VV     I    SSSSS  UUUUU  A    A   LLLLL

       OOO    TTTTT  TTTTT  H    H   Y    Y  M    M   OOO     TM
      O   O     T      T    H    H    Y Y    MM MM  O   O
      O   O     T      T    H    H     Y     M    M  O   O
       OOO      T      T    H    H     Y     M    M   OOO
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                    ***** D E T A I L E D   O U T P U T *****

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\82eecb13
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\82eecb13

DATE: 05-18-2022                             TIME: 12:44:41

USER:


COMMENTS: _____________________________________________________________

------------------------------------------------------------------------------------------------
  **********************************************
  ** SIMULATION : Run 01                      **
  **********************************************


--------------------
|   READ STORM     |     Filename: C:\Users\caef070146\AppD
|                  |               ata\Local\Temp\
|                  |               11403a02-80e0-48b3-97a8-b203216ba841\f7e451a6
| Ptotal= 36.98 mm |     Comments: 2-year, 4 hr-Chicago, City of Barrie
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.17    2.47 |  1.17   18.78 |  2.17    5.73 |  3.17    2.93
               0.33    2.82 |  1.33   83.11 |  2.33    4.89 |  3.33    2.72
               0.50    3.31 |  1.50   24.75 |  2.50    4.28 |  3.50    2.55
               0.67    4.05 |  1.67   13.01 |  2.67    3.82 |  3.67    2.39
               0.83    5.30 |  1.83    9.01 |  2.83    3.46 |  3.83    2.26
               1.00    7.98 |  2.00    6.97 |  3.00    3.17 |  4.00    2.15

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--------------------
| CALIB            |
| STANDHYD ( 20022)|   Area    (ha)=   0.80
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.68          0.12
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     73.03         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
              0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
              0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
              0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
              0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
              0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
              0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
              0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
              0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
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              0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
              0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
              1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11         41.24
                over (min)          5.00         10.00
     Storage Coeff.  (min)=        2.28 (ii)     6.43 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.30          0.14
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.16          0.01          0.164 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=       35.98         19.22          33.47
     TOTAL RAINFALL   (mm)=       36.98         36.98          36.98
     RUNOFF COEFFICIENT  =         0.97          0.52           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20021)|   Area    (ha)=   0.70
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.62          0.08
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     68.31         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
              0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
              0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
              0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
              0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
              0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
              0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
              0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
              0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
              0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
              0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
              1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11         41.24
                over (min)          5.00         10.00
     Storage Coeff.  (min)=        2.19 (ii)     5.79 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.15
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.14          0.01          0.149 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=       35.98         19.22          34.14
     TOTAL RAINFALL   (mm)=       36.98         36.98          36.98
     RUNOFF COEFFICIENT  =         0.97          0.52           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20031)|   Area    (ha)=   0.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.39          0.04
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     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     53.54         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
              0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
              0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
              0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
              0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
              0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
              0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
              0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
              0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
              0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
              0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
              1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11         41.24
                over (min)          5.00         10.00
     Storage Coeff.  (min)=        1.89 (ii)     5.34 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.16
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.09          0.00          0.092 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=       35.98         19.22          34.30
     TOTAL RAINFALL   (mm)=       36.98         36.98          36.98
     RUNOFF COEFFICIENT  =         0.97          0.52           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20032)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.41          0.06
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
              0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
              0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
              0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
              0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
              0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
              0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
              0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
              0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
              0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
              0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
              1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11         41.24
                over (min)          5.00         10.00
     Storage Coeff.  (min)=        1.94 (ii)     5.83 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.15
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.09          0.01          0.099 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42           1.33
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     RUNOFF VOLUME    (mm)=       35.98         19.22          33.80
     TOTAL RAINFALL   (mm)=       36.98         36.98          36.98
     RUNOFF COEFFICIENT  =         0.97          0.52           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.31          0.04
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     48.30         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
              0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
              0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
              0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
              0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
              0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
              0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
              0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
              0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
              0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
              0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
              1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11         41.24
                over (min)          5.00         10.00
     Storage Coeff.  (min)=        1.78 (ii)     5.38 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.16
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.07          0.00          0.075 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=       35.98         19.22          34.13
     TOTAL RAINFALL   (mm)=       36.98         36.98          36.98
     RUNOFF COEFFICIENT  =         0.97          0.52           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 20042)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.31          0.05
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     48.99         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
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            0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
            0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
            0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
            0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
            0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
            0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
            0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
            0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
            0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
            0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
            1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=       83.11         41.24
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.79 (ii)     5.94 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.07          0.00         0.075 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=       35.98         19.22         33.46
     TOTAL RAINFALL   (mm)=       36.98         36.98         36.98
     RUNOFF COEFFICIENT   =        0.97          0.52          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20052)|   Area    (ha)=   0.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.23          0.06
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       43.97         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
            0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
            0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
            0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
            0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
            0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
            0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
            0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
            0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
            0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
            0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
            1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=       83.11         32.82
                over (min)         5.00         15.00
     Storage Coeff.  (min)=        1.68 (ii)    13.73 (ii)
     Unit Hyd. Tpeak (min)=        5.00         15.00
     Unit Hyd. peak  (cms)=        0.32          0.08
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.05          0.00         0.054 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.50          1.33
     RUNOFF VOLUME    (mm)=       35.98         19.22         32.27
     TOTAL RAINFALL   (mm)=       36.98         36.98         36.98
     RUNOFF COEFFICIENT   =        0.97          0.52          0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB              |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.58          0.15
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       69.76         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
            0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
            0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
            0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
            0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
            0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
            0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
            0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
            0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
            0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
            0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
            1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=       83.11         41.24
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        2.22 (ii)     6.99 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.30          0.14
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.13          0.01         0.144 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=       35.98         19.22         32.63
     TOTAL RAINFALL   (mm)=       36.98         36.98         36.98
     RUNOFF COEFFICIENT   =        0.97          0.52          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.55          0.10
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       65.83         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
            0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
            0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
            0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
            0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
            0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
            0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
            0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
            0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
            0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
            0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
            1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15
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     Max.Eff.Inten.(mm/hr)=       83.11         41.24
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        2.14 (ii)     6.29 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.13          0.01         0.134 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=       35.98         19.22         33.46
     TOTAL RAINFALL   (mm)=       36.98         36.98         36.98
     RUNOFF COEFFICIENT   =        0.97          0.52          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.54          0.10
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       65.32         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
            0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
            0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
            0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
            0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
            0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
            0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
            0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
            0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
            0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
            0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
            1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=       83.11         41.24
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        2.13 (ii)     6.41 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.14
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.12          0.01         0.131 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=       35.98         19.22         33.30
     TOTAL RAINFALL   (mm)=       36.98         36.98         36.98
     RUNOFF COEFFICIENT   =        0.97          0.52          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.49          0.09
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       62.18         40.00
     Mannings n           =       0.013         0.290
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         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
            0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
            0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
            0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
            0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
            0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
            0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
            0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
            0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
            0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
            0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
            1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=       83.11         41.24
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        2.07 (ii)     6.22 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.11          0.01         0.120 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=       35.98         19.22         33.46
     TOTAL RAINFALL   (mm)=       36.98         36.98         36.98
     RUNOFF COEFFICIENT   =        0.97          0.52          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.51          0.12
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       64.81         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
            0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
            0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
            0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
            0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
            0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
            0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
            0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
            0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
            0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
            0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
            1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=       83.11         41.24
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        2.12 (ii)     6.77 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.14
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.12          0.01         0.126 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=       35.98         19.22         32.79
     TOTAL RAINFALL   (mm)=       36.98         36.98         36.98
     RUNOFF COEFFICIENT   =        0.97          0.52          0.89
```

```
***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20091)|   Area    (ha)=   0.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.00   Dir. Conn.(%)=  77.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.31          0.09
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      51.64         40.00
    Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
              0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
              0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
              0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
              0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
              0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
              0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
              0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
              0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
              0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
              0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
              1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

    Max.Eff.Inten.(mm/hr)=      83.11        32.82
               over (min)        5.00        15.00
    Storage Coeff.  (min)=       1.85 (ii)   13.90 (ii)
    Unit Hyd. Tpeak (min)=       5.00        15.00
    Unit Hyd. peak  (cms)=       0.32         0.08
                                                         *TOTALS*
    PEAK FLOW        (cms)=      0.07         0.01          0.074 (iii)
    TIME TO PEAK     (hrs)=      1.33         1.50           1.33
    RUNOFF VOLUME     (mm)=     35.98        19.22          32.11
    TOTAL RAINFALL    (mm)=     36.98        36.98          36.98
    RUNOFF COEFFICIENT   =       0.97         0.52           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200812)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  70.00   Dir. Conn.(%)=  70.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.27          0.11
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      50.33         40.00
    Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
              0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
              0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
              0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
              0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
```

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              0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
              0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
              0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
              0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
              0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
              0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
              1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

    Max.Eff.Inten.(mm/hr)=      83.11        32.82
               over (min)        5.00        15.00
    Storage Coeff.  (min)=       1.82 (ii)   13.87 (ii)
    Unit Hyd. Tpeak (min)=       5.00        15.00
    Unit Hyd. peak  (cms)=       0.32         0.08
                                                         *TOTALS*
    PEAK FLOW        (cms)=      0.06         0.01          0.065 (iii)
    TIME TO PEAK     (hrs)=      1.33         1.50           1.33
    RUNOFF VOLUME     (mm)=     35.98        19.22          30.94
    TOTAL RAINFALL    (mm)=     36.98        36.98          36.98
    RUNOFF COEFFICIENT   =       0.97         0.52           0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200811)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.06          0.01
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      21.60         40.00
    Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
              0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
              0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
              0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
              0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
              0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
              0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
              0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
              0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
              0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
              0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
              1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

    Max.Eff.Inten.(mm/hr)=      83.11        41.24
               over (min)        5.00        10.00
    Storage Coeff.  (min)=       1.10 (ii)    5.38 (ii)
    Unit Hyd. Tpeak (min)=       5.00        10.00
    Unit Hyd. peak  (cms)=       0.34         0.16
                                                         *TOTALS*
    PEAK FLOW        (cms)=      0.01         0.00          0.014 (iii)
    TIME TO PEAK     (hrs)=      1.33         1.42           1.33
    RUNOFF VOLUME     (mm)=     35.98        19.22          33.27
    TOTAL RAINFALL    (mm)=     36.98        36.98          36.98
    RUNOFF COEFFICIENT   =       0.97         0.52           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0110)|
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|   1 + 2 = 3      |          AREA    QPEAK     TPEAK      R.V.
--------------------          (ha)    (cms)     (hrs)      (mm)
        ID1= 1 (200811):      0.07    0.014      1.33     33.27
      + ID2= 2 (200812):      0.38    0.065      1.33     30.94
        ===============================================
        ID = 3 (  0110):      0.45    0.079      1.33     31.30

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (200822)|   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.23          0.16
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      50.99         40.00
    Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
              0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
              0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
              0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
              0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
              0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
              0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
              0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
              0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
              0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
              0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
              1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

    Max.Eff.Inten.(mm/hr)=      83.11        32.82
               over (min)        5.00        15.00
    Storage Coeff.  (min)=       1.84 (ii)   13.88 (ii)
    Unit Hyd. Tpeak (min)=       5.00        15.00
    Unit Hyd. peak  (cms)=       0.32         0.08
                                                         *TOTALS*
    PEAK FLOW        (cms)=      0.05         0.01          0.058 (iii)
    TIME TO PEAK     (hrs)=      1.33         1.50           1.33
    RUNOFF VOLUME     (mm)=     35.98        19.22          29.09
    TOTAL RAINFALL    (mm)=     36.98        36.98          36.98
    RUNOFF COEFFICIENT   =       0.97         0.52           0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200821)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00   Dir. Conn.(%)=  83.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.06          0.01
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      21.60         40.00
    Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
              0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
              0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
              0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
              0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
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              0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
              0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
              0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
              0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
              0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
              0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
              1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

    Max.Eff.Inten.(mm/hr)=      83.11        41.24
               over (min)        5.00        10.00
    Storage Coeff.  (min)=       1.10 (ii)    5.50 (ii)
    Unit Hyd. Tpeak (min)=       5.00        10.00
    Unit Hyd. peak  (cms)=       0.34         0.16
                                                         *TOTALS*
    PEAK FLOW        (cms)=      0.01         0.00          0.014 (iii)
    TIME TO PEAK     (hrs)=      1.33         1.42           1.33
    RUNOFF VOLUME     (mm)=     35.98        19.22          33.10
    TOTAL RAINFALL    (mm)=     36.98        36.98          36.98
    RUNOFF COEFFICIENT   =       0.97         0.52           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0111)|
|   1 + 2 = 3      |          AREA    QPEAK     TPEAK      R.V.
--------------------          (ha)    (cms)     (hrs)      (mm)
        ID1= 1 (200821):      0.07    0.014      1.33     33.10
      + ID2= 2 (200822):      0.39    0.058      1.33     29.09
        ===============================================
        ID = 3 (  0111):      0.46    0.072      1.33     29.70

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20102)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.35          0.12
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      55.98         40.00
    Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
              0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
              0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
              0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
              0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
              0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
              0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
              0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
              0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
              0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
              0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
              1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

    Max.Eff.Inten.(mm/hr)=      83.11        32.82
               over (min)        5.00        15.00
    Storage Coeff.  (min)=       1.94 (ii)   13.99 (ii)
    Unit Hyd. Tpeak (min)=       5.00        15.00
    Unit Hyd. peak  (cms)=       0.31         0.08
                                                         *TOTALS*
    PEAK FLOW        (cms)=      0.08         0.01          0.084 (iii)
    TIME TO PEAK     (hrs)=      1.33         1.50           1.33
    RUNOFF VOLUME     (mm)=     35.98        19.22          31.61
    TOTAL RAINFALL    (mm)=     36.98        36.98          36.98
    RUNOFF COEFFICIENT   =       0.97         0.52           0.85
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***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20101)|   Area    (ha)=   0.25
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  82.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.20          0.05
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     40.82         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
           0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
           0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
           0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
           0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
           0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
           0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
           0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
           0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
           0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
           0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
           1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11         41.24
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.61 (ii)     6.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.05          0.00          0.051 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      35.98         19.22          32.95
     TOTAL RAINFALL   (mm)=      36.98         36.98          36.98
     RUNOFF COEFFICIENT   =       0.97          0.52           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.


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--------------------
| ADD HYD  (  0121)|
|   1 +  2 =  3    |         AREA    QPEAK     TPEAK      R.V.
--------------------         (ha)    (cms)     (hrs)      (mm)
       ID1= 1 ( 20101):      0.25   0.051      1.33     32.95
     + ID2= 2 ( 20102):      0.47   0.084      1.33     31.61
       ===============================================
       ID = 3 (  0121):      0.72   0.134      1.33     32.08

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD ( 20111)|   Area    (ha)=   0.87
|ID= 1 DT= 5.0 min |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.58          0.29
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     76.16         40.00
     Mannings n           =     0.013         0.290
```

```
         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
           0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
           0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
           0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
           0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
           0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
           0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
           0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
           0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
           0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
           0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
           1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11         32.82
                over (min)        5.00         15.00
     Storage Coeff.  (min)=       2.34 (ii)    14.38 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.30          0.08
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.13          0.02          0.142 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.50           1.33
     RUNOFF VOLUME    (mm)=      35.98         19.22          30.44
     TOTAL RAINFALL   (mm)=      36.98         36.98          36.98
     RUNOFF COEFFICIENT   =       0.97          0.52           0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.72          0.18
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     77.46         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
           0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
           0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
           0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
           0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
           0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
           0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
           0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
           0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
           0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
           0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
           1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11         41.24
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.36 (ii)     7.13 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.30          0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.16          0.02          0.177 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      35.98         19.22          32.63
     TOTAL RAINFALL   (mm)=      36.98         36.98          36.98
     RUNOFF COEFFICIENT   =       0.97          0.52           0.88
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***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.90          0.21
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     86.02         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
           0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
           0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
           0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
           0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
           0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
           0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
           0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
           0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
           0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
           0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
           1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11         41.24
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       2.51 (ii)     7.16 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.29          0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.20          0.02          0.219 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      35.98         19.22          32.80
     TOTAL RAINFALL   (mm)=      36.98         36.98          36.98
     RUNOFF COEFFICIENT   =       0.97          0.52           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.40          0.07
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
           0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
           0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
           0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
           0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
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           0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
           0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
           0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
           0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
           0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
           0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
           1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11         41.24
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.94 (ii)     6.09 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.01          0.097 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      35.98         19.22          33.46
     TOTAL RAINFALL   (mm)=      36.98         36.98          36.98
     RUNOFF COEFFICIENT   =       0.97          0.52           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.40          0.07
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n           =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
           0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
           0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
           0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
           0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
           0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
           0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
           0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
           0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
           0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
           0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
           0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
           1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11         41.24
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.94 (ii)     6.09 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.01          0.097 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      35.98         19.22          33.46
     TOTAL RAINFALL   (mm)=      36.98         36.98          36.98
     RUNOFF COEFFICIENT   =       0.97          0.52           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0136)|
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|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (201021):     0.47    0.097     1.33    33.46
      + ID2= 2 (201022):     0.47    0.097     1.33    33.46
        ===============================================
        ID = 3 ( 0136):      0.94    0.194     1.33    33.46

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD (  2005)|   Area    (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.25          0.03
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      43.20         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
                  0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
                  0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
                  0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
                  0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
                  0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
                  0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
                  0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
                  0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
                  0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
                  0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
                  1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11        41.24
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.66 (ii)    5.11 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.06         0.00        0.060 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42         1.33
     RUNOFF VOLUME    (mm)=      35.98        19.22        34.30
     TOTAL RAINFALL   (mm)=      36.98        36.98        36.98
     RUNOFF COEFFICIENT  =        0.97         0.52         0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20121)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62          0.49
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      86.02         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
                  0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
                  0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
                  0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
                  0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
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                  0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
                  0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
                  0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
                  0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
                  0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
                  0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
                  1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11        32.82
                over (min)        5.00        15.00
     Storage Coeff.  (min)=       2.51 (ii)   14.56 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.29         0.08
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.14         0.03        0.156 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.50         1.33
     RUNOFF VOLUME    (mm)=      35.98        19.22        28.60
     TOTAL RAINFALL   (mm)=      36.98        36.98        36.98
     RUNOFF COEFFICIENT  =        0.97         0.52         0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200111)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.09          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      25.82         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
                  0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
                  0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
                  0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
                  0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
                  0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
                  0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
                  0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
                  0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
                  0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
                  0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
                  1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11        41.24
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.22 (ii)    4.75 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.22
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.02         0.00        0.022 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33         1.33
     RUNOFF VOLUME    (mm)=      35.99        19.22        34.21
     TOTAL RAINFALL   (mm)=      36.98        36.98        36.98
     RUNOFF COEFFICIENT  =        0.97         0.52         0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (200121)|   Area    (ha)=   0.11
```

```
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.10          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      27.08         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
                  0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
                  0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
                  0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
                  0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
                  0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
                  0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
                  0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
                  0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
                  0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
                  0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
                  1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11        41.24
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.26 (ii)    5.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.16
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.02         0.00        0.023 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42         1.33
     RUNOFF VOLUME    (mm)=      35.98        19.22        33.78
     TOTAL RAINFALL   (mm)=      36.98        36.98        36.98
     RUNOFF COEFFICIENT  =        0.97         0.52         0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0142)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (200111):     0.10    0.022     1.33    34.21
      + ID2= 2 (200121):     0.11    0.023     1.33    33.78
        ===============================================
        ID = 3 ( 0142):      0.21    0.045     1.33    33.99

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (200112)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.08          0.02
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      25.69         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
                  0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
                  0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
                  0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
                  0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
```

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                  0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
                  0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
                  0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
                  0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
                  0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
                  0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
                  1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11        41.24
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.22 (ii)    6.11 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.02         0.00        0.020 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42         1.33
     RUNOFF VOLUME    (mm)=      35.98        19.22        32.42
     TOTAL RAINFALL   (mm)=      36.98        36.98        36.98
     RUNOFF COEFFICIENT  =        0.97         0.52         0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200122)|   Area    (ha)=   0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.11          0.02
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      29.44         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                   TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                    hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                  0.083    2.47 | 1.083   18.78 | 2.083    5.73 |  3.08    2.93
                  0.167    2.47 | 1.167   18.78 | 2.167    5.73 |  3.17    2.93
                  0.250    2.82 | 1.250   83.11 | 2.250    4.89 |  3.25    2.72
                  0.333    2.82 | 1.333   83.11 | 2.333    4.89 |  3.33    2.72
                  0.417    3.31 | 1.417   24.75 | 2.417    4.28 |  3.42    2.55
                  0.500    3.31 | 1.500   24.75 | 2.500    4.28 |  3.50    2.55
                  0.583    4.05 | 1.583   13.01 | 2.583    3.82 |  3.58    2.39
                  0.667    4.05 | 1.667   13.01 | 2.667    3.82 |  3.67    2.39
                  0.750    5.30 | 1.750    9.01 | 2.750    3.46 |  3.75    2.26
                  0.833    5.30 | 1.833    9.01 | 2.833    3.46 |  3.83    2.26
                  0.917    7.98 | 1.917    6.97 | 2.917    3.17 |  3.92    2.15
                  1.000    7.98 | 2.000    6.97 | 3.000    3.17 |  4.00    2.15

     Max.Eff.Inten.(mm/hr)=      83.11        41.24
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.32 (ii)    5.34 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.16
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.03         0.00        0.027 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42         1.33
     RUNOFF VOLUME    (mm)=      35.99        19.22        33.61
     TOTAL RAINFALL   (mm)=      36.98        36.98        36.98
     RUNOFF COEFFICIENT  =        0.97         0.52         0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0145)|
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|  1 +  2 =  3    |         AREA    QPEAK    TPEAK      R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
      ID1= 1 (200112):       0.10   0.020     1.33     32.42
    + ID2= 2 (200122):       0.13   0.027     1.33     33.61
      ===============================================
      ID = 3 ( 0145):        0.23   0.047     1.33     33.10

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
================================================================================

      V    V   I    SSSSS  U    U    A     L              (v 6.1.2002)
      V    V   I    SS     U    U   A A    L
       V  V    I     SS    U    U  AAAAA   L
       V  V    I       SS  U    U  A    A  L
        VV     I    SSSSS  UUUUU  A    A  LLLLL

      OOO    TTTTT  TTTTT  H    H  Y    Y  M    M   OOO     TM
     O   O     T      T    H    H   Y  Y   MM MM   O   O
     O   O     T      T    H    H    Y     M    M  O   O
      OOO      T      T    H    H    Y     M    M   OOO
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               *****  D E T A I L E D   O U T P U T *****

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\5ca142d0
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\5ca142d0

DATE: 05-18-2022                          TIME: 12:44:41

USER:

COMMENTS: _____________________________________________________

--------------------------------------------------------------------------------
  **********************************************
  ** SIMULATION : Run 02                      **
  **********************************************

--------------------
|  READ STORM      |    Filename: C:\Users\caef070146\AppD
|                  |              ata\Local\Temp\
|                  |              11403a02-80e0-48b3-97a8-b203216ba841\3558f47a
| Ptotal= 50.52 mm |    Comments: 5-year, 4 hr-Chicago, City of Barrie
--------------------
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.17    3.57 |  1.17   25.64 |  2.17    8.12 |  3.17    4.22
               0.33    4.07 |  1.33  108.92 |  2.33    6.96 |  3.33    3.93
               0.50    4.76 |  1.50   33.31 |  2.50    6.12 |  3.50    3.68
               0.67    5.79 |  1.67   17.99 |  2.67    5.48 |  3.67    3.47
               0.83    7.53 |  1.83   12.60 |  2.83    4.97 |  3.83    3.28
               1.00   11.20 |  2.00    9.82 |  3.00    4.56 |  4.00    3.12

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--------------------
| CALIB            |
| STANDHYD ( 20022)|   Area    (ha)=   0.80
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
    Surface Area      (ha)=      0.68          0.12
    Dep. Storage      (mm)=      1.00          1.00
    Average Slope      (%)=      1.00          2.00
    Length             (m)=     73.03         40.00
    Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
```

```
              0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
              0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
              0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
              0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
              0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
              0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
              0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
              0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
              0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
              0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
              0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
              1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

    Max.Eff.Inten.(mm/hr)=     108.92         64.33
               over (min)        5.00         10.00
    Storage Coeff.  (min)=       2.04 (ii)     5.77 (ii)
    Unit Hyd. Tpeak (min)=       5.00         10.00
    Unit Hyd. peak  (cms)=       0.31          0.15
                                                          *TOTALS*
    PEAK FLOW        (cms)=      0.20          0.02          0.219 (iii)
    TIME TO PEAK     (hrs)=      1.33          1.42           1.33
    RUNOFF VOLUME     (mm)=     49.52         30.31          46.63
    TOTAL RAINFALL    (mm)=     50.52         50.52          50.52
    RUNOFF COEFFICIENT   =       0.98          0.60           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20021)|   Area    (ha)=   0.70
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
    Surface Area      (ha)=      0.62          0.08
    Dep. Storage      (mm)=      1.00          1.00
    Average Slope      (%)=      1.00          2.00
    Length             (m)=     68.31         40.00
    Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
              0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
              0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
              0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
              0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
              0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
              0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
              0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
              0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
              0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
              0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
              1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

    Max.Eff.Inten.(mm/hr)=     108.92         64.33
               over (min)        5.00         10.00
    Storage Coeff.  (min)=       1.96 (ii)     5.19 (ii)
    Unit Hyd. Tpeak (min)=       5.00         10.00
    Unit Hyd. peak  (cms)=       0.31          0.16
                                                          *TOTALS*
    PEAK FLOW        (cms)=      0.19          0.01          0.197 (iii)
    TIME TO PEAK     (hrs)=      1.33          1.42           1.33
    RUNOFF VOLUME     (mm)=     49.52         30.31          47.40
    TOTAL RAINFALL    (mm)=     50.52         50.52          50.52
    RUNOFF COEFFICIENT   =       0.98          0.60           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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--------------------
| CALIB            |
| STANDHYD ( 20031)|   Area    (ha)=   0.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
    Surface Area      (ha)=      0.39          0.04
    Dep. Storage      (mm)=      1.00          1.00
    Average Slope      (%)=      1.00          2.00
    Length             (m)=     53.54         40.00
    Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
              0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
              0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
              0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
              0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
              0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
              0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
              0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
              0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
              0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
              0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
              1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

    Max.Eff.Inten.(mm/hr)=     108.92         64.33
               over (min)        5.00          5.00
    Storage Coeff.  (min)=       1.70 (ii)     4.79 (ii)
    Unit Hyd. Tpeak (min)=       5.00          5.00
    Unit Hyd. peak  (cms)=       0.32          0.22
                                                          *TOTALS*
    PEAK FLOW        (cms)=      0.12          0.01          0.124 (iii)
    TIME TO PEAK     (hrs)=      1.33          1.33           1.33
    RUNOFF VOLUME     (mm)=     49.52         30.31          47.59
    TOTAL RAINFALL    (mm)=     50.52         50.52          50.52
    RUNOFF COEFFICIENT   =       0.98          0.60           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20032)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
    Surface Area      (ha)=      0.41          0.06
    Dep. Storage      (mm)=      1.00          1.00
    Average Slope      (%)=      1.00          2.00
    Length             (m)=     55.98         40.00
    Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
              0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
              0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
              0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
              0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
              0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
              0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
              0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
              0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
              0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
              0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
              1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12
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    Max.Eff.Inten.(mm/hr)=     108.92         64.33
               over (min)        5.00         10.00
    Storage Coeff.  (min)=       1.74 (ii)     5.23 (ii)
    Unit Hyd. Tpeak (min)=       5.00         10.00
    Unit Hyd. peak  (cms)=       0.32          0.16
                                                          *TOTALS*
    PEAK FLOW        (cms)=      0.12          0.01          0.131 (iii)
    TIME TO PEAK     (hrs)=      1.33          1.42           1.33
    RUNOFF VOLUME     (mm)=     49.52         30.31          47.02
    TOTAL RAINFALL    (mm)=     50.52         50.52          50.52
    RUNOFF COEFFICIENT   =       0.98          0.60           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
    Surface Area      (ha)=      0.31          0.04
    Dep. Storage      (mm)=      1.00          1.00
    Average Slope      (%)=      1.00          2.00
    Length             (m)=     48.30         40.00
    Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
              0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
              0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
              0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
              0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
              0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
              0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
              0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
              0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
              0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
              0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
              1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

    Max.Eff.Inten.(mm/hr)=     108.92         64.33
               over (min)        5.00          5.00
    Storage Coeff.  (min)=       1.60 (ii)     4.83 (ii)
    Unit Hyd. Tpeak (min)=       5.00          5.00
    Unit Hyd. peak  (cms)=       0.33          0.22
                                                          *TOTALS*
    PEAK FLOW        (cms)=      0.09          0.01          0.101 (iii)
    TIME TO PEAK     (hrs)=      1.33          1.33           1.33
    RUNOFF VOLUME     (mm)=     49.52         30.31          47.40
    TOTAL RAINFALL    (mm)=     50.52         50.52          50.52
    RUNOFF COEFFICIENT   =       0.98          0.60           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20042)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
    Surface Area      (ha)=      0.31          0.05
    Dep. Storage      (mm)=      1.00          1.00
    Average Slope      (%)=      1.00          2.00
    Length             (m)=     48.99         40.00
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     Mannings n          =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    3.57 | 1.083  25.64 | 2.083    8.12 |  3.08    4.22
              0.167    3.57 | 1.167  25.64 | 2.167    8.12 |  3.17    4.22
              0.250    4.07 | 1.250 108.92 | 2.250    6.96 |  3.25    3.93
              0.333    4.07 | 1.333 108.92 | 2.333    6.96 |  3.33    3.93
              0.417    4.76 | 1.417  33.31 | 2.417    6.12 |  3.42    3.68
              0.500    4.76 | 1.500  33.31 | 2.500    6.12 |  3.50    3.68
              0.583    5.79 | 1.583  17.99 | 2.583    5.48 |  3.58    3.47
              0.667    5.79 | 1.667  17.99 | 2.667    5.48 |  3.67    3.47
              0.750    7.53 | 1.750  12.60 | 2.750    4.97 |  3.75    3.28
              0.833    7.53 | 1.833  12.60 | 2.833    4.97 |  3.83    3.28
              0.917   11.20 | 1.917   9.82 | 2.917    4.56 |  3.92    3.12
              1.000   11.20 | 2.000   9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=      108.92        64.33
                over (min)         5.00        10.00
     Storage Coeff.  (min)=        1.61 (ii)    5.33 (ii)
     Unit Hyd. Tpeak (min)=        5.00        10.00
     Unit Hyd. peak  (cms)=        0.32         0.16
                                                            *TOTALS*
     PEAK FLOW       (cms)=        0.09         0.01          0.099 (iii)
     TIME TO PEAK    (hrs)=        1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=       49.52        30.31          46.63
     TOTAL RAINFALL   (mm)=       50.52        50.52          50.52
     RUNOFF COEFFICIENT   =        0.98         0.60           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20052)|   Area    (ha)=   0.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.23         0.06
     Dep. Storage     (mm)=        1.00         1.00
     Average Slope     (%)=        1.00         2.00
     Length            (m)=       43.97        40.00
     Mannings n          =        0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    3.57 | 1.083  25.64 | 2.083    8.12 |  3.08    4.22
              0.167    3.57 | 1.167  25.64 | 2.167    8.12 |  3.17    4.22
              0.250    4.07 | 1.250 108.92 | 2.250    6.96 |  3.25    3.93
              0.333    4.07 | 1.333 108.92 | 2.333    6.96 |  3.33    3.93
              0.417    4.76 | 1.417  33.31 | 2.417    6.12 |  3.42    3.68
              0.500    4.76 | 1.500  33.31 | 2.500    6.12 |  3.50    3.68
              0.583    5.79 | 1.583  17.99 | 2.583    5.48 |  3.58    3.47
              0.667    5.79 | 1.667  17.99 | 2.667    5.48 |  3.67    3.47
              0.750    7.53 | 1.750  12.60 | 2.750    4.97 |  3.75    3.28
              0.833    7.53 | 1.833  12.60 | 2.833    4.97 |  3.83    3.28
              0.917   11.20 | 1.917   9.82 | 2.917    4.56 |  3.92    3.12
              1.000   11.20 | 2.000   9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=      108.92        64.33
                over (min)         5.00        10.00
     Storage Coeff.  (min)=        1.51 (ii)    6.00 (ii)
     Unit Hyd. Tpeak (min)=        5.00        10.00
     Unit Hyd. peak  (cms)=        0.33         0.15
                                                            *TOTALS*
     PEAK FLOW       (cms)=        0.07         0.01          0.076 (iii)
     TIME TO PEAK    (hrs)=        1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=       49.52        30.31          45.28
     TOTAL RAINFALL   (mm)=       50.52        50.52          50.52
     RUNOFF COEFFICIENT   =        0.98         0.60           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.58         0.15
     Dep. Storage     (mm)=        1.00         1.00
     Average Slope     (%)=        1.00         2.00
     Length            (m)=       69.76        40.00
     Mannings n          =        0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    3.57 | 1.083  25.64 | 2.083    8.12 |  3.08    4.22
              0.167    3.57 | 1.167  25.64 | 2.167    8.12 |  3.17    4.22
              0.250    4.07 | 1.250 108.92 | 2.250    6.96 |  3.25    3.93
              0.333    4.07 | 1.333 108.92 | 2.333    6.96 |  3.33    3.93
              0.417    4.76 | 1.417  33.31 | 2.417    6.12 |  3.42    3.68
              0.500    4.76 | 1.500  33.31 | 2.500    6.12 |  3.50    3.68
              0.583    5.79 | 1.583  17.99 | 2.583    5.48 |  3.58    3.47
              0.667    5.79 | 1.667  17.99 | 2.667    5.48 |  3.67    3.47
              0.750    7.53 | 1.750  12.60 | 2.750    4.97 |  3.75    3.28
              0.833    7.53 | 1.833  12.60 | 2.833    4.97 |  3.83    3.28
              0.917   11.20 | 1.917   9.82 | 2.917    4.56 |  3.92    3.12
              1.000   11.20 | 2.000   9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=      108.92        64.33
                over (min)         5.00        10.00
     Storage Coeff.  (min)=        1.99 (ii)    6.27 (ii)
     Unit Hyd. Tpeak (min)=        5.00        10.00
     Unit Hyd. peak  (cms)=        0.31         0.15
                                                            *TOTALS*
     PEAK FLOW       (cms)=        0.18         0.02          0.193 (iii)
     TIME TO PEAK    (hrs)=        1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=       49.52        30.31          45.67
     TOTAL RAINFALL   (mm)=       50.52        50.52          50.52
     RUNOFF COEFFICIENT   =        0.98         0.60           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.55         0.10
     Dep. Storage     (mm)=        1.00         1.00
     Average Slope     (%)=        1.00         2.00
     Length            (m)=       65.83        40.00
     Mannings n          =        0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    3.57 | 1.083  25.64 | 2.083    8.12 |  3.08    4.22
              0.167    3.57 | 1.167  25.64 | 2.167    8.12 |  3.17    4.22
              0.250    4.07 | 1.250 108.92 | 2.250    6.96 |  3.25    3.93
              0.333    4.07 | 1.333 108.92 | 2.333    6.96 |  3.33    3.93
              0.417    4.76 | 1.417  33.31 | 2.417    6.12 |  3.42    3.68
              0.500    4.76 | 1.500  33.31 | 2.500    6.12 |  3.50    3.68
              0.583    5.79 | 1.583  17.99 | 2.583    5.48 |  3.58    3.47
              0.667    5.79 | 1.667  17.99 | 2.667    5.48 |  3.67    3.47
              0.750    7.53 | 1.750  12.60 | 2.750    4.97 |  3.75    3.28
              0.833    7.53 | 1.833  12.60 | 2.833    4.97 |  3.83    3.28
              0.917   11.20 | 1.917   9.82 | 2.917    4.56 |  3.92    3.12
              1.000   11.20 | 2.000   9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=      108.92        64.33
                over (min)         5.00        10.00
     Storage Coeff.  (min)=        1.92 (ii)    5.65 (ii)
     Unit Hyd. Tpeak (min)=        5.00        10.00
     Unit Hyd. peak  (cms)=        0.31         0.15
                                                            *TOTALS*
     PEAK FLOW       (cms)=        0.17         0.01          0.179 (iii)
     TIME TO PEAK    (hrs)=        1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=       49.52        30.31          46.63
     TOTAL RAINFALL   (mm)=       50.52        50.52          50.52
     RUNOFF COEFFICIENT   =        0.98         0.60           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.54         0.10
     Dep. Storage     (mm)=        1.00         1.00
     Average Slope     (%)=        1.00         2.00
     Length            (m)=       65.32        40.00
     Mannings n          =        0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    3.57 | 1.083  25.64 | 2.083    8.12 |  3.08    4.22
              0.167    3.57 | 1.167  25.64 | 2.167    8.12 |  3.17    4.22
              0.250    4.07 | 1.250 108.92 | 2.250    6.96 |  3.25    3.93
              0.333    4.07 | 1.333 108.92 | 2.333    6.96 |  3.33    3.93
              0.417    4.76 | 1.417  33.31 | 2.417    6.12 |  3.42    3.68
              0.500    4.76 | 1.500  33.31 | 2.500    6.12 |  3.50    3.68
              0.583    5.79 | 1.583  17.99 | 2.583    5.48 |  3.58    3.47
              0.667    5.79 | 1.667  17.99 | 2.667    5.48 |  3.67    3.47
              0.750    7.53 | 1.750  12.60 | 2.750    4.97 |  3.75    3.28
              0.833    7.53 | 1.833  12.60 | 2.833    4.97 |  3.83    3.28
              0.917   11.20 | 1.917   9.82 | 2.917    4.56 |  3.92    3.12
              1.000   11.20 | 2.000   9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=      108.92        64.33
                over (min)         5.00        10.00
     Storage Coeff.  (min)=        1.91 (ii)    5.75 (ii)
     Unit Hyd. Tpeak (min)=        5.00        10.00
     Unit Hyd. peak  (cms)=        0.31         0.15
                                                            *TOTALS*
     PEAK FLOW       (cms)=        0.16         0.01          0.175 (iii)
     TIME TO PEAK    (hrs)=        1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=       49.52        30.31          46.44
     TOTAL RAINFALL   (mm)=       50.52        50.52          50.52
     RUNOFF COEFFICIENT   =        0.98         0.60           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.49         0.09
     Dep. Storage     (mm)=        1.00         1.00
     Average Slope     (%)=        1.00         2.00
     Length            (m)=       62.18        40.00
     Mannings n          =        0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    3.57 | 1.083  25.64 | 2.083    8.12 |  3.08    4.22
              0.167    3.57 | 1.167  25.64 | 2.167    8.12 |  3.17    4.22
              0.250    4.07 | 1.250 108.92 | 2.250    6.96 |  3.25    3.93
              0.333    4.07 | 1.333 108.92 | 2.333    6.96 |  3.33    3.93
              0.417    4.76 | 1.417  33.31 | 2.417    6.12 |  3.42    3.68
              0.500    4.76 | 1.500  33.31 | 2.500    6.12 |  3.50    3.68
              0.583    5.79 | 1.583  17.99 | 2.583    5.48 |  3.58    3.47
              0.667    5.79 | 1.667  17.99 | 2.667    5.48 |  3.67    3.47
              0.750    7.53 | 1.750  12.60 | 2.750    4.97 |  3.75    3.28
              0.833    7.53 | 1.833  12.60 | 2.833    4.97 |  3.83    3.28
              0.917   11.20 | 1.917   9.82 | 2.917    4.56 |  3.92    3.12
              1.000   11.20 | 2.000   9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=      108.92        64.33
                over (min)         5.00        10.00
     Storage Coeff.  (min)=        1.86 (ii)    5.58 (ii)
     Unit Hyd. Tpeak (min)=        5.00        10.00
     Unit Hyd. peak  (cms)=        0.32         0.16
                                                            *TOTALS*
     PEAK FLOW       (cms)=        0.15         0.01          0.159 (iii)
     TIME TO PEAK    (hrs)=        1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=       49.52        30.31          46.63
     TOTAL RAINFALL   (mm)=       50.52        50.52          50.52
     RUNOFF COEFFICIENT   =        0.98         0.60           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD ( 20092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.51         0.12
     Dep. Storage     (mm)=        1.00         1.00
     Average Slope     (%)=        1.00         2.00
     Length            (m)=       64.81        40.00
     Mannings n          =        0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    3.57 | 1.083  25.64 | 2.083    8.12 |  3.08    4.22
              0.167    3.57 | 1.167  25.64 | 2.167    8.12 |  3.17    4.22
              0.250    4.07 | 1.250 108.92 | 2.250    6.96 |  3.25    3.93
              0.333    4.07 | 1.333 108.92 | 2.333    6.96 |  3.33    3.93
              0.417    4.76 | 1.417  33.31 | 2.417    6.12 |  3.42    3.68
              0.500    4.76 | 1.500  33.31 | 2.500    6.12 |  3.50    3.68
              0.583    5.79 | 1.583  17.99 | 2.583    5.48 |  3.58    3.47
              0.667    5.79 | 1.667  17.99 | 2.667    5.48 |  3.67    3.47
              0.750    7.53 | 1.750  12.60 | 2.750    4.97 |  3.75    3.28
              0.833    7.53 | 1.833  12.60 | 2.833    4.97 |  3.83    3.28
              0.917   11.20 | 1.917   9.82 | 2.917    4.56 |  3.92    3.12
              1.000   11.20 | 2.000   9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=      108.92        64.33
                over (min)         5.00        10.00
     Storage Coeff.  (min)=        1.90 (ii)    6.08 (ii)
```

```
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.15         0.02         0.168 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42          1.33
     RUNOFF VOLUME    (mm)=      49.52        30.31         45.86
     TOTAL RAINFALL   (mm)=      50.52        50.52         50.52
     RUNOFF COEFFICIENT   =       0.98         0.60          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20091)|   Area    (ha)=   0.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.00   Dir. Conn.(%)=  77.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31         0.09
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      51.64        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
               0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
               0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
               0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
               0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
               0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
               0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
               0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
               0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
               0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
               0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
               1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=     108.92        64.33
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       1.66 (ii)    6.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.09         0.01         0.104 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42          1.33
     RUNOFF VOLUME    (mm)=      49.52        30.31         45.09
     TOTAL RAINFALL   (mm)=      50.52        50.52         50.52
     RUNOFF COEFFICIENT   =       0.98         0.60          0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200812)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  70.00   Dir. Conn.(%)=  70.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.27         0.11
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      50.33        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
               0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
               0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
               0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
               0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
               0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
               0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
               0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
               0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
               0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
               0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
               1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=     108.92        64.33
               over (min)         5.00        15.00
     Storage Coeff.  (min)=       1.64 (ii)   10.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.32         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.08         0.01         0.087 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.50          1.33
     RUNOFF VOLUME    (mm)=      49.52        30.31         43.74
     TOTAL RAINFALL   (mm)=      50.52        50.52         50.52
     RUNOFF COEFFICIENT   =       0.98         0.60          0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200811)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.06         0.01
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      21.60        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
               0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
               0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
               0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
               0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
               0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
               0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
               0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
               0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
               0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
               0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
               1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=     108.92        64.33
               over (min)         5.00         5.00
     Storage Coeff.  (min)=       0.98 (ii)    4.83 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.02         0.00         0.020 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33          1.33
     RUNOFF VOLUME    (mm)=      49.52        30.31         46.42
     TOTAL RAINFALL   (mm)=      50.52        50.52         50.52
     RUNOFF COEFFICIENT   =       0.98         0.60          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
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           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (200811):    0.07   0.020     1.33    46.42
       + ID2= 2 (200812):    0.38   0.087     1.33    43.74
         ==============================================
         ID = 3 (  0110):    0.45   0.107     1.33    44.16

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-----------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (200822)|   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23         0.16
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      50.99        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
               0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
               0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
               0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
               0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
               0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
               0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
               0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
               0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
               0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
               0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
               1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=     108.92        64.33
               over (min)         5.00        15.00
     Storage Coeff.  (min)=       1.65 (ii)   10.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.32         0.09
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.07         0.02         0.079 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.50          1.33
     RUNOFF VOLUME    (mm)=      49.52        30.31         41.62
     TOTAL RAINFALL   (mm)=      50.52        50.52         50.52
     RUNOFF COEFFICIENT   =       0.98         0.60          0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200821)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00   Dir. Conn.(%)=  83.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.06         0.01
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      21.60        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
               0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
               0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
               0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
               0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
               0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
               0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
               0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
               0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
               0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
               0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
               1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=     108.92        64.33
               over (min)         5.00         5.00
     Storage Coeff.  (min)=       0.98 (ii)    4.94 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.02         0.00         0.020 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33          1.33
     RUNOFF VOLUME    (mm)=      49.52        30.31         46.23
     TOTAL RAINFALL   (mm)=      50.52        50.52         50.52
     RUNOFF COEFFICIENT   =       0.98         0.60          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0111)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (200821):    0.07   0.020     1.33    46.23
       + ID2= 2 (200822):    0.39   0.079     1.33    41.62
         ==============================================
         ID = 3 (  0111):    0.46   0.098     1.33    42.32

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-----------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20102)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.35         0.12
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      55.98        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
               0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
               0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
               0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
               0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
               0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
               0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
               0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
               0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
               0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
               0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
               1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=     108.92        64.33
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       1.74 (ii)    6.65 (ii)
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     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.14
                                                     *TOTALS*
     PEAK FLOW       (cms)=       0.10         0.02        0.119 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42         1.33
     RUNOFF VOLUME    (mm)=      49.52        30.31        44.51
     TOTAL RAINFALL   (mm)=      50.52        50.52        50.52
     RUNOFF COEFFICIENT  =       0.98         0.60         0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20101)|   Area    (ha)=   0.25
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  82.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.20         0.05
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      40.82        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
                0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
                0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
                0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
                0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
                0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
                0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
                0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
                0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
                0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
                0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
                1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=     108.92        64.33
                over (min)       5.00        10.00
     Storage Coeff.  (min)=       1.44 (ii)    5.51 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.16
                                                     *TOTALS*
     PEAK FLOW       (cms)=       0.06         0.01        0.068 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42         1.33
     RUNOFF VOLUME    (mm)=      49.52        30.31        46.05
     TOTAL RAINFALL   (mm)=      50.52        50.52        50.52
     RUNOFF COEFFICIENT  =       0.98         0.60         0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0121)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 20101):      0.25    0.068     1.33     46.05
      + ID2= 2 ( 20102):      0.47    0.119     1.33     44.51
        ================================================
        ID = 3 (  0121):      0.72    0.187     1.33     45.05

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB            |
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| STANDHYD ( 20111)|   Area    (ha)=   0.87
|ID= 1 DT= 5.0 min |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.58         0.29
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      76.16        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
                0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
                0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
                0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
                0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
                0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
                0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
                0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
                0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
                0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
                0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
                1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=     108.92        64.33
                over (min)       5.00        15.00
     Storage Coeff.  (min)=       2.10 (ii)   11.30 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.31         0.09
                                                     *TOTALS*
     PEAK FLOW       (cms)=       0.18         0.03        0.192 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.50         1.33
     RUNOFF VOLUME    (mm)=      49.52        30.31        43.17
     TOTAL RAINFALL   (mm)=      50.52        50.52        50.52
     RUNOFF COEFFICIENT  =       0.98         0.60         0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.72         0.18
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      77.46        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
                0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
                0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
                0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
                0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
                0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
                0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
                0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
                0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
                0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
                0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
                1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=     108.92        64.33
                over (min)       5.00        10.00
     Storage Coeff.  (min)=       2.12 (ii)    6.40 (ii)
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     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.31         0.14
                                                     *TOTALS*
     PEAK FLOW       (cms)=       0.22         0.02        0.237 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42         1.33
     RUNOFF VOLUME    (mm)=      49.52        30.31        45.67
     TOTAL RAINFALL   (mm)=      50.52        50.52        50.52
     RUNOFF COEFFICIENT  =       0.98         0.60         0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.90         0.21
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.02        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
                0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
                0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
                0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
                0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
                0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
                0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
                0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
                0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
                0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
                0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
                1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=     108.92        64.33
                over (min)       5.00        10.00
     Storage Coeff.  (min)=       2.26 (ii)    6.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.30         0.14
                                                     *TOTALS*
     PEAK FLOW       (cms)=       0.27         0.03        0.294 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42         1.33
     RUNOFF VOLUME    (mm)=      49.52        30.31        45.87
     TOTAL RAINFALL   (mm)=      50.52        50.52        50.52
     RUNOFF COEFFICIENT  =       0.98         0.60         0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40         0.07
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      55.98        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
                0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
                0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
                0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
                0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
                0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
                0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
                0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
                0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
                0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
                0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
                1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=     108.92        64.33
                over (min)       5.00        10.00
     Storage Coeff.  (min)=       1.74 (ii)    5.47 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                     *TOTALS*
     PEAK FLOW       (cms)=       0.12         0.01        0.129 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42         1.33
     RUNOFF VOLUME    (mm)=      49.52        30.31        46.63
     TOTAL RAINFALL   (mm)=      50.52        50.52        50.52
     RUNOFF COEFFICIENT  =       0.98         0.60         0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40         0.07
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      55.98        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
                0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
                0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
                0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
                0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
                0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
                0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
                0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
                0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
                0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
                0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
                1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=     108.92        64.33
                over (min)       5.00        10.00
     Storage Coeff.  (min)=       1.74 (ii)    5.47 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                     *TOTALS*
     PEAK FLOW       (cms)=       0.12         0.01        0.129 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42         1.33
     RUNOFF VOLUME    (mm)=      49.52        30.31        46.63
     TOTAL RAINFALL   (mm)=      50.52        50.52        50.52
     RUNOFF COEFFICIENT  =       0.98         0.60         0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
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```
         CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 0136)|
|  1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (201021):    0.47   0.129     1.33    46.63
       + ID2= 2 (201022):    0.47   0.129     1.33    46.63
         ==================================================
         ID = 3 ( 0136):     0.94   0.259     1.33    46.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| STANDHYD (  2005)|   Area     (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.25         0.03
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      43.20        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
               0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
               0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
               0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
               0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
               0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
               0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
               0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
               0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
               0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
               0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
               1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=      108.92         64.33
                over (min)          5.00          5.00
     Storage Coeff.  (min)=         1.49 (ii)     4.59 (ii)
     Unit Hyd. Tpeak (min)=         5.00          5.00
     Unit Hyd. peak  (cms)=         0.33          0.23
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.08          0.00          0.081 (iii)
     TIME TO PEAK    (hrs)=         1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=        49.52         30.31          47.59
     TOTAL RAINFALL   (mm)=        50.52         50.52          50.52
     RUNOFF COEFFICIENT   =         0.98          0.60           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20121)|   Area     (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62         0.49
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.02        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
               0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
               0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
               0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
               0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
               0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
               0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
               0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
               0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
               0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
               0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
               1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=      108.92         64.33
                over (min)          5.00         15.00
     Storage Coeff.  (min)=         2.26 (ii)    11.46 (ii)
     Unit Hyd. Tpeak (min)=         5.00         15.00
     Unit Hyd. peak  (cms)=         0.30          0.09
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.19          0.05          0.214 (iii)
     TIME TO PEAK    (hrs)=         1.33          1.50           1.33
     RUNOFF VOLUME    (mm)=        49.52         30.31          41.06
     TOTAL RAINFALL   (mm)=        50.52         50.52          50.52
     RUNOFF COEFFICIENT   =         0.98          0.60           0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (200111)|   Area     (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.09         0.01
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      25.82        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
               0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
               0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
               0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
               0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
               0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
               0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
               0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
               0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
               0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
               0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
               1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=      108.92         64.33
                over (min)          5.00          5.00
     Storage Coeff.  (min)=         1.10 (ii)     4.26 (ii)
     Unit Hyd. Tpeak (min)=         5.00          5.00
     Unit Hyd. peak  (cms)=         0.34          0.23
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.03          0.00          0.029 (iii)
     TIME TO PEAK    (hrs)=         1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=        49.52         30.31          47.49
     TOTAL RAINFALL   (mm)=        50.52         50.52          50.52
     RUNOFF COEFFICIENT   =         0.98          0.60           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200121)|   Area     (ha)=   0.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.10         0.01
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      27.08        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
               0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
               0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
               0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
               0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
               0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
               0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
               0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
               0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
               0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
               0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
               1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=      108.92         64.33
                over (min)          5.00          5.00
     Storage Coeff.  (min)=         1.13 (ii)     4.61 (ii)
     Unit Hyd. Tpeak (min)=         5.00          5.00
     Unit Hyd. peak  (cms)=         0.34          0.22
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.03          0.00          0.031 (iii)
     TIME TO PEAK    (hrs)=         1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=        49.52         30.31          47.00
     TOTAL RAINFALL   (mm)=        50.52         50.52          50.52
     RUNOFF COEFFICIENT   =         0.98          0.60           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 0142)|
|  1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (200111):    0.10   0.029     1.33    47.49
       + ID2= 2 (200121):    0.11   0.031     1.33    47.00
         ==================================================
         ID = 3 ( 0142):     0.21   0.060     1.33    47.23

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (200112)|   Area     (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.08         0.02
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      25.69        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
               0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
               0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
               0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
               0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
               0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
               0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
               0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
               0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
               0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
               0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
               1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=      108.92         64.33
                over (min)          5.00         10.00
     Storage Coeff.  (min)=         1.09 (ii)     5.48 (ii)
     Unit Hyd. Tpeak (min)=         5.00         10.00
     Unit Hyd. peak  (cms)=         0.34          0.16
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.02          0.00          0.026 (iii)
     TIME TO PEAK    (hrs)=         1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=        49.52         30.31          45.46
     TOTAL RAINFALL   (mm)=        50.52         50.52          50.52
     RUNOFF COEFFICIENT   =         0.98          0.60           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200122)|   Area     (ha)=   0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.11         0.02
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      29.44        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    3.57 | 1.083   25.64 | 2.083    8.12 |  3.08    4.22
               0.167    3.57 | 1.167   25.64 | 2.167    8.12 |  3.17    4.22
               0.250    4.07 | 1.250  108.92 | 2.250    6.96 |  3.25    3.93
               0.333    4.07 | 1.333  108.92 | 2.333    6.96 |  3.33    3.93
               0.417    4.76 | 1.417   33.31 | 2.417    6.12 |  3.42    3.68
               0.500    4.76 | 1.500   33.31 | 2.500    6.12 |  3.50    3.68
               0.583    5.79 | 1.583   17.99 | 2.583    5.48 |  3.58    3.47
               0.667    5.79 | 1.667   17.99 | 2.667    5.48 |  3.67    3.47
               0.750    7.53 | 1.750   12.60 | 2.750    4.97 |  3.75    3.28
               0.833    7.53 | 1.833   12.60 | 2.833    4.97 |  3.83    3.28
               0.917   11.20 | 1.917    9.82 | 2.917    4.56 |  3.92    3.12
               1.000   11.20 | 2.000    9.82 | 3.000    4.56 |  4.00    3.12

     Max.Eff.Inten.(mm/hr)=      108.92         64.33
                over (min)          5.00          5.00
     Storage Coeff.  (min)=         1.19 (ii)     4.79 (ii)
     Unit Hyd. Tpeak (min)=         5.00          5.00
     Unit Hyd. peak  (cms)=         0.33          0.22
                                                            *TOTALS*
     PEAK FLOW       (cms)=         0.03          0.00          0.037 (iii)
     TIME TO PEAK    (hrs)=         1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=        49.52         30.31          46.81
     TOTAL RAINFALL   (mm)=        50.52         50.52          50.52
     RUNOFF COEFFICIENT   =         0.98          0.60           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
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```
      CN* =  89.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  ( 0145)|
|   1 + 2 = 3     |        AREA    QPEAK    TPEAK      R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
      ID1= 1 (200112):      0.10   0.026     1.33    45.46
    + ID2= 2 (200122):      0.13   0.037     1.33    46.81
      ===============================================
      ID = 3 ( 0145):       0.23   0.063     1.33    46.23

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
==========================================================================================

    V     V   I    SSSSS  U    U    A    L              (v 6.1.2002)
     V   V    I    SS     U    U   A A   L
      V V     I     SS    U    U  AAAAA  L
      V V     I      SS   U    U  A   A  L
       VV     I    SSSSS  UUUUU  A    A  LLLLL

     OOO    TTTTT  TTTTT  H   H  Y   Y  M   M   OOO     TM
    O   O     T      T    H   H   Y Y   MM MM  O   O
    O   O     T      T    H   H    Y    M   M  O   O
     OOO      T      T    H   H    Y    M   M   OOO
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                   *****  D E T A I L E D   O U T P U T  *****

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\219ec28a
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\219ec28a

DATE: 05-18-2022                          TIME: 12:44:42

USER:


COMMENTS: ____________________________________________________________

------------------------------------------------------------------------------------------
  ************************************************
  ** SIMULATION : Run 03                        **
  ************************************************


--------------------
|   READ STORM      |    Filename: C:\Users\caef070146\AppD
|                   |              ata\Local\Temp\
|                   |              11403a02-80e0-48b3-97a8-b203216ba841\63724dd9
| Ptotal= 59.72 mm |    Comments: 10-year, 4 hr-Chicago, City of Barrie
--------------------
                TIME    RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs   mm/hr
                0.17    4.32 |  1.17    30.27 |  2.17     9.72 |  3.17    5.09
                0.33    4.91 |  1.33   126.55 |  2.33     8.53 |  3.33    4.74
                0.50    5.73 |  1.50    39.22 |  2.50     7.35 |  3.50    4.45
                0.67    6.96 |  1.67    21.35 |  2.67     6.59 |  3.67    4.19
                0.83    9.03 |  1.83    15.01 |  2.83     5.99 |  3.83    3.97
                1.00   13.36 |  2.00    11.74 |  3.00     5.50 |  4.00    3.77

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--------------------
| CALIB             |
| STANDHYD ( 20022)|   Area    (ha)=   0.80
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.68         0.12
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     73.03        40.00
     Mannings n          =      0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs   mm/hr
               0.083    4.32 | 1.083    30.27 | 2.083     9.72 |  3.08    5.09
               0.167    4.32 | 1.167    30.27 | 2.167     9.72 |  3.17    5.09
               0.250    4.91 | 1.250   126.55 | 2.250     8.53 |  3.25    4.74
               0.333    4.91 | 1.333   126.55 | 2.333     8.53 |  3.33    4.74
               0.417    5.73 | 1.417    39.22 | 2.417     7.35 |  3.42    4.45
               0.500    5.73 | 1.500    39.22 | 2.500     7.35 |  3.50    4.45
               0.583    6.96 | 1.583    21.35 | 2.583     6.59 |  3.58    4.19
               0.667    6.96 | 1.667    21.35 | 2.667     6.59 |  3.67    4.19
               0.750    9.03 | 1.750    15.01 | 2.750     5.99 |  3.75    3.97
               0.833    9.03 | 1.833    15.01 | 2.833     5.99 |  3.83    3.97
               0.917   13.36 | 1.917    11.74 | 2.917     5.50 |  3.92    3.77
               1.000   13.36 | 2.000    11.74 | 3.000     5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55        80.98
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.93 (ii)     5.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.31         0.16
                                                       *TOTALS*
     PEAK FLOW       (cms)=       0.24         0.02       0.257 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42        1.33
     RUNOFF VOLUME    (mm)=      58.72        38.27       55.65
     TOTAL RAINFALL   (mm)=      59.72        59.72       59.72
     RUNOFF COEFFICIENT   =       0.98         0.64        0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20021)|   Area    (ha)=   0.70
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.62         0.08
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     68.31        40.00
     Mannings n          =      0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs   mm/hr
               0.083    4.32 | 1.083    30.27 | 2.083     9.72 |  3.08    5.09
               0.167    4.32 | 1.167    30.27 | 2.167     9.72 |  3.17    5.09
               0.250    4.91 | 1.250   126.55 | 2.250     8.53 |  3.25    4.74
               0.333    4.91 | 1.333   126.55 | 2.333     8.53 |  3.33    4.74
               0.417    5.73 | 1.417    39.22 | 2.417     7.35 |  3.42    4.45
               0.500    5.73 | 1.500    39.22 | 2.500     7.35 |  3.50    4.45
               0.583    6.96 | 1.583    21.35 | 2.583     6.59 |  3.58    4.19
               0.667    6.96 | 1.667    21.35 | 2.667     6.59 |  3.67    4.19
               0.750    9.03 | 1.750    15.01 | 2.750     5.99 |  3.75    3.97
               0.833    9.03 | 1.833    15.01 | 2.833     5.99 |  3.83    3.97
               0.917   13.36 | 1.917    11.74 | 2.917     5.50 |  3.92    3.77
               1.000   13.36 | 2.000    11.74 | 3.000     5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55        80.98
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.85 (ii)     4.89 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.32         0.22
                                                       *TOTALS*
     PEAK FLOW       (cms)=       0.22         0.02       0.234 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33        1.33
     RUNOFF VOLUME    (mm)=      58.72        38.27       56.47
     TOTAL RAINFALL   (mm)=      59.72        59.72       59.72
     RUNOFF COEFFICIENT   =       0.98         0.64        0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20031)|   Area    (ha)=   0.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.39         0.04
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     53.54        40.00
     Mannings n          =      0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs   mm/hr
               0.083    4.32 | 1.083    30.27 | 2.083     9.72 |  3.08    5.09
               0.167    4.32 | 1.167    30.27 | 2.167     9.72 |  3.17    5.09
               0.250    4.91 | 1.250   126.55 | 2.250     8.53 |  3.25    4.74
               0.333    4.91 | 1.333   126.55 | 2.333     8.53 |  3.33    4.74
               0.417    5.73 | 1.417    39.22 | 2.417     7.35 |  3.42    4.45
               0.500    5.73 | 1.500    39.22 | 2.500     7.35 |  3.50    4.45
               0.583    6.96 | 1.583    21.35 | 2.583     6.59 |  3.58    4.19
               0.667    6.96 | 1.667    21.35 | 2.667     6.59 |  3.67    4.19
               0.750    9.03 | 1.750    15.01 | 2.750     5.99 |  3.75    3.97
               0.833    9.03 | 1.833    15.01 | 2.833     5.99 |  3.83    3.97
               0.917   13.36 | 1.917    11.74 | 2.917     5.50 |  3.92    3.77
               1.000   13.36 | 2.000    11.74 | 3.000     5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55        80.98
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.60 (ii)     4.51 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.32         0.23
                                                       *TOTALS*
     PEAK FLOW       (cms)=       0.14         0.01       0.145 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33        1.33
     RUNOFF VOLUME    (mm)=      58.72        38.27       56.67
     TOTAL RAINFALL   (mm)=      59.72        59.72       59.72
     RUNOFF COEFFICIENT   =       0.98         0.64        0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20032)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.41         0.06
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     55.98        40.00
     Mannings n          =      0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs   mm/hr
               0.083    4.32 | 1.083    30.27 | 2.083     9.72 |  3.08    5.09
               0.167    4.32 | 1.167    30.27 | 2.167     9.72 |  3.17    5.09
               0.250    4.91 | 1.250   126.55 | 2.250     8.53 |  3.25    4.74
               0.333    4.91 | 1.333   126.55 | 2.333     8.53 |  3.33    4.74
               0.417    5.73 | 1.417    39.22 | 2.417     7.35 |  3.42    4.45
               0.500    5.73 | 1.500    39.22 | 2.500     7.35 |  3.50    4.45
               0.583    6.96 | 1.583    21.35 | 2.583     6.59 |  3.58    4.19
               0.667    6.96 | 1.667    21.35 | 2.667     6.59 |  3.67    4.19
               0.750    9.03 | 1.750    15.01 | 2.750     5.99 |  3.75    3.97
               0.833    9.03 | 1.833    15.01 | 2.833     5.99 |  3.83    3.97
               0.917   13.36 | 1.917    11.74 | 2.917     5.50 |  3.92    3.77
               1.000   13.36 | 2.000    11.74 | 3.000     5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55        80.98
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.64 (ii)     4.92 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.32         0.22
                                                       *TOTALS*
     PEAK FLOW       (cms)=       0.14         0.01       0.156 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33        1.33
     RUNOFF VOLUME    (mm)=      58.72        38.27       56.06
     TOTAL RAINFALL   (mm)=      59.72        59.72       59.72
     RUNOFF COEFFICIENT   =       0.98         0.64        0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.31         0.04
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     48.30        40.00
     Mannings n          =      0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                              ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs    mm/hr |'   hrs    mm/hr |   hrs   mm/hr
               0.083    4.32 | 1.083    30.27 | 2.083     9.72 |  3.08    5.09
               0.167    4.32 | 1.167    30.27 | 2.167     9.72 |  3.17    5.09
               0.250    4.91 | 1.250   126.55 | 2.250     8.53 |  3.25    4.74
               0.333    4.91 | 1.333   126.55 | 2.333     8.53 |  3.33    4.74
               0.417    5.73 | 1.417    39.22 | 2.417     7.35 |  3.42    4.45
               0.500    5.73 | 1.500    39.22 | 2.500     7.35 |  3.50    4.45
               0.583    6.96 | 1.583    21.35 | 2.583     6.59 |  3.58    4.19
               0.667    6.96 | 1.667    21.35 | 2.667     6.59 |  3.67    4.19
               0.750    9.03 | 1.750    15.01 | 2.750     5.99 |  3.75    3.97
               0.833    9.03 | 1.833    15.01 | 2.833     5.99 |  3.83    3.97
               0.917   13.36 | 1.917    11.74 | 2.917     5.50 |  3.92    3.77
               1.000   13.36 | 2.000    11.74 | 3.000     5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55        80.98
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.50 (ii)     4.55 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.23
                                                       *TOTALS*
     PEAK FLOW       (cms)=       0.11         0.01       0.118 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33        1.33
     RUNOFF VOLUME    (mm)=      58.72        38.27       56.47
     TOTAL RAINFALL   (mm)=      59.72        59.72       59.72
     RUNOFF COEFFICIENT   =       0.98         0.64        0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

     (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
         CN* =  89.0    Ia = Dep. Storage  (Above)
    (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
         THAN THE STORAGE COEFFICIENT.
   (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20042)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.31          0.05
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    48.99         40.00
     Mannings n          =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
            0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
            0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
            0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
            0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
            0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
            0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
            0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
            0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
            0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
            0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
            0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
            1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55         80.98
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.52 (ii)     5.02 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.11          0.01          0.116 (iii)
     TIME TO PEAK     (hrs)=      1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      58.72         38.27          55.65
     TOTAL RAINFALL   (mm)=      59.72         59.72          59.72
     RUNOFF COEFFICIENT   =       0.98          0.64           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20052)|   Area    (ha)=   0.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.23          0.06
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    43.97         40.00
     Mannings n          =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
            0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
            0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
            0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
            0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
            0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
            0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
            0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
            0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
            0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
            0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
            0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
            1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55         80.98
                over (min)        5.00         10.00
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     Storage Coeff.  (min)=       1.42 (ii)     5.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.08          0.01          0.089 (iii)
     TIME TO PEAK     (hrs)=      1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      58.72         38.27          54.21
     TOTAL RAINFALL   (mm)=      59.72         59.72          59.72
     RUNOFF COEFFICIENT   =       0.98          0.64           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.58          0.15
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    69.76         40.00
     Mannings n          =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
            0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
            0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
            0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
            0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
            0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
            0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
            0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
            0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
            0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
            0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
            0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
            1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55         80.98
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.87 (ii)     5.91 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.20          0.03          0.227 (iii)
     TIME TO PEAK     (hrs)=      1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      58.72         38.27          54.63
     TOTAL RAINFALL   (mm)=      59.72         59.72          59.72
     RUNOFF COEFFICIENT   =       0.98          0.64           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.55          0.10
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    65.83         40.00
     Mannings n          =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                         ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
            0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
            0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
            0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
            0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
            0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
            0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
            0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
            0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
            0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
            0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
            0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
            1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55         80.98
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.81 (ii)     5.32 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.19          0.02          0.209 (iii)
     TIME TO PEAK     (hrs)=      1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      58.72         38.27          55.65
     TOTAL RAINFALL   (mm)=      59.72         59.72          59.72
     RUNOFF COEFFICIENT   =       0.98          0.64           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.54          0.10
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    65.32         40.00
     Mannings n          =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
            0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
            0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
            0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
            0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
            0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
            0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
            0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
            0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
            0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
            0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
            0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
            1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55         80.98
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.80 (ii)     5.42 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.19          0.02          0.205 (iii)
     TIME TO PEAK     (hrs)=      1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      58.72         38.27          55.45
     TOTAL RAINFALL   (mm)=      59.72         59.72          59.72
     RUNOFF COEFFICIENT   =       0.98          0.64           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
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      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.49          0.09
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    62.18         40.00
     Mannings n          =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
            0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
            0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
            0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
            0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
            0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
            0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
            0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
            0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
            0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
            0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
            0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
            1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55         80.98
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.75 (ii)     5.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.17          0.02          0.187 (iii)
     TIME TO PEAK     (hrs)=      1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      58.72         38.27          55.65
     TOTAL RAINFALL   (mm)=      59.72         59.72          59.72
     RUNOFF COEFFICIENT   =       0.98          0.64           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.51          0.12
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    64.81         40.00
     Mannings n          =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
            0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
            0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
            0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
            0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
            0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
            0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
            0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
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          0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
          0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
          0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
          0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
          1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

    Max.Eff.Inten.(mm/hr)=     126.55        80.98
               over (min)        5.00        10.00
    Storage Coeff.  (min)=       1.79 (ii)    5.72 (ii)
    Unit Hyd. Tpeak (min)=       5.00        10.00
    Unit Hyd. peak  (cms)=       0.32         0.15
                                                         *TOTALS*
    PEAK FLOW       (cms)=       0.18         0.02         0.198 (iii)
    TIME TO PEAK    (hrs)=       1.33         1.42          1.33
    RUNOFF VOLUME    (mm)=      58.72        38.27         54.83
    TOTAL RAINFALL   (mm)=      59.72        59.72         59.72
    RUNOFF COEFFICIENT   =       0.98         0.64          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20091)|   Area    (ha)=   0.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.00   Dir. Conn.(%)=  77.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=        0.31         0.09
    Dep. Storage     (mm)=        1.00         1.00
    Average Slope     (%)=        1.00         2.00
    Length            (m)=       51.64        40.00
    Mannings n          =        0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
          0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
          0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
          0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
          0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
          0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
          0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
          0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
          0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
          0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
          0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
          1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

    Max.Eff.Inten.(mm/hr)=     126.55        80.98
               over (min)        5.00        10.00
    Storage Coeff.  (min)=       1.56 (ii)    5.89 (ii)
    Unit Hyd. Tpeak (min)=       5.00        10.00
    Unit Hyd. peak  (cms)=       0.33         0.15
                                                         *TOTALS*
    PEAK FLOW       (cms)=       0.11         0.02         0.122 (iii)
    TIME TO PEAK    (hrs)=       1.33         1.42          1.33
    RUNOFF VOLUME    (mm)=      58.72        38.27         54.01
    TOTAL RAINFALL   (mm)=      59.72        59.72         59.72
    RUNOFF COEFFICIENT   =       0.98         0.64          0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200812)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  70.00   Dir. Conn.(%)=  70.00
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                               IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=        0.27         0.11
    Dep. Storage     (mm)=        1.00         1.00
    Average Slope     (%)=        1.00         2.00
    Length            (m)=       50.33        40.00
    Mannings n          =        0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
          0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
          0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
          0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
          0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
          0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
          0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
          0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
          0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
          0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
          0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
          1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

    Max.Eff.Inten.(mm/hr)=     126.55        80.98
               over (min)        5.00        10.00
    Storage Coeff.  (min)=       1.54 (ii)    9.93 (ii)
    Unit Hyd. Tpeak (min)=       5.00        10.00
    Unit Hyd. peak  (cms)=       0.33         0.11
                                                         *TOTALS*
    PEAK FLOW       (cms)=       0.09         0.02         0.107 (iii)
    TIME TO PEAK    (hrs)=       1.33         1.42          1.33
    RUNOFF VOLUME    (mm)=      58.72        38.27         52.57
    TOTAL RAINFALL   (mm)=      59.72        59.72         59.72
    RUNOFF COEFFICIENT   =       0.98         0.64          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200811)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=        0.06         0.01
    Dep. Storage     (mm)=        1.00         1.00
    Average Slope     (%)=        1.00         2.00
    Length            (m)=       21.60        40.00
    Mannings n          =        0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
          0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
          0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
          0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
          0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
          0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
          0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
          0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
          0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
          0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
          0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
          1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

    Max.Eff.Inten.(mm/hr)=     126.55        80.98
               over (min)        5.00         5.00
    Storage Coeff.  (min)=       0.93 (ii)    4.54 (ii)
    Unit Hyd. Tpeak (min)=       5.00         5.00
    Unit Hyd. peak  (cms)=       0.34         0.23
                                                         *TOTALS*
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    PEAK FLOW       (cms)=       0.02         0.00         0.023 (iii)
    TIME TO PEAK    (hrs)=       1.33         1.33          1.33
    RUNOFF VOLUME    (mm)=      58.72        38.27         55.43
    TOTAL RAINFALL   (mm)=      59.72        59.72         59.72
    RUNOFF COEFFICIENT   =       0.98         0.64          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0110)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (200811):       0.07   0.023     1.33    55.43
     + ID2= 2 (200812):       0.38   0.107     1.33    52.57
       ==================================================
       ID = 3 (  0110):       0.45   0.130     1.33    53.02

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| STANDHYD (200822)|   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=        0.23         0.16
    Dep. Storage     (mm)=        1.00         1.00
    Average Slope     (%)=        1.00         2.00
    Length            (m)=       50.99        40.00
    Mannings n          =        0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
          0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
          0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
          0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
          0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
          0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
          0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
          0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
          0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
          0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
          0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
          1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

    Max.Eff.Inten.(mm/hr)=     126.55        80.98
               over (min)        5.00        10.00
    Storage Coeff.  (min)=       1.55 (ii)    9.95 (ii)
    Unit Hyd. Tpeak (min)=       5.00        10.00
    Unit Hyd. peak  (cms)=       0.33         0.11
                                                         *TOTALS*
    PEAK FLOW       (cms)=       0.08         0.02         0.100 (iii)
    TIME TO PEAK    (hrs)=       1.33         1.42          1.33
    RUNOFF VOLUME    (mm)=      58.72        38.27         50.32
    TOTAL RAINFALL   (mm)=      59.72        59.72         59.72
    RUNOFF COEFFICIENT   =       0.98         0.64          0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200821)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00   Dir. Conn.(%)=  83.00
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                               IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=        0.06         0.01
    Dep. Storage     (mm)=        1.00         1.00
    Average Slope     (%)=        1.00         2.00
    Length            (m)=       21.60        40.00
    Mannings n          =        0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
          0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
          0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
          0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
          0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
          0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
          0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
          0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
          0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
          0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
          0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
          1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

    Max.Eff.Inten.(mm/hr)=     126.55        80.98
               over (min)        5.00         5.00
    Storage Coeff.  (min)=       0.93 (ii)    4.65 (ii)
    Unit Hyd. Tpeak (min)=       5.00         5.00
    Unit Hyd. peak  (cms)=       0.34         0.22
                                                         *TOTALS*
    PEAK FLOW       (cms)=       0.02         0.00         0.023 (iii)
    TIME TO PEAK    (hrs)=       1.33         1.33          1.33
    RUNOFF VOLUME    (mm)=      58.72        38.27         55.22
    TOTAL RAINFALL   (mm)=      59.72        59.72         59.72
    RUNOFF COEFFICIENT   =       0.98         0.64          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0111)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (200821):       0.07   0.023     1.33    55.22
     + ID2= 2 (200822):       0.39   0.100     1.33    50.32
       ==================================================
       ID = 3 (  0111):       0.46   0.123     1.33    51.07

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20102)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=        0.35         0.12
    Dep. Storage     (mm)=        1.00         1.00
    Average Slope     (%)=        1.00         2.00
    Length            (m)=       55.98        40.00
    Mannings n          =        0.013        0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
          0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
          0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
          0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
          0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
          0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
          0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
          0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
```

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              0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
              0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
              0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
              0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
              1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55        80.98
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       1.64 (ii)    6.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.12         0.02        0.140 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42        1.33
     RUNOFF VOLUME    (mm)=      58.72        38.27       53.40
     TOTAL RAINFALL   (mm)=      59.72        59.72       59.72
     RUNOFF COEFFICIENT   =       0.98         0.64        0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20101)|   Area    (ha)=   0.25
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  82.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.20         0.05
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      40.82        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
              0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
              0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
              0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
              0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
              0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
              0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
              0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
              0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
              0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
              0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
              1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55        80.98
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       1.36 (ii)    5.19 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.16
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.07         0.01        0.079 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42        1.33
     RUNOFF VOLUME    (mm)=      58.72        38.27       55.03
     TOTAL RAINFALL   (mm)=      59.72        59.72       59.72
     RUNOFF COEFFICIENT   =       0.98         0.64        0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0121)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
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```
       ID1= 1 ( 20101):      0.25   0.079     1.33    55.03
     + ID2= 2 ( 20102):      0.47   0.140     1.33    53.40
       ==================================================
       ID = 3 (  0121):      0.72   0.220     1.33    53.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| STANDHYD ( 20111)|   Area    (ha)=   0.87
|ID= 1 DT= 5.0 min |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.58         0.29
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      76.16        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
              0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
              0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
              0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
              0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
              0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
              0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
              0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
              0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
              0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
              0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
              1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55        80.98
               over (min)         5.00        15.00
     Storage Coeff.  (min)=       1.97 (ii)   10.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00        15.00
     Unit Hyd. peak  (cms)=       0.31         0.09
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.20         0.04        0.226 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.50        1.33
     RUNOFF VOLUME    (mm)=      58.72        38.27       51.97
     TOTAL RAINFALL   (mm)=      59.72        59.72       59.72
     RUNOFF COEFFICIENT   =       0.98         0.64        0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.72         0.18
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      77.46        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
              0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
              0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
              0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
              0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
              0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
              0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
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              0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
              0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
              0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
              0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
              1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55        80.98
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       1.99 (ii)    6.03 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.31         0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.25         0.03        0.279 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42        1.33
     RUNOFF VOLUME    (mm)=      58.72        38.27       54.63
     TOTAL RAINFALL   (mm)=      59.72        59.72       59.72
     RUNOFF COEFFICIENT   =       0.98         0.64        0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.90         0.21
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.02        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
              0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
              0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
              0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
              0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
              0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
              0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
              0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
              0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
              0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
              0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
              1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55        80.98
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       2.12 (ii)    6.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.31         0.15
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.31         0.04        0.346 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42        1.33
     RUNOFF VOLUME    (mm)=      58.72        38.27       54.83
     TOTAL RAINFALL   (mm)=      59.72        59.72       59.72
     RUNOFF COEFFICIENT   =       0.98         0.64        0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
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                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40         0.07
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      55.98        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
              0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
              0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
              0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
              0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
              0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
              0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
              0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
              0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
              0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
              0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
              1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55        80.98
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       1.64 (ii)    5.15 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                         *TOTALS*
     PEAK FLOW       (cms)=       0.14         0.01        0.152 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42        1.33
     RUNOFF VOLUME    (mm)=      58.72        38.27       55.65
     TOTAL RAINFALL   (mm)=      59.72        59.72       59.72
     RUNOFF COEFFICIENT   =       0.98         0.64        0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40         0.07
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      55.98        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
              0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
              0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
              0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
              0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
              0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
              0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
              0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
              0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
              0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
              0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
              1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55        80.98
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       1.64 (ii)    5.15 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                         *TOTALS*
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     PEAK FLOW       (cms)=       0.14          0.01          0.152 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      58.72         38.27          55.65
     TOTAL RAINFALL   (mm)=      59.72         59.72          59.72
     RUNOFF COEFFICIENT   =       0.98          0.64           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0136)|
|  1 +  2 =  3     |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (201021):     0.47   0.152     1.33     55.65
     + ID2= 2 (201022):     0.47   0.152     1.33     55.65
       ===============================================
       ID = 3 (  0136):     0.94   0.303     1.33     55.65

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  2005)|   Area    (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.25          0.03
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      43.20         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
             0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
             0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
             0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
             0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
             0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
             0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
             0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
             0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
             0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
             0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
             1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55         80.98
               over (min)         5.00          5.00
     Storage Coeff.  (min)=       1.41 (ii)     4.32 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.23
                                                             *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.01          0.095 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=      58.72         38.27          56.67
     TOTAL RAINFALL   (mm)=      59.72         59.72          59.72
     RUNOFF COEFFICIENT   =       0.98          0.64           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20121)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
--------------------
```

```
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62          0.49
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      86.02         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
             0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
             0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
             0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
             0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
             0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
             0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
             0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
             0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
             0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
             0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
             1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55         80.98
               over (min)         5.00         15.00
     Storage Coeff.  (min)=       2.12 (ii)    10.52 (ii)
     Unit Hyd. Tpeak (min)=       5.00         15.00
     Unit Hyd. peak  (cms)=       0.31          0.09
                                                             *TOTALS*
     PEAK FLOW       (cms)=       0.22          0.06          0.254 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.50           1.33
     RUNOFF VOLUME    (mm)=      58.72         38.27          49.72
     TOTAL RAINFALL   (mm)=      59.72         59.72          59.72
     RUNOFF COEFFICIENT   =       0.98          0.64           0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (200111)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.09          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      25.82         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
             0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
             0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
             0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
             0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
             0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
             0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
             0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
             0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
             0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
             0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
             1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55         80.98
               over (min)         5.00          5.00
     Storage Coeff.  (min)=       1.03 (ii)     4.01 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.24
                                                             *TOTALS*
```

```
     PEAK FLOW       (cms)=       0.03          0.00          0.034 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=      58.72         38.27          56.56
     TOTAL RAINFALL   (mm)=      59.72         59.72          59.72
     RUNOFF COEFFICIENT   =       0.98          0.64           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200121)|   Area    (ha)=   0.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.10          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      27.08         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
             0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
             0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
             0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
             0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
             0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
             0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
             0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
             0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
             0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
             0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
             1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55         80.98
               over (min)         5.00          5.00
     Storage Coeff.  (min)=       1.06 (ii)     4.34 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.23
                                                             *TOTALS*
     PEAK FLOW       (cms)=       0.03          0.00          0.037 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=      58.72         38.27          56.04
     TOTAL RAINFALL   (mm)=      59.72         59.72          59.72
     RUNOFF COEFFICIENT   =       0.98          0.64           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0142)|
|  1 +  2 =  3     |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (200111):     0.10   0.034     1.33     56.56
     + ID2= 2 (200121):     0.11   0.037     1.33     56.04
       ===============================================
       ID = 3 (  0142):     0.21   0.071     1.33     56.29

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (200112)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
```

```
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.08          0.02
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      25.69         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
             0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
             0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
             0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
             0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
             0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
             0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
             0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
             0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
             0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
             0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
             1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55         80.98
               over (min)         5.00         10.00
     Storage Coeff.  (min)=       1.03 (ii)     5.16 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.34          0.16
                                                             *TOTALS*
     PEAK FLOW       (cms)=       0.03          0.00          0.031 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      58.72         38.27          54.40
     TOTAL RAINFALL   (mm)=      59.72         59.72          59.72
     RUNOFF COEFFICIENT   =       0.98          0.64           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200122)|   Area    (ha)=   0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.11          0.02
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      29.44         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    4.32 | 1.083   30.27 | 2.083    9.72 |  3.08    5.09
             0.167    4.32 | 1.167   30.27 | 2.167    9.72 |  3.17    5.09
             0.250    4.91 | 1.250  126.55 | 2.250    8.53 |  3.25    4.74
             0.333    4.91 | 1.333  126.55 | 2.333    8.53 |  3.33    4.74
             0.417    5.73 | 1.417   39.22 | 2.417    7.35 |  3.42    4.45
             0.500    5.73 | 1.500   39.22 | 2.500    7.35 |  3.50    4.45
             0.583    6.96 | 1.583   21.35 | 2.583    6.59 |  3.58    4.19
             0.667    6.96 | 1.667   21.35 | 2.667    6.59 |  3.67    4.19
             0.750    9.03 | 1.750   15.01 | 2.750    5.99 |  3.75    3.97
             0.833    9.03 | 1.833   15.01 | 2.833    5.99 |  3.83    3.97
             0.917   13.36 | 1.917   11.74 | 2.917    5.50 |  3.92    3.77
             1.000   13.36 | 2.000   11.74 | 3.000    5.50 |  4.00    3.77

     Max.Eff.Inten.(mm/hr)=     126.55         80.98
               over (min)         5.00          5.00
     Storage Coeff.  (min)=       1.12 (ii)     4.51 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.23
                                                             *TOTALS*
```

```
     PEAK FLOW        (cms)=       0.04         0.00          0.043 (iii)
     TIME TO PEAK     (hrs)=       1.33         1.33           1.33
     RUNOFF VOLUME     (mm)=      58.72        38.27          55.84
     TOTAL RAINFALL    (mm)=      59.72        59.72          59.72
     RUNOFF COEFFICIENT   =        0.98         0.64           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0145)|
|  1 +  2 =  3     |      AREA    QPEAK    TPEAK      R.V.
--------------------      (ha)    (cms)    (hrs)      (mm)
      ID1= 1 (200112):    0.10    0.031     1.33     54.40
    + ID2= 2 (200122):    0.13    0.043     1.33     55.84
      ===============================================
      ID = 3 (  0145):    0.23    0.074     1.33     55.22

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

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===============================================================================================

       V    V   I    SSSSS  U   U    A    L               (v 6.1.2002)
       V    V   I    SS     U   U   A A   L
        V  V    I     SS    U   U  AAAAA  L
        V  V    I      SS   U   U  A   A  L
         VV     I    SSSSS  UUUUU  A   A  LLLLL

       OOO    TTTTT  TTTTT  H   H  Y   Y  M   M   OOO     TM
      O   O     T      T    H   H   Y Y   MM MM  O   O
      O   O     T      T    H   H    Y    M   M  O   O
       OOO      T      T    H   H    Y    M   M   OOO
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                   *****  D E T A I L E D   O U T P U T *****

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\b4bab8e4
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\b4bab8e4

DATE: 05-18-2022                         TIME: 12:44:43

USER:

COMMENTS: ____________________________________________________

-----------------------------------------------------------------------------------------------
  **************************************************
  ** SIMULATION : Run 04                           **
  **************************************************

--------------------
|    READ STORM     |     Filename: C:\Users\caef070146\AppD
|                   |               ata\Local\Temp\
|                   |               11403a02-80e0-48b3-97a8-b203216ba841\53217781
| Ptotal= 71.24 mm |     Comments: 25-year, 4 hr-Chicago, City of Barrie
--------------------
                TIME     RAIN |  TIME     RAIN |'  TIME     RAIN |  TIME      RAIN
                 hrs    mm/hr |   hrs    mm/hr |'    hrs    mm/hr |   hrs     mm/hr
                0.17     5.22 |  1.17    36.37 |   2.17    11.74 |  3.17      6.15
                0.33     5.94 |  1.33   148.15 |   2.33    10.09 |  3.33      5.74
                0.50     6.93 |  1.50    47.06 |   2.50     8.89 |  3.50      5.38
                0.67     8.42 |  1.67    25.72 |   2.67     7.96 |  3.67      5.08
                0.83    10.91 |  1.83    18.11 |   2.83     7.24 |  3.83      4.80
                1.00    16.13 |  2.00    14.17 |   3.00     6.65 |  4.00      4.57

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--------------------
| CALIB              |
| STANDHYD ( 20022)|   Area    (ha)=   0.80
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.68         0.12
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      73.03        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08     6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17     6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25     5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33     5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42     5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50     5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58     5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67     5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75     4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83     4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92     4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00     4.57

     Max.Eff.Inten.(mm/hr)=     148.15       102.23
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.81 (ii)     5.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.28         0.03          0.304 (iii)
     TIME TO PEAK     (hrs)=       1.33         1.42           1.33
     RUNOFF VOLUME     (mm)=      70.24        48.54          66.98
     TOTAL RAINFALL    (mm)=      71.24        71.24          71.24
     RUNOFF COEFFICIENT   =        0.99         0.68           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20021)|   Area    (ha)=   0.70
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62         0.08
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      68.31        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08     6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17     6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25     5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33     5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42     5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50     5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58     5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67     5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75     4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83     4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92     4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00     4.57

     Max.Eff.Inten.(mm/hr)=     148.15       102.23
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                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.74 (ii)     4.59 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.32         0.23
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.26         0.02          0.276 (iii)
     TIME TO PEAK     (hrs)=       1.33         1.33           1.33
     RUNOFF VOLUME     (mm)=      70.24        48.54          67.85
     TOTAL RAINFALL    (mm)=      71.24        71.24          71.24
     RUNOFF COEFFICIENT   =        0.99         0.68           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20031)|   Area    (ha)=   0.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.39         0.04
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      53.54        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08     6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17     6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25     5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33     5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42     5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50     5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58     5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67     5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75     4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83     4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92     4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00     4.57

     Max.Eff.Inten.(mm/hr)=     148.15       102.23
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.50 (ii)     4.24 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.24
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.16         0.01          0.171 (iii)
     TIME TO PEAK     (hrs)=       1.33         1.33           1.33
     RUNOFF VOLUME     (mm)=      70.24        48.54          68.06
     TOTAL RAINFALL    (mm)=      71.24        71.24          71.24
     RUNOFF COEFFICIENT   =        0.99         0.68           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20032)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.41         0.06
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      55.98        40.00
     Mannings n           =      0.013        0.290
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         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08     6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17     6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25     5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33     5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42     5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50     5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58     5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67     5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75     4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83     4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92     4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00     4.57

     Max.Eff.Inten.(mm/hr)=     148.15       102.23
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.54 (ii)     4.62 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.22
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.17         0.02          0.184 (iii)
     TIME TO PEAK     (hrs)=       1.33         1.33           1.33
     RUNOFF VOLUME     (mm)=      70.24        48.54          67.41
     TOTAL RAINFALL    (mm)=      71.24        71.24          71.24
     RUNOFF COEFFICIENT   =        0.99         0.68           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31         0.04
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      48.30        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08     6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17     6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25     5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33     5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42     5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50     5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58     5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67     5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75     4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83     4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92     4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00     4.57

     Max.Eff.Inten.(mm/hr)=     148.15       102.23
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.41 (ii)     4.27 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.23
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.13         0.01          0.139 (iii)
     TIME TO PEAK     (hrs)=       1.33         1.33           1.33
     RUNOFF VOLUME     (mm)=      70.24        48.54          67.84
     TOTAL RAINFALL    (mm)=      71.24        71.24          71.24
     RUNOFF COEFFICIENT   =        0.99         0.68           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
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```
    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* =  89.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20042)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.31          0.05
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     48.99         40.00
     Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        102.23
               over (min)        5.00          5.00
     Storage Coeff.  (min)=      1.42 (ii)     4.72 (ii)
     Unit Hyd. Tpeak (min)=      5.00          5.00
     Unit Hyd. peak  (cms)=      0.33          0.22
                                                           *TOTALS*
     PEAK FLOW       (cms)=      0.13          0.01          0.140 (iii)
     TIME TO PEAK    (hrs)=      1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=     70.24         48.54         66.97
     TOTAL RAINFALL   (mm)=     71.24         71.24         71.24
     RUNOFF COEFFICIENT   =      0.99          0.68          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* =  89.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20052)|   Area    (ha)=   0.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.23          0.06
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     43.97         40.00
     Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        102.23
               over (min)        5.00         10.00
     Storage Coeff.  (min)=      1.33 (ii)     5.31 (ii)
     Unit Hyd. Tpeak (min)=      5.00         10.00
     Unit Hyd. peak  (cms)=      0.33          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=      0.09          0.01          0.106 (iii)
     TIME TO PEAK    (hrs)=      1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=     70.24         48.54         65.45
     TOTAL RAINFALL   (mm)=     71.24         71.24         71.24
     RUNOFF COEFFICIENT   =      0.99          0.68          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* =  89.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.58          0.15
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     69.76         40.00
     Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        102.23
               over (min)        5.00         10.00
     Storage Coeff.  (min)=      1.76 (ii)     5.55 (ii)
     Unit Hyd. Tpeak (min)=      5.00         10.00
     Unit Hyd. peak  (cms)=      0.32          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=      0.24          0.03          0.269 (iii)
     TIME TO PEAK    (hrs)=      1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=     70.24         48.54         65.89
     TOTAL RAINFALL   (mm)=     71.24         71.24         71.24
     RUNOFF COEFFICIENT   =      0.99          0.68          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* =  89.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.55          0.10
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     65.83         40.00
     Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        102.23
               over (min)        5.00          5.00
     Storage Coeff.  (min)=      1.70 (ii)     4.99 (ii)
     Unit Hyd. Tpeak (min)=      5.00          5.00
     Unit Hyd. peak  (cms)=      0.32          0.21
                                                           *TOTALS*
     PEAK FLOW       (cms)=      0.23          0.03          0.252 (iii)
     TIME TO PEAK    (hrs)=      1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=     70.24         48.54         66.98
     TOTAL RAINFALL   (mm)=     71.24         71.24         71.24
     RUNOFF COEFFICIENT   =      0.99          0.68          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* =  89.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.54          0.10
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     65.32         40.00
     Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        102.23
               over (min)        5.00         10.00
     Storage Coeff.  (min)=      1.69 (ii)     5.09 (ii)
     Unit Hyd. Tpeak (min)=      5.00         10.00
     Unit Hyd. peak  (cms)=      0.32          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=      0.22          0.02          0.242 (iii)
     TIME TO PEAK    (hrs)=      1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=     70.24         48.54         66.76
     TOTAL RAINFALL   (mm)=     71.24         71.24         71.24
     RUNOFF COEFFICIENT   =      0.99          0.68          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* =  89.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.49          0.09
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     62.18         40.00
     Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
              0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
              0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
              0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
              0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
              0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
              0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
              0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
              0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
              0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        102.23
               over (min)        5.00          5.00
     Storage Coeff.  (min)=      1.64 (ii)     4.94 (ii)
     Unit Hyd. Tpeak (min)=      5.00          5.00
     Unit Hyd. peak  (cms)=      0.32          0.22
                                                           *TOTALS*
     PEAK FLOW       (cms)=      0.20          0.02          0.225 (iii)
     TIME TO PEAK    (hrs)=      1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=     70.24         48.54         66.98
     TOTAL RAINFALL   (mm)=     71.24         71.24         71.24
     RUNOFF COEFFICIENT   =      0.99          0.68          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

    (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
        CN* =  89.0    Ia = Dep. Storage  (Above)
   (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
        THAN THE STORAGE COEFFICIENT.
  (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.51          0.12
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     64.81         40.00
     Mannings n          =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
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             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
            0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
            0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
            0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
            0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
            0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
            0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
            0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
            0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
            0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
            0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
            1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=      148.15        102.23
               over (min)          5.00         10.00
     Storage Coeff.  (min)=        1.68 (ii)     5.37 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.21          0.03         0.234 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=       70.24         48.54         66.11
     TOTAL RAINFALL   (mm)=       71.24         71.24         71.24
     RUNOFF COEFFICIENT   =        0.99          0.68          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20091)|   Area    (ha)=   0.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.00   Dir. Conn.(%)=  77.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31          0.09
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      51.64         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
            0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
            0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
            0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
            0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
            0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
            0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
            0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
            0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
            0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
            0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
            1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=      148.15        102.23
               over (min)          5.00         10.00
     Storage Coeff.  (min)=        1.47 (ii)     5.53 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.13          0.02         0.145 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=       70.24         48.54         65.24
     TOTAL RAINFALL   (mm)=       71.24         71.24         71.24
     RUNOFF COEFFICIENT   =        0.99          0.68          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
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           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD (200812)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  70.00   Dir. Conn.(%)=  70.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.27          0.11
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      50.33         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
            0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
            0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
            0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
            0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
            0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
            0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
            0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
            0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
            0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
            0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
            1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=      148.15        102.23
               over (min)          5.00         10.00
     Storage Coeff.  (min)=        1.45 (ii)     6.14 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.11          0.02         0.131 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=       70.24         48.54         63.72
     TOTAL RAINFALL   (mm)=       71.24         71.24         71.24
     RUNOFF COEFFICIENT   =        0.99          0.68          0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD (200811)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.06          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      21.60         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
            0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
            0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
            0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
            0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
            0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
            0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
            0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
            0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
            0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
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            0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
            1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=      148.15        102.23
               over (min)          5.00          5.00
     Storage Coeff.  (min)=        0.87 (ii)     4.27 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.34          0.23
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.02          0.00         0.027 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=       70.24         48.54         66.74
     TOTAL RAINFALL   (mm)=       71.24         71.24         71.24
     RUNOFF COEFFICIENT   =        0.99          0.68          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (200811):    0.07    0.027     1.33    66.74
       + ID2= 2 (200812):    0.38    0.131     1.33    63.72
         ===============================================
         ID = 3 (  0110):    0.45    0.159     1.33    64.19

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB             |
| STANDHYD (200822)|   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23          0.16
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      50.99         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
            0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
            0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
            0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
            0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
            0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
            0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
            0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
            0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
            0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
            0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
            1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=      148.15        102.23
               over (min)          5.00         10.00
     Storage Coeff.  (min)=        1.46 (ii)     9.10 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.12
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.09          0.03         0.120 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=       70.24         48.54         61.32
     TOTAL RAINFALL   (mm)=       71.24         71.24         71.24
     RUNOFF COEFFICIENT   =        0.99          0.68          0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
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           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD (200821)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00   Dir. Conn.(%)=  83.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.06          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      21.60         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
            0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
            0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
            0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
            0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
            0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
            0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
            0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
            0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
            0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
            0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
            1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=      148.15        102.23
               over (min)          5.00          5.00
     Storage Coeff.  (min)=        0.87 (ii)     4.37 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.34          0.23
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.02          0.00         0.027 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=       70.24         48.54         66.52
     TOTAL RAINFALL   (mm)=       71.24         71.24         71.24
     RUNOFF COEFFICIENT   =        0.99          0.68          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0111)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (200821):    0.07    0.027     1.33    66.52
       + ID2= 2 (200822):    0.39    0.120     1.33    61.32
         ===============================================
         ID = 3 (  0111):    0.46    0.147     1.33    62.11

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD ( 20102)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.35          0.12
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      55.98         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
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```
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
             0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
             0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
             0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
             0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
             0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
             0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
             0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
             0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
             0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
             0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
             1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        102.23
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.54 (ii)     5.88 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.14          0.03        0.167 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42         1.33
     RUNOFF VOLUME    (mm)=       70.24         48.54        64.59
     TOTAL RAINFALL   (mm)=       71.24         71.24        71.24
     RUNOFF COEFFICIENT  =         0.99          0.68         0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20101)|   Area    (ha)=   0.25
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  82.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.20          0.05
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      40.82         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
             0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
             0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
             0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
             0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
             0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
             0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
             0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
             0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
             0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
             0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
             1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        102.23
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.28 (ii)     4.87 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.08          0.01        0.096 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.33         1.33
     RUNOFF VOLUME    (mm)=       70.24         48.54        66.32
     TOTAL RAINFALL   (mm)=       71.24         71.24        71.24
     RUNOFF COEFFICIENT  =         0.99          0.68         0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
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```
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0121)|
|   1 +  2 =  3    |        AREA    QPEAK     TPEAK      R.V.
--------------------        (ha)    (cms)     (hrs)      (mm)
        ID1= 1 ( 20101):     0.25   0.096      1.33     66.32
      + ID2= 2 ( 20102):     0.47   0.167      1.33     64.59
        ==================================================
        ID = 3 (  0121):     0.72   0.263      1.33     65.19

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| STANDHYD ( 20111)|   Area    (ha)=   0.87
|ID= 1 DT= 5.0 min |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.58          0.29
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      76.16         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
             0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
             0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
             0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
             0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
             0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
             0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
             0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
             0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
             0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
             0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
             1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        102.23
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.85 (ii)     6.82 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.24          0.06        0.292 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42         1.33
     RUNOFF VOLUME    (mm)=       70.24         48.54        63.07
     TOTAL RAINFALL   (mm)=       71.24         71.24        71.24
     RUNOFF COEFFICIENT  =         0.99          0.68         0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.72          0.18
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      77.46         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
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              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
             0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
             0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
             0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
             0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
             0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
             0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
             0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
             0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
             0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
             0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
             1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57
     Max.Eff.Inten.(mm/hr)=     148.15        102.23
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.87 (ii)     5.66 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.30          0.04        0.331 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42         1.33
     RUNOFF VOLUME    (mm)=       70.24         48.54        65.89
     TOTAL RAINFALL   (mm)=       71.24         71.24        71.24
     RUNOFF COEFFICIENT  =         0.99          0.68         0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.90          0.21
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      86.02         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
             0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
             0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
             0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
             0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
             0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
             0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
             0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
             0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
             0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
             0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
             1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        102.23
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.99 (ii)     5.69 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.37          0.05        0.410 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42         1.33
     RUNOFF VOLUME    (mm)=       70.24         48.54        66.11
     TOTAL RAINFALL   (mm)=       71.24         71.24        71.24
     RUNOFF COEFFICIENT  =         0.99          0.68         0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
```

```
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40          0.07
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      55.98         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
             0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
             0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
             0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
             0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
             0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
             0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
             0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
             0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
             0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
             0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
             1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        102.23
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.54 (ii)     4.84 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=        0.16          0.02        0.183 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.33         1.33
     RUNOFF VOLUME    (mm)=       70.24         48.54        66.98
     TOTAL RAINFALL   (mm)=       71.24         71.24        71.24
     RUNOFF COEFFICIENT  =         0.99          0.68         0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40          0.07
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      55.98         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
             0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
             0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
             0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
             0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
             0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
             0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
             0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
             0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
             0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
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            0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
            1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15          102.23
               over (min)         5.00            5.00
     Storage Coeff.  (min)=       1.54 (ii)       4.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00            5.00
     Unit Hyd. peak  (cms)=       0.33            0.22
                                                              *TOTALS*
     PEAK FLOW       (cms)=       0.16            0.02          0.183 (iii)
     TIME TO PEAK    (hrs)=       1.33            1.33          1.33
     RUNOFF VOLUME    (mm)=      70.24           48.54         66.98
     TOTAL RAINFALL   (mm)=      71.24           71.24         71.24
     RUNOFF COEFFICIENT   =       0.99            0.68          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------

--------------------
| ADD HYD  (  0136)|
|  1 +  2 =  3     |        AREA    QPEAK     TPEAK     R.V.
--------------------        (ha)    (cms)     (hrs)     (mm)
        ID1= 1 (201021):    0.47   0.183      1.33    66.98
      + ID2= 2 (201022):    0.47   0.183      1.33    66.98
        ===============================================
        ID = 3 (  0136):    0.94   0.366      1.33    66.98

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  2005)|   Area    (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                             IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=       0.25           0.03
     Dep. Storage     (mm)=       1.00           1.00
     Average Slope     (%)=       1.00           2.00
     Length            (m)=      43.20          40.00
     Mannings n           =      0.013          0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
            0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
            0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
            0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
            0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
            0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
            0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
            0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
            0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
            0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
            0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
            1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15          102.23
               over (min)         5.00            5.00
     Storage Coeff.  (min)=       1.32 (ii)       4.06 (ii)
     Unit Hyd. Tpeak (min)=       5.00            5.00
     Unit Hyd. peak  (cms)=       0.33            0.24
                                                              *TOTALS*
     PEAK FLOW       (cms)=       0.10            0.01          0.111 (iii)
     TIME TO PEAK    (hrs)=       1.33            1.33          1.33
     RUNOFF VOLUME    (mm)=      70.24           48.54         68.06
     TOTAL RAINFALL   (mm)=      71.24           71.24         71.24
     RUNOFF COEFFICIENT   =       0.99            0.68          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20121)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
--------------------
                             IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=       0.62           0.49
     Dep. Storage     (mm)=       1.00           1.00
     Average Slope     (%)=       1.00           2.00
     Length            (m)=      86.02          40.00
     Mannings n           =      0.013          0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
            0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
            0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
            0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
            0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
            0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
            0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
            0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
            0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
            0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
            0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
            1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15          102.23
               over (min)         5.00           10.00
     Storage Coeff.  (min)=       1.99 (ii)       9.64 (ii)
     Unit Hyd. Tpeak (min)=       5.00           10.00
     Unit Hyd. peak  (cms)=       0.31            0.11
                                                              *TOTALS*
     PEAK FLOW       (cms)=       0.25            0.09          0.330 (iii)
     TIME TO PEAK    (hrs)=       1.33            1.42          1.33
     RUNOFF VOLUME    (mm)=      70.24           48.54         60.69
     TOTAL RAINFALL   (mm)=      71.24           71.24         71.24
     RUNOFF COEFFICIENT   =       0.99            0.68          0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200111)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                             IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=       0.09           0.01
     Dep. Storage     (mm)=       1.00           1.00
     Average Slope     (%)=       1.00           2.00
     Length            (m)=      25.82          40.00
     Mannings n           =      0.013          0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
            0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
            0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
            0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
            0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
            0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
            0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
            0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
            0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
            0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
            0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
            1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15          102.23
               over (min)         5.00            5.00
     Storage Coeff.  (min)=       0.97 (ii)       3.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00            5.00
     Unit Hyd. peak  (cms)=       0.34            0.25
                                                              *TOTALS*
     PEAK FLOW       (cms)=       0.04            0.00          0.040 (iii)
     TIME TO PEAK    (hrs)=       1.33            1.33          1.33
     RUNOFF VOLUME    (mm)=      70.24           48.54         67.94
     TOTAL RAINFALL   (mm)=      71.24           71.24         71.24
     RUNOFF COEFFICIENT   =       0.99            0.68          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200121)|   Area    (ha)=   0.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                             IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=       0.10           0.01
     Dep. Storage     (mm)=       1.00           1.00
     Average Slope     (%)=       1.00           2.00
     Length            (m)=      27.08          40.00
     Mannings n           =      0.013          0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
            0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
            0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
            0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
            0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
            0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
            0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
            0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
            0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
            0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
            0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
            1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15          102.23
               over (min)         5.00            5.00
     Storage Coeff.  (min)=       1.00 (ii)       4.08 (ii)
     Unit Hyd. Tpeak (min)=       5.00            5.00
     Unit Hyd. peak  (cms)=       0.34            0.24
                                                              *TOTALS*
     PEAK FLOW       (cms)=       0.04            0.00          0.043 (iii)
     TIME TO PEAK    (hrs)=       1.33            1.33          1.33
     RUNOFF VOLUME    (mm)=      70.24           48.54         67.40
     TOTAL RAINFALL   (mm)=      71.24           71.24         71.24
     RUNOFF COEFFICIENT   =       0.99            0.68          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0142)|
|  1 +  2 =  3     |        AREA    QPEAK     TPEAK     R.V.
--------------------        (ha)    (cms)     (hrs)     (mm)
        ID1= 1 (200111):    0.10   0.040      1.33    67.94
      + ID2= 2 (200121):    0.11   0.043      1.33    67.40
        ===============================================
        ID = 3 (  0142):    0.21   0.083      1.33    67.66

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (200112)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                             IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=       0.08           0.02
     Dep. Storage     (mm)=       1.00           1.00
     Average Slope     (%)=       1.00           2.00
     Length            (m)=      25.69          40.00
     Mannings n           =      0.013          0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
            0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
            0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
            0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
            0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
            0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
            0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
            0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
            0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
            0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
            0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
            1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15          102.23
               over (min)         5.00            5.00
     Storage Coeff.  (min)=       0.97 (ii)       4.85 (ii)
     Unit Hyd. Tpeak (min)=       5.00            5.00
     Unit Hyd. peak  (cms)=       0.34            0.22
                                                              *TOTALS*
     PEAK FLOW       (cms)=       0.03            0.01          0.038 (iii)
     TIME TO PEAK    (hrs)=       1.33            1.33          1.33
     RUNOFF VOLUME    (mm)=      70.24           48.54         65.64
     TOTAL RAINFALL   (mm)=      71.24           71.24         71.24
     RUNOFF COEFFICIENT   =       0.99            0.68          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (200122)|   Area    (ha)=   0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                             IMPERVIOUS     PERVIOUS (i)
     Surface Area     (ha)=       0.11           0.02
     Dep. Storage     (mm)=       1.00           1.00
     Average Slope     (%)=       1.00           2.00
     Length            (m)=      29.44          40.00
     Mannings n           =      0.013          0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    5.22 | 1.083   36.37 | 2.083   11.74 |  3.08    6.15
            0.167    5.22 | 1.167   36.37 | 2.167   11.74 |  3.17    6.15
            0.250    5.94 | 1.250  148.15 | 2.250   10.09 |  3.25    5.74
            0.333    5.94 | 1.333  148.15 | 2.333   10.09 |  3.33    5.74
            0.417    6.93 | 1.417   47.06 | 2.417    8.89 |  3.42    5.38
            0.500    6.93 | 1.500   47.06 | 2.500    8.89 |  3.50    5.38
            0.583    8.42 | 1.583   25.72 | 2.583    7.96 |  3.58    5.08
            0.667    8.42 | 1.667   25.72 | 2.667    7.96 |  3.67    5.08
            0.750   10.91 | 1.750   18.11 | 2.750    7.24 |  3.75    4.80
            0.833   10.91 | 1.833   18.11 | 2.833    7.24 |  3.83    4.80
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              0.917   16.13 | 1.917   14.17 | 2.917    6.65 |  3.92    4.57
              1.000   16.13 | 2.000   14.17 | 3.000    6.65 |  4.00    4.57

     Max.Eff.Inten.(mm/hr)=     148.15        102.23
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.05 (ii)     4.24 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.24
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.05          0.00           0.051 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33            1.33
     RUNOFF VOLUME    (mm)=      70.24         48.54           67.17
     TOTAL RAINFALL   (mm)=      71.24         71.24           71.24
     RUNOFF COEFFICIENT   =       0.99          0.68            0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0145)|
|   1 +  2 =  3    |        AREA    QPEAK     TPEAK      R.V.
--------------------        (ha)    (cms)     (hrs)      (mm)
        ID1= 1 (200112):    0.10    0.038      1.33     65.64
      + ID2= 2 (200122):    0.13    0.051      1.33     67.17
        =================================================
        ID = 3 (  0145):    0.23    0.089      1.33     66.51

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-----------------------------------------------------------------------------
=============================================================================================

      V    V   I    SSSSS  U    U    A    L               (v 6.1.2002)
      V    V   I    SS     U    U   A A   L
       V  V    I     SS    U    U  AAAAA  L
       V  V    I      SS   U    U  A   A  L
        VV     I    SSSSS  UUUUU   A   A  LLLLL

       OOO    TTTTT  TTTTT  H    H  Y    Y  M    M   OOO     TM
      O   O     T      T    H    H   Y Y    MM MM  O   O
      O   O     T      T    H    H    Y     M    M  O   O
       OOO      T      T    H    H    Y     M    M   OOO
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                   *****  D E T A I L E D   O U T P U T *****

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\b83c9b70
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\b83c9b70

DATE: 05-18-2022                              TIME: 12:44:44

USER:


COMMENTS: ____________________________________________________________

---------------------------------------------------------------------------------------------
  *****************************************************
  ** SIMULATION : Run 05                            **
  *****************************************************

--------------------
|   READ STORM     |    Filename: C:\Users\caef070146\AppD
|                  |              ata\Local\Temp\
|                  |              11403a02-80e0-48b3-97a8-b203216ba841\05b28c32
| Ptotal= 79.45 mm |    Comments: 50-year, 4 hr-Chicago, City of Barrie
--------------------
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
```

```
               0.17    5.93 |  1.17   40.22 |  2.17   13.20 |  3.17    6.98
               0.33    6.74 |  1.33  164.22 |  2.33   11.37 |  3.33    6.51
               0.50    7.85 |  1.50   51.92 |  2.50   10.03 |  3.50    6.11
               0.67    9.50 |  1.67   28.58 |  2.67    9.00 |  3.67    5.77
               0.83   12.27 |  1.83   20.23 |  2.83    8.19 |  3.83    5.46
               1.00   18.04 |  2.00   15.88 |  3.00    7.53 |  4.00    5.19

-----------------------------------------------------------------------------

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| CALIB            |
| STANDHYD ( 20022)|   Area    (ha)=   0.80
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.68          0.12
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      73.03         40.00
     Mannings n           =      0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.73 (ii)     4.90 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.32          0.22
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.31          0.04           0.346 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33            1.33
     RUNOFF VOLUME    (mm)=      78.45         56.03           75.09
     TOTAL RAINFALL   (mm)=      79.45         79.45           79.45
     RUNOFF COEFFICIENT   =       0.99          0.71            0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20021)|   Area    (ha)=   0.70
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62          0.08
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      68.31         40.00
     Mannings n           =      0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
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                0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.67 (ii)     4.41 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.32          0.23
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.28          0.02           0.308 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33            1.33
     RUNOFF VOLUME    (mm)=      78.45         56.03           75.98
     TOTAL RAINFALL   (mm)=      79.45         79.45           79.45
     RUNOFF COEFFICIENT   =       0.99          0.71            0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20031)|   Area    (ha)=   0.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.39          0.04
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      53.54         40.00
     Mannings n           =      0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.44 (ii)     4.07 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.24
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.18          0.01           0.190 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33            1.33
     RUNOFF VOLUME    (mm)=      78.45         56.03           76.21
     TOTAL RAINFALL   (mm)=      79.45         79.45           79.45
     RUNOFF COEFFICIENT   =       0.99          0.71            0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 20032)|   Area    (ha)=   0.47
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|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.41          0.06
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      55.98         40.00
     Mannings n           =      0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.48 (ii)     4.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.23
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.19          0.02           0.205 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33            1.33
     RUNOFF VOLUME    (mm)=      78.45         56.03           75.53
     TOTAL RAINFALL   (mm)=      79.45         79.45           79.45
     RUNOFF COEFFICIENT   =       0.99          0.71            0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD ( 20041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31          0.04
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      48.30         40.00
     Mannings n           =      0.013         0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.35 (ii)     4.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
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     Unit Hyd. peak  (cms)=       0.33         0.24
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.14         0.01          0.154 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33           1.33
     RUNOFF VOLUME    (mm)=      78.45        56.03          75.98
     TOTAL RAINFALL   (mm)=      79.45        79.45          79.45
     RUNOFF COEFFICIENT  =        0.99         0.71           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20042)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.31         0.05
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     48.99        40.00
     Mannings n           =     0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                 0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                 0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                 0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                 0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                 0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                 0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                 0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                 0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                 0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                 0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                 1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22       118.16
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.37 (ii)    4.53 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.23
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.14         0.02          0.156 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33           1.33
     RUNOFF VOLUME    (mm)=      78.45        56.03          75.08
     TOTAL RAINFALL   (mm)=      79.45        79.45          79.45
     RUNOFF COEFFICIENT  =        0.99         0.71           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20052)|   Area    (ha)=   0.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.23         0.06
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     43.97        40.00
     Mannings n           =     0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                 0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                 0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                 0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                 0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                 0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                 0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                 0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                 0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                 0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                 0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                 1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22       118.16
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.28 (ii)    5.09 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.16
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.10         0.02          0.119 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=      78.45        56.03          73.51
     TOTAL RAINFALL   (mm)=      79.45        79.45          79.45
     RUNOFF COEFFICIENT  =        0.99         0.71           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.58         0.15
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     69.76        40.00
     Mannings n           =     0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                 0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                 0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                 0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                 0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                 0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                 0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                 0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                 0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                 0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                 0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                 1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22       118.16
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.69 (ii)    5.32 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.27         0.04          0.301 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42           1.33
     RUNOFF VOLUME    (mm)=      78.45        56.03          73.96
     TOTAL RAINFALL   (mm)=      79.45        79.45          79.45
     RUNOFF COEFFICIENT  =        0.99         0.71           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.55         0.10
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     65.83        40.00
     Mannings n           =     0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                 0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                 0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                 0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                 0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                 0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                 0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                 0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                 0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                 0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                 0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                 1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22       118.16
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.63 (ii)    4.79 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.32         0.22
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.25         0.03          0.281 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33           1.33
     RUNOFF VOLUME    (mm)=      78.45        56.03          75.09
     TOTAL RAINFALL   (mm)=      79.45        79.45          79.45
     RUNOFF COEFFICIENT  =        0.99         0.71           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.54         0.10
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     65.32        40.00
     Mannings n           =     0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                 0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                 0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                 0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                 0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                 0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                 0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                 0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                 0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                 0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                 0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                 1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22       118.16
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.62 (ii)    4.88 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.32         0.22
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.24         0.03          0.276 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33           1.33
     RUNOFF VOLUME    (mm)=      78.45        56.03          74.86
     TOTAL RAINFALL   (mm)=      79.45        79.45          79.45
     RUNOFF COEFFICIENT  =        0.99         0.71           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.49         0.09
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     62.18        40.00
     Mannings n           =     0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                 0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                 0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                 0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                 0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                 0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                 0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                 0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                 0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                 0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                 0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                 1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22       118.16
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.58 (ii)    4.74 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.22
                                                            *TOTALS*
     PEAK FLOW       (cms)=       0.22         0.03          0.251 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33           1.33
     RUNOFF VOLUME    (mm)=      78.45        56.03          75.09
     TOTAL RAINFALL   (mm)=      79.45        79.45          79.45
     RUNOFF COEFFICIENT  =        0.99         0.71           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.51         0.12
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     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       64.81         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
              0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
              0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
              0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
              0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
              0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
              0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
              0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
              0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
              0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
              0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
              1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=      164.22        118.16
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.61 (ii)     5.16 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.23          0.03          0.261 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=       78.45         56.03          74.19
     TOTAL RAINFALL   (mm)=       79.45         79.45          79.45
     RUNOFF COEFFICIENT   =        0.99          0.71           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20091)|   Area    (ha)=   0.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.00   Dir. Conn.(%)=  77.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.31          0.09
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       51.64         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
              0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
              0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
              0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
              0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
              0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
              0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
              0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
              0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
              0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
              0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
              1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=      164.22        118.16
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.41 (ii)     5.31 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.14          0.02          0.162 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42           1.33
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     RUNOFF VOLUME    (mm)=       78.45         56.03          73.29
     TOTAL RAINFALL   (mm)=       79.45         79.45          79.45
     RUNOFF COEFFICIENT   =        0.99          0.71           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200812)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  70.00   Dir. Conn.(%)=  70.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.27          0.11
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       50.33         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
              0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
              0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
              0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
              0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
              0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
              0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
              0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
              0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
              0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
              0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
              1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=      164.22        118.16
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.39 (ii)     5.90 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.12          0.03          0.147 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=       78.45         56.03          71.71
     TOTAL RAINFALL   (mm)=       79.45         79.45          79.45
     RUNOFF COEFFICIENT   =        0.99          0.71           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200811)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.06          0.01
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       21.60         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
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              0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
              0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
              0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
              0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
              0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
              0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
              0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
              0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
              0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
              0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
              1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=      164.22        118.16
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        0.84 (ii)     4.09 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.34          0.24
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.03          0.00          0.030 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=       78.45         56.03          74.84
     TOTAL RAINFALL   (mm)=       79.45         79.45          79.45
     RUNOFF COEFFICIENT   =        0.99          0.71           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0110)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK      R.V.
--------------------        (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (200811):    0.07   0.030     1.33     74.84
      + ID2= 2 (200812):    0.38   0.147     1.33     71.71
        ==================================================
        ID = 3 (  0110):    0.45   0.178     1.33     72.20

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| STANDHYD (200822)|   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.23          0.16
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       50.99         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
              0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
              0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
              0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
              0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
              0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
              0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
              0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
              0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
              0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
              0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
              1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=      164.22        118.16
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.40 (ii)     8.62 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.12
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.10          0.04          0.136 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42           1.33
```

```
     RUNOFF VOLUME    (mm)=       78.45         56.03          69.24
     TOTAL RAINFALL   (mm)=       79.45         79.45          79.45
     RUNOFF COEFFICIENT   =        0.99          0.71           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (200821)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00   Dir. Conn.(%)=  83.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.06          0.01
     Dep. Storage     (mm)=        1.00          1.00
     Average Slope     (%)=        1.00          2.00
     Length            (m)=       21.60         40.00
     Mannings n           =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
              0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
              0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
              0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
              0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
              0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
              0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
              0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
              0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
              0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
              0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
              1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=      164.22        118.16
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        0.84 (ii)     4.19 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.34          0.24
                                                           *TOTALS*
     PEAK FLOW       (cms)=        0.03          0.00          0.030 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=       78.45         56.03          74.61
     TOTAL RAINFALL   (mm)=       79.45         79.45          79.45
     RUNOFF COEFFICIENT   =        0.99          0.71           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0111)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK      R.V.
--------------------        (ha)    (cms)    (hrs)      (mm)
        ID1= 1 (200821):    0.07   0.030     1.33     74.61
      + ID2= 2 (200822):    0.39   0.136     1.33     69.24
        ==================================================
        ID = 3 (  0111):    0.46   0.166     1.33     70.06

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20102)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        0.35          0.12
```

```
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      55.98         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.48 (ii)     5.64 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.15
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.16          0.03          0.187 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME     (mm)=      78.45         56.03          72.61
     TOTAL RAINFALL    (mm)=      79.45         79.45          79.45
     RUNOFF COEFFICIENT   =       0.99          0.71           0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB             |
| STANDHYD ( 20101)|   Area    (ha)=   0.25
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  82.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.20          0.05
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      40.82         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.22 (ii)     4.67 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.22
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.09          0.01          0.107 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.33           1.33
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     RUNOFF VOLUME     (mm)=      78.45         56.03          74.40
     TOTAL RAINFALL    (mm)=      79.45         79.45          79.45
     RUNOFF COEFFICIENT   =       0.99          0.71           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0121)|
|   1 +  2 =  3    |          AREA    QPEAK     TPEAK      R.V.
--------------------          (ha)    (cms)     (hrs)      (mm)
        ID1= 1 ( 20101):      0.25   0.107      1.33    74.40
      + ID2= 2 ( 20102):      0.47   0.187      1.33    72.61
        ===============================================
        ID = 3 (  0121):      0.72   0.294      1.33    73.24

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB             |
| STANDHYD ( 20111)|   Area    (ha)=   0.87
|ID= 1 DT= 5.0 min |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.58          0.29
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      76.16         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.78 (ii)     6.55 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.14
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.27          0.07          0.328 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME     (mm)=      78.45         56.03          71.05
     TOTAL RAINFALL    (mm)=      79.45         79.45          79.45
     RUNOFF COEFFICIENT   =       0.99          0.71           0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.72          0.18
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     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      77.46         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.80 (ii)     5.43 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.33          0.05          0.370 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME     (mm)=      78.45         56.03          73.97
     TOTAL RAINFALL    (mm)=      79.45         79.45          79.45
     RUNOFF COEFFICIENT   =       0.99          0.71           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.90          0.21
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      86.02         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.91 (ii)     5.46 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.16
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.41          0.05          0.458 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.42           1.33
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     RUNOFF VOLUME     (mm)=      78.45         56.03          74.19
     TOTAL RAINFALL    (mm)=      79.45         79.45          79.45
     RUNOFF COEFFICIENT   =       0.99          0.71           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40          0.07
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      55.98         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
                0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
                0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
                0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
                0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
                0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
                0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
                0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
                0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
                0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
                0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
                1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.48 (ii)     4.64 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.22
                                                          *TOTALS*
     PEAK FLOW        (cms)=       0.18          0.02          0.204 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.33           1.33
     RUNOFF VOLUME     (mm)=      78.45         56.03          75.09
     TOTAL RAINFALL    (mm)=      79.45         79.45          79.45
     RUNOFF COEFFICIENT   =       0.99          0.71           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB             |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40          0.07
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      55.98         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
```

```
          0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
          0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
          0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
          0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
          0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
          0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
          0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
          0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
          0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
          0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
          1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.48 (ii)     4.64 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.22
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.18          0.02         0.204 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      78.45         56.03         75.09
     TOTAL RAINFALL   (mm)=      79.45         79.45         79.45
     RUNOFF COEFFICIENT   =       0.99          0.71          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0136)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (201021):     0.47   0.204     1.33    75.09
      + ID2= 2 (201022):     0.47   0.204     1.33    75.09
        =================================================
        ID = 3 (  0136):     0.94   0.408     1.33    75.09

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
----------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  2005)|   Area    (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.25          0.03
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      43.20         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                       ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
          0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
          0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
          0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
          0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
          0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
          0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
          0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
          0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
          0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
          0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
          0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
          1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.27 (ii)     3.89 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.25
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.11          0.01         0.124 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
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     RUNOFF VOLUME    (mm)=      78.45         56.03         76.21
     TOTAL RAINFALL   (mm)=      79.45         79.45         79.45
     RUNOFF COEFFICIENT   =       0.99          0.71          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20121)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62          0.49
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      86.02         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                       ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
          0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
          0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
          0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
          0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
          0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
          0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
          0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
          0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
          0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
          0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
          0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
          1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.91 (ii)     9.13 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.31          0.12
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.28          0.11         0.373 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=      78.45         56.03         68.58
     TOTAL RAINFALL   (mm)=      79.45         79.45         79.45
     RUNOFF COEFFICIENT   =       0.99          0.71          0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD (200111)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.09          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      25.82         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                       ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
          0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
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          0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
          0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
          0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
          0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
          0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
          0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
          0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
          0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
          0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
          0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
          1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       0.93 (ii)     3.61 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.25
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.04          0.00         0.044 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      78.45         56.03         76.08
     TOTAL RAINFALL   (mm)=      79.45         79.45         79.45
     RUNOFF COEFFICIENT   =       0.99          0.71          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD (200121)|   Area    (ha)=   0.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.10          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      27.08         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                       ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
          0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
          0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
          0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
          0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
          0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
          0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
          0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
          0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
          0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
          0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
          0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
          1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       0.96 (ii)     3.91 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.25
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.04          0.00         0.048 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      78.45         56.03         75.52
     TOTAL RAINFALL   (mm)=      79.45         79.45         79.45
     RUNOFF COEFFICIENT   =       0.99          0.71          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| ADD HYD  (  0142)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (200111):     0.10   0.044     1.33    76.08
      + ID2= 2 (200121):     0.11   0.048     1.33    75.52
        =================================================
        ID = 3 (  0142):     0.21   0.093     1.33    75.79

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB            |
| STANDHYD (200112)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.08          0.02
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      25.69         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                       ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
          0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
          0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
          0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
          0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
          0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
          0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
          0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
          0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
          0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
          0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
          0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
          1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

     Max.Eff.Inten.(mm/hr)=     164.22        118.16
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       0.93 (ii)     4.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.22
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.04          0.01         0.042 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      78.45         56.03         73.70
     TOTAL RAINFALL   (mm)=      79.45         79.45         79.45
     RUNOFF COEFFICIENT   =       0.99          0.71          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200122)|   Area    (ha)=   0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.11          0.02
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      29.44         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                       ---- TRANSFORMED HYETOGRAPH ----
           TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME     RAIN
            hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs    mm/hr
          0.083    5.93 | 1.083   40.22 | 2.083   13.20 |  3.08    6.98
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        0.167    5.93 | 1.167   40.22 | 2.167   13.20 |  3.17    6.98
        0.250    6.74 | 1.250  164.22 | 2.250   11.37 |  3.25    6.51
        0.333    6.74 | 1.333  164.22 | 2.333   11.37 |  3.33    6.51
        0.417    7.85 | 1.417   51.92 | 2.417   10.03 |  3.42    6.11
        0.500    7.85 | 1.500   51.92 | 2.500   10.03 |  3.50    6.11
        0.583    9.50 | 1.583   28.58 | 2.583    9.00 |  3.58    5.77
        0.667    9.50 | 1.667   28.58 | 2.667    9.00 |  3.67    5.77
        0.750   12.27 | 1.750   20.23 | 2.750    8.19 |  3.75    5.46
        0.833   12.27 | 1.833   20.23 | 2.833    8.19 |  3.83    5.46
        0.917   18.04 | 1.917   15.88 | 2.917    7.53 |  3.92    5.19
        1.000   18.04 | 2.000   15.88 | 3.000    7.53 |  4.00    5.19

    Max.Eff.Inten.(mm/hr)=     164.22       118.16
               over (min)        5.00         5.00
    Storage Coeff.  (min)=       1.01 (ii)    4.07 (ii)
    Unit Hyd. Tpeak (min)=       5.00         5.00
    Unit Hyd. peak  (cms)=       0.34         0.24
                                                      *TOTALS*
    PEAK FLOW        (cms)=      0.05         0.01         0.057 (iii)
    TIME TO PEAK     (hrs)=      1.33         1.33          1.33
    RUNOFF VOLUME     (mm)=     78.45        56.03         75.29
    TOTAL RAINFALL    (mm)=     79.45        79.45         79.45
    RUNOFF COEFFICIENT   =       0.99         0.71          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0145)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK     R.V.
--------------------        (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (200112):     0.10    0.042     1.33    73.70
     + ID2= 2 (200122):     0.13    0.057     1.33    75.29
       =================================================
       ID = 3 (  0145):     0.23    0.099     1.33    74.60

    NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
==========================================================================================

       V    V   I    SSSSS  U    U    A    L               (v 6.1.2002)
       V    V   I    SS     U    U   A A   L
        V  V    I     SS    U    U  AAAAA  L
        V  V    I      SS   U    U  A   A  L
         VV     I    SSSSS  UUUUU  A    A  LLLLL

       OOO   TTTTT  TTTTT  H    H   Y  Y   M    M   OOO     TM
      O   O    T      T    H    H    Y Y   MM MM  O   O
      O   O    T      T    H    H     Y    M   M  O   O
       OOO     T      T    H    H     Y    M   M   OOO
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                    *****  D E T A I L E D   O U T P U T *****

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\68534fb6
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\68534fb6

DATE: 05-18-2022                           TIME: 12:44:44

USER:

COMMENTS: _____________________________________________________________

------------------------------------------------------------------------------------------
  ************************************************
  ** SIMULATION : Run 06                        **
  ************************************************

--------------------
|   READ STORM     |     Filename: C:\Users\caef070146\AppD
|                  |               ata\Local\Temp\
|                  |               11403a02-80e0-48b3-97a8-b203216ba841\4c83eb39
| Ptotal= 87.58 mm |     Comments: 100-year, 4 hr-Chicago, City of Barrie
--------------------
                    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                    0.17    6.41 |  1.17   45.22 |  2.17   14.50 |  3.17    7.56
                    0.33    7.29 |  1.33  180.15 |  2.33   12.44 |  3.33    7.04
                    0.50    8.52 |  1.50   58.54 |  2.50   10.94 |  3.50    6.60
                    0.67   10.36 |  1.67   31.96 |  2.67    9.80 |  3.67    6.22
                    0.83   13.45 |  1.83   22.45 |  2.83    8.90 |  3.83    5.89
                    1.00   19.96 |  2.00   17.52 |  3.00    8.16 |  4.00    5.59

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--------------------
| CALIB            |
| STANDHYD ( 20022)|   Area    (ha)=   0.80
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.68          0.12
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      73.03         40.00
    Mannings n          =       0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
                    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                   0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                   0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                   0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                   0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                   0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                   0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                   0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                   0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                   0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                   0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                   0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                   1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

    Max.Eff.Inten.(mm/hr)=     180.15       134.19
               over (min)        5.00         5.00
    Storage Coeff.  (min)=       1.67 (ii)    4.72 (ii)
    Unit Hyd. Tpeak (min)=       5.00         5.00
    Unit Hyd. peak  (cms)=       0.32         0.22
                                                      *TOTALS*
    PEAK FLOW        (cms)=      0.34         0.04         0.381 (iii)
    TIME TO PEAK     (hrs)=      1.33         1.33          1.33
    RUNOFF VOLUME     (mm)=     86.58        63.54         83.12
    TOTAL RAINFALL    (mm)=     87.58        87.58         87.58
    RUNOFF COEFFICIENT   =       0.99         0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20021)|   Area    (ha)=   0.70
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.62          0.08
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      68.31         40.00
    Mannings n          =       0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                   0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                   0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                   0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                   0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                   0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                   0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                   0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                   0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                   0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                   0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                   0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                   1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

    Max.Eff.Inten.(mm/hr)=     180.15       134.19
               over (min)        5.00         5.00
    Storage Coeff.  (min)=       1.61 (ii)    4.25 (ii)
    Unit Hyd. Tpeak (min)=       5.00         5.00
    Unit Hyd. peak  (cms)=       0.32         0.24
                                                      *TOTALS*
    PEAK FLOW        (cms)=      0.31         0.03         0.339 (iii)
    TIME TO PEAK     (hrs)=      1.33         1.33          1.33
    RUNOFF VOLUME     (mm)=     86.58        63.54         84.04
    TOTAL RAINFALL    (mm)=     87.58        87.58         87.58
    RUNOFF COEFFICIENT   =       0.99         0.73          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20031)|   Area    (ha)=   0.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.39          0.04
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      53.54         40.00
    Mannings n          =       0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                   0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                   0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                   0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                   0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                   0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                   0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                   0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                   0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                   0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                   0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                   0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                   1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

    Max.Eff.Inten.(mm/hr)=     180.15       134.19
               over (min)        5.00         5.00
    Storage Coeff.  (min)=       1.39 (ii)    3.92 (ii)
    Unit Hyd. Tpeak (min)=       5.00         5.00
    Unit Hyd. peak  (cms)=       0.33         0.24
                                                      *TOTALS*
    PEAK FLOW        (cms)=      0.19         0.02         0.209 (iii)
    TIME TO PEAK     (hrs)=      1.33         1.33          1.33
    RUNOFF VOLUME     (mm)=     86.58        63.54         84.27
    TOTAL RAINFALL    (mm)=     87.58        87.58         87.58
    RUNOFF COEFFICIENT   =       0.99         0.73          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20032)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.41          0.06
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      55.98         40.00
    Mannings n          =       0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                   0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                   0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                   0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                   0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                   0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                   0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                   0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                   0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                   0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                   0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                   0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                   1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

    Max.Eff.Inten.(mm/hr)=     180.15       134.19
               over (min)        5.00         5.00
    Storage Coeff.  (min)=       1.43 (ii)    4.28 (ii)
    Unit Hyd. Tpeak (min)=       5.00         5.00
    Unit Hyd. peak  (cms)=       0.33         0.23
                                                      *TOTALS*
    PEAK FLOW        (cms)=      0.20         0.02         0.226 (iii)
    TIME TO PEAK     (hrs)=      1.33         1.33          1.33
    RUNOFF VOLUME     (mm)=     86.58        63.54         83.57
    TOTAL RAINFALL    (mm)=     87.58        87.58         87.58
    RUNOFF COEFFICIENT   =       0.99         0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=       0.31          0.04
    Dep. Storage     (mm)=       1.00          1.00
    Average Slope     (%)=       1.00          2.00
    Length            (m)=      48.30         40.00
    Mannings n          =       0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                          ---- TRANSFORMED HYETOGRAPH ----
                    TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                     hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                   0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                   0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                   0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                   0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                   0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                   0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                   0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                   0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
```

```
            0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
            0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
            0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
            1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.30 (ii)     3.95 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.24
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.16          0.01          0.170 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         84.04
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20042)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31          0.05
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      48.99         40.00
     Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
             0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
             0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
             0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
             0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
             0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
             0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
             0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
             0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
             0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
             0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
             1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.32 (ii)     4.36 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.23
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.15          0.02          0.172 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         83.11
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20052)|   Area    (ha)=   0.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23          0.06
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      43.97         40.00
     Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
             0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
             0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
             0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
             0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
             0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
             0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
             0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
             0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
             0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
             0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
             1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.23 (ii)     4.91 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.11          0.02          0.135 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         81.50
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.58          0.15
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      69.76         40.00
     Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
             0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
             0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
             0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
             0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
             0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
             0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
             0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
             0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
             0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
             0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
             1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.63 (ii)     5.13 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.29          0.04          0.332 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         81.96
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.55          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.83         40.00
     Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
             0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
             0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
             0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
             0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
             0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
             0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
             0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
             0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
             0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
             0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
             1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.57 (ii)     4.62 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.28          0.03          0.310 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         83.12
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.54          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.32         40.00
     Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
             0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
             0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
             0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
             0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
             0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
             0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
             0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
             0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
             0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
             0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
             1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.56 (ii)     4.70 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.27          0.04          0.304 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         82.89
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.49          0.09
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      62.18         40.00
     Mannings n           =      0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
             0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
             0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
             0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
             0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
             0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
             0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
             0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
             0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
             0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
             0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
             1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.52 (ii)     4.56 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.23
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.25          0.03          0.277 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         83.12
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB              |
| STANDHYD ( 20092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.51          0.12
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     64.81         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                               ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                 0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                 0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                 0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                 0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                 0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                 0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                 0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                 0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                 0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                 0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                 1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.56 (ii)     4.97 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.26          0.04          0.296 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         82.19
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20091)|   Area    (ha)=   0.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.00   Dir. Conn.(%)=  77.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.31          0.09
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     51.64         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                               ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                 0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                 0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                 0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                 0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                 0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                 0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                 0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                 0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                 0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                 0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                 1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.36 (ii)     5.12 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.15          0.03          0.179 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         81.27
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200812)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  70.00   Dir. Conn.(%)=  70.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.27          0.11
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     50.33         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                               ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                 0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                 0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                 0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                 0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                 0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                 0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                 0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                 0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                 0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                 0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                 1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.34 (ii)     5.68 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.13          0.03          0.163 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         79.65
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200811)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.06          0.01
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     21.60         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                               ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                 0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                 0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                 0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                 0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                 0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                 0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                 0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                 0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                 0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                 0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                 1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       0.80 (ii)     3.95 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.24
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.03          0.00          0.033 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         82.86
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (200811):    0.07   0.033     1.33    82.86
       + ID2= 2 (200812):    0.38   0.163     1.33    79.65
         ===============================================
         ID = 3 (  0110):    0.45   0.197     1.33    80.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| STANDHYD (200822)|   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.23          0.16
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     50.99         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                               ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                 0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                 0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                 0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                 0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                 0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                 0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                 0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                 0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                 0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                 0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                 1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.35 (ii)     8.21 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.13
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.12          0.04          0.151 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         77.12
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200821)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00   Dir. Conn.(%)=  83.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.06          0.01
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     21.60         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                               ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                 0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                 0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                 0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                 0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                 0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                 0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                 0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                 0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                 0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                 0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                 0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                 1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       0.80 (ii)     4.04 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.24
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.03          0.00          0.033 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         82.63
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0111)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (200821):    0.07   0.033     1.33    82.63
       + ID2= 2 (200822):    0.39   0.151     1.33    77.12
         ===============================================
         ID = 3 (  0111):    0.46   0.184     1.33    77.96
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     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| CALIB              |
| STANDHYD ( 20102)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.35          0.12
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      55.98         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=      180.15        134.19
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.43 (ii)     5.44 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.16
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.17          0.04          0.207 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=       86.58         63.54          80.58
     TOTAL RAINFALL   (mm)=       87.58         87.58          87.58
     RUNOFF COEFFICIENT   =        0.99          0.73           0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20101)|   Area    (ha)=   0.25
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  82.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.20          0.05
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      40.82         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59
```

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     Max.Eff.Inten.(mm/hr)=      180.15        134.19
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.18 (ii)     4.50 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.23
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.10          0.02          0.118 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=       86.58         63.54          82.42
     TOTAL RAINFALL   (mm)=       87.58         87.58          87.58
     RUNOFF COEFFICIENT   =        0.99          0.73           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0121)|
|   1 +  2 =  3    |        AREA     QPEAK     TPEAK      R.V.
--------------------        (ha)     (cms)     (hrs)      (mm)
        ID1= 1 ( 20101):     0.25    0.118      1.33     82.42
      + ID2= 2 ( 20102):     0.47    0.207      1.33     80.58
        ===============================================
        ID = 3 (  0121):     0.72    0.325      1.33     81.22

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20111)|   Area    (ha)=   0.87
|ID= 1 DT= 5.0 min |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.58          0.29
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      76.16         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=      180.15        134.19
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.71 (ii)     6.31 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.15
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.29          0.08          0.364 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=       86.58         63.54          78.97
     TOTAL RAINFALL   (mm)=       87.58         87.58          87.58
     RUNOFF COEFFICIENT   =        0.99          0.73           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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| CALIB              |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.72          0.18
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      77.46         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=      180.15        134.19
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.73 (ii)     5.23 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.16
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.36          0.05          0.409 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=       86.58         63.54          81.97
     TOTAL RAINFALL   (mm)=       87.58         87.58          87.58
     RUNOFF COEFFICIENT   =        0.99          0.73           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.90          0.21
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      86.02         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59
```

```
     Max.Eff.Inten.(mm/hr)=      180.15        134.19
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.84 (ii)     5.26 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.32          0.16
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.45          0.06          0.506 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=       86.58         63.54          82.20
     TOTAL RAINFALL   (mm)=       87.58         87.58          87.58
     RUNOFF COEFFICIENT   =        0.99          0.73           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40          0.07
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      55.98         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=      180.15        134.19
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.43 (ii)     4.47 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.23
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.20          0.02          0.225 (iii)
     TIME TO PEAK    (hrs)=        1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=       86.58         63.54          83.12
     TOTAL RAINFALL   (mm)=       87.58         87.58          87.58
     RUNOFF COEFFICIENT   =        0.99          0.73           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.40          0.07
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      55.98         40.00
```

```
     Mannings n          =     0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15       134.19
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.43 (ii)    4.47 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.23
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.20         0.02         0.225 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58        63.54         83.12
     TOTAL RAINFALL   (mm)=      87.58        87.58         87.58
     RUNOFF COEFFICIENT   =       0.99         0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0136)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (201021):      0.47   0.225     1.33    83.12
     + ID2= 2 (201022):      0.47   0.225     1.33    83.12
       ================================================
       ID = 3 (  0136):      0.94   0.449     1.33    83.12

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (  2005)|   Area    (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.25         0.03
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      43.20        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59
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     Max.Eff.Inten.(mm/hr)=     180.15       134.19
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.22 (ii)    3.75 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.25
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.13         0.01         0.136 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58        63.54         84.27
     TOTAL RAINFALL   (mm)=      87.58        87.58         87.58
     RUNOFF COEFFICIENT   =       0.99         0.73          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20121)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62         0.49
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      86.02        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15       134.19
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.84 (ii)    8.70 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.12
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.31         0.12         0.417 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.42          1.33
     RUNOFF VOLUME    (mm)=      86.58        63.54         76.44
     TOTAL RAINFALL   (mm)=      87.58        87.58         87.58
     RUNOFF COEFFICIENT   =       0.99         0.73          0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200111)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.09         0.01
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      25.82        40.00
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     Mannings n          =     0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15       134.19
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       0.90 (ii)    3.48 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.26
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.04         0.00         0.049 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58        63.54         84.14
     TOTAL RAINFALL   (mm)=      87.58        87.58         87.58
     RUNOFF COEFFICIENT   =       0.99         0.73          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200121)|   Area    (ha)=   0.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.10         0.01
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      27.08        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15       134.19
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       0.92 (ii)    3.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.25
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.05         0.01         0.053 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58        63.54         83.56
     TOTAL RAINFALL   (mm)=      87.58        87.58         87.58
     RUNOFF COEFFICIENT   =       0.99         0.73          0.95
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***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0142)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (200111):      0.10   0.049     1.33    84.14
     + ID2= 2 (200121):      0.11   0.053     1.33    83.56
       ================================================
       ID = 3 (  0142):      0.21   0.102     1.33    83.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (200112)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.08         0.02
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      25.69        40.00
     Mannings n          =       0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                           ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15       134.19
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       0.89 (ii)    4.48 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.23
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.04         0.01         0.046 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58        63.54         81.73
     TOTAL RAINFALL   (mm)=      87.58        87.58         87.58
     RUNOFF COEFFICIENT   =       0.99         0.73          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (200122)|   Area    (ha)=   0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                               IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.11         0.02
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      29.44        40.00
```

```
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                               ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15       134.19
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       0.97 (ii)    3.92 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.24
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.06         0.01          0.063 (iii)
     TIME TO PEAK    (hrs)=       1.33         1.33           1.33
     RUNOFF VOLUME    (mm)=      86.58        63.54          83.33
     TOTAL RAINFALL   (mm)=      87.58        87.58          87.58
     RUNOFF COEFFICIENT   =       0.99         0.73           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0145)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (200112):     0.10   0.046     1.33    81.73
      + ID2= 2 (200122):     0.13   0.063     1.33    83.33
        ====================================================
        ID = 3 (  0145):     0.23   0.109     1.33    82.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------

 FINISH
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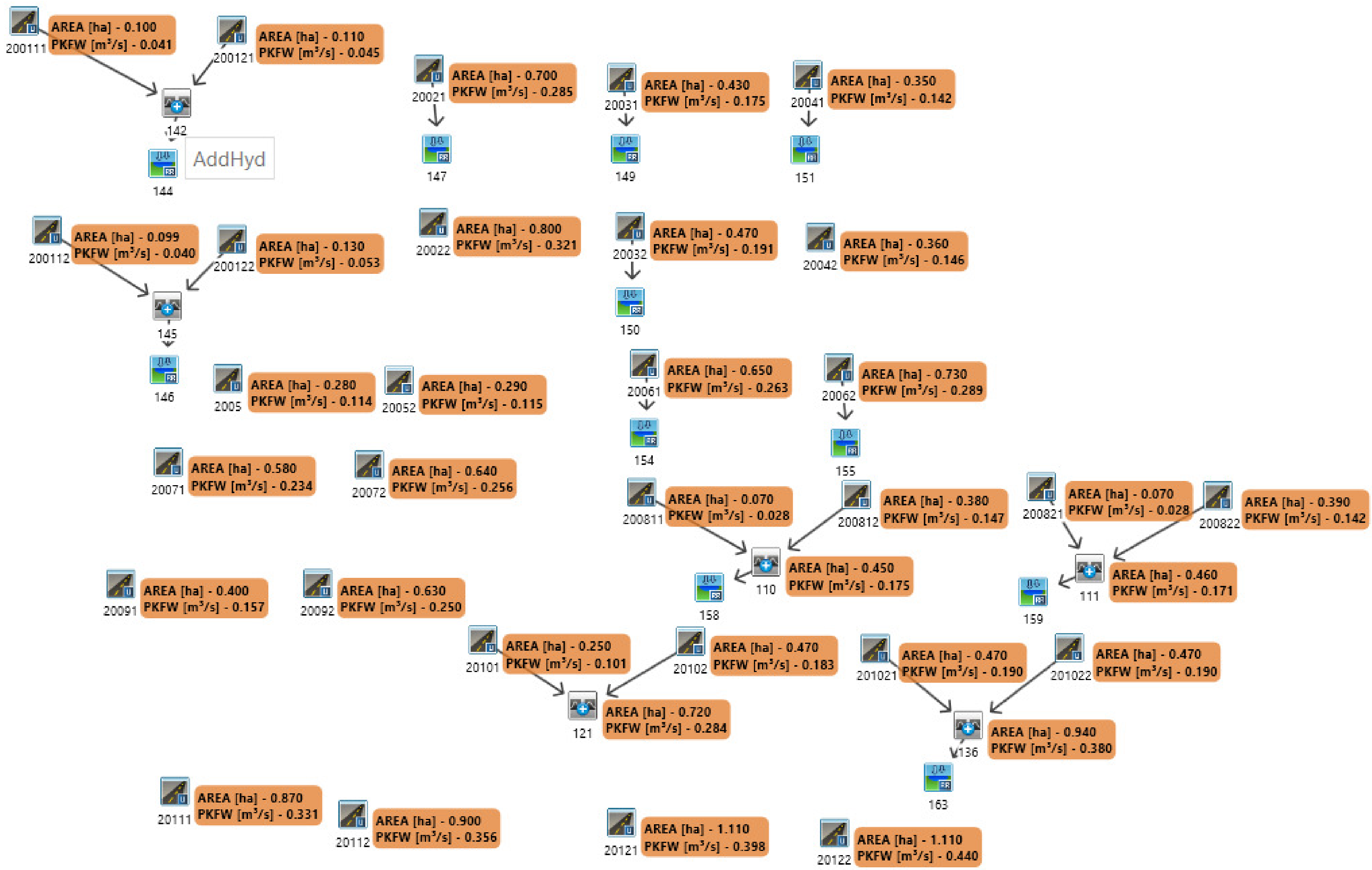
```

100-Yr Post-Developmet Required Storage Volume Roadway Drainage Areas (12-hr SCSII)



```
===============================================================================================

       V    V   I   SSSSS  U   U    A    L              (v 6.1.2002)
       V    V   I   SS     U   U   A A   L
        V  V    I    SS    U   U  AAAAA  L
        V  V    I     SS   U   U  A   A  L
         VV     I   SSSSS  UUUUU  A   A  LLLLL

        OOO   TTTTT  TTTTT  H   H  Y   Y  M   M   OOO    TM
       O   O    T      T    H   H   Y Y   MM MM  O   O
       O   O    T      T    H   H    Y    M   M  O   O
        OOO     T      T    H   H    Y    M   M   OOO
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                   *****  D E T A I L E D   O U T P U T *****


  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\ad5c9df4
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\ad5c9df4


DATE: 05-18-2022                              TIME: 01:03:59

USER:



COMMENTS: ____________________________________________________________


-----------------------------------------------------------------------------------------------
  ************************************************
  ** SIMULATION : Run 18                        **
  ************************************************


--------------------
|   READ STORM     |    Filename: C:\Users\caef070146\AppD
|                  |              ata\Local\Temp\
|                  |              df3beae7-c83b-4af2-836d-f749a05f6013\13bf36c4
| Ptotal=112.50 mm |    Comments: 100-Yr,12-hr SCS, City of Barrie
--------------------
                 TIME     RAIN |  TIME     RAIN |'  TIME    RAIN |  TIME     RAIN
                  hrs    mm/hr |   hrs    mm/hr |'   hrs   mm/hr |   hrs    mm/hr
                 0.25     2.81 |  3.25     4.50 |  6.25    20.25 |  9.25     3.94
                 0.50     2.81 |  3.50     4.50 |  6.50    20.25 |  9.50     3.94
                 0.75     2.81 |  3.75     4.50 |  6.75     9.00 |  9.75     3.94
                 1.00     2.81 |  4.00     4.50 |  7.00     9.00 | 10.00     3.94
                 1.25     2.81 |  4.25     6.75 |  7.25     6.75 | 10.25     2.25
                 1.50     2.81 |  4.50     6.75 |  7.50     6.75 | 10.50     2.25
                 1.75     2.81 |  4.75     9.00 |  7.75     6.75 | 10.75     2.25
                 2.00     2.81 |  5.00     9.00 |  8.00     6.75 | 11.00     2.25
                 2.25     3.37 |  5.25    13.50 |  8.25     3.94 | 11.25     2.25
                 2.50     3.37 |  5.50    13.50 |  8.50     3.94 | 11.50     2.25
                 2.75     3.37 |  5.75    54.00 |  8.75     3.94 | 11.75     2.25
                 3.00     3.37 |  6.00   148.50 |  9.00     3.94 | 12.00     2.25

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--------------------
| CALIB            |
| STANDHYD ( 20022)|   Area    (ha)=   0.80
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.68          0.12
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      73.03         40.00
     Mannings n          =       0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                 TIME     RAIN |  TIME     RAIN |'  TIME    RAIN |  TIME     RAIN
                  hrs    mm/hr |   hrs    mm/hr |'   hrs   mm/hr |   hrs    mm/hr
                0.083     2.81 | 3.083     4.50 | 6.083    20.25 |  9.08     3.94
                0.167     2.81 | 3.167     4.50 | 6.167    20.25 |  9.17     3.94
                0.250     2.81 | 3.250     4.50 | 6.250    20.25 |  9.25     3.94
                0.333     2.81 | 3.333     4.50 | 6.333    20.25 |  9.33     3.94
                0.417     2.81 | 3.417     4.50 | 6.417    20.25 |  9.42     3.94
                0.500     2.81 | 3.500     4.50 | 6.500    20.25 |  9.50     3.94
                0.583     2.81 | 3.583     4.50 | 6.583     9.00 |  9.58     3.94
                0.667     2.81 | 3.667     4.50 | 6.667     9.00 |  9.67     3.94
                0.750     2.81 | 3.750     4.50 | 6.750     9.00 |  9.75     3.94
                0.833     2.81 | 3.833     4.50 | 6.833     9.00 |  9.83     3.94
                0.917     2.81 | 3.917     4.50 | 6.917     9.00 |  9.92     3.94
                1.000     2.81 | 4.000     4.50 | 7.000     9.00 | 10.00     3.94
                1.083     2.81 | 4.083     6.75 | 7.083     6.75 | 10.08     2.25
                1.167     2.81 | 4.167     6.75 | 7.167     6.75 | 10.17     2.25
                1.250     2.81 | 4.250     6.75 | 7.250     6.75 | 10.25     2.25
                1.333     2.81 | 4.333     6.75 | 7.333     6.75 | 10.33     2.25
                1.417     2.81 | 4.417     6.75 | 7.417     6.75 | 10.42     2.25
                1.500     2.81 | 4.500     6.75 | 7.500     6.75 | 10.50     2.25
                1.583     2.81 | 4.583     9.00 | 7.583     6.75 | 10.58     2.25
                1.667     2.81 | 4.667     9.00 | 7.667     6.75 | 10.67     2.25
                1.750     2.81 | 4.750     9.00 | 7.750     6.75 | 10.75     2.25
                1.833     2.81 | 4.833     9.00 | 7.833     6.75 | 10.83     2.25
                1.917     2.81 | 4.917     9.00 | 7.917     6.75 | 10.92     2.25
                2.000     2.81 | 5.000     9.00 | 8.000     6.75 | 11.00     2.25
                2.083     3.37 | 5.083    13.50 | 8.083     3.94 | 11.08     2.25
                2.167     3.37 | 5.167    13.50 | 8.167     3.94 | 11.17     2.25
                2.250     3.37 | 5.250    13.50 | 8.250     3.94 | 11.25     2.25
                2.333     3.37 | 5.333    13.50 | 8.333     3.94 | 11.33     2.25
                2.417     3.37 | 5.417    13.50 | 8.417     3.94 | 11.42     2.25
                2.500     3.37 | 5.500    13.50 | 8.500     3.94 | 11.50     2.25
                2.583     3.37 | 5.583    54.00 | 8.583     3.94 | 11.58     2.25
                2.667     3.37 | 5.667    54.00 | 8.667     3.94 | 11.67     2.25
                2.750     3.37 | 5.750    54.00 | 8.750     3.94 | 11.75     2.25
                2.833     3.37 | 5.833   148.50 | 8.833     3.94 | 11.83     2.25
                2.917     3.37 | 5.917   148.50 | 8.917     3.94 | 11.92     2.25
                3.000     3.37 | 6.000   148.50 | 9.000     3.94 | 12.00     2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.81 (ii)     5.10 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.28          0.04         0.321 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00        107.82
     TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
     RUNOFF COEFFICIENT   =       0.99          0.77          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20042)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.31          0.05
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      48.99         40.00
     Mannings n          =       0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                 TIME     RAIN |  TIME     RAIN |'  TIME    RAIN |  TIME     RAIN
                  hrs    mm/hr |   hrs    mm/hr |'   hrs   mm/hr |   hrs    mm/hr
                0.083     2.81 | 3.083     4.50 | 6.083    20.25 |  9.08     3.94
                0.167     2.81 | 3.167     4.50 | 6.167    20.25 |  9.17     3.94
                0.250     2.81 | 3.250     4.50 | 6.250    20.25 |  9.25     3.94
                0.333     2.81 | 3.333     4.50 | 6.333    20.25 |  9.33     3.94
                0.417     2.81 | 3.417     4.50 | 6.417    20.25 |  9.42     3.94
                0.500     2.81 | 3.500     4.50 | 6.500    20.25 |  9.50     3.94
                0.583     2.81 | 3.583     4.50 | 6.583     9.00 |  9.58     3.94
                0.667     2.81 | 3.667     4.50 | 6.667     9.00 |  9.67     3.94
                0.750     2.81 | 3.750     4.50 | 6.750     9.00 |  9.75     3.94
                0.833     2.81 | 3.833     4.50 | 6.833     9.00 |  9.83     3.94
                0.917     2.81 | 3.917     4.50 | 6.917     9.00 |  9.92     3.94
                1.000     2.81 | 4.000     4.50 | 7.000     9.00 | 10.00     3.94
                1.083     2.81 | 4.083     6.75 | 7.083     6.75 | 10.08     2.25
                1.167     2.81 | 4.167     6.75 | 7.167     6.75 | 10.17     2.25
                1.250     2.81 | 4.250     6.75 | 7.250     6.75 | 10.25     2.25
                1.333     2.81 | 4.333     6.75 | 7.333     6.75 | 10.33     2.25
                1.417     2.81 | 4.417     6.75 | 7.417     6.75 | 10.42     2.25
                1.500     2.81 | 4.500     6.75 | 7.500     6.75 | 10.50     2.25
                1.583     2.81 | 4.583     9.00 | 7.583     6.75 | 10.58     2.25
                1.667     2.81 | 4.667     9.00 | 7.667     6.75 | 10.67     2.25
                1.750     2.81 | 4.750     9.00 | 7.750     6.75 | 10.75     2.25
                1.833     2.81 | 4.833     9.00 | 7.833     6.75 | 10.83     2.25
                1.917     2.81 | 4.917     9.00 | 7.917     6.75 | 10.92     2.25
                2.000     2.81 | 5.000     9.00 | 8.000     6.75 | 11.00     2.25
                2.083     3.37 | 5.083    13.50 | 8.083     3.94 | 11.08     2.25
                2.167     3.37 | 5.167    13.50 | 8.167     3.94 | 11.17     2.25
                2.250     3.37 | 5.250    13.50 | 8.250     3.94 | 11.25     2.25
                2.333     3.37 | 5.333    13.50 | 8.333     3.94 | 11.33     2.25
                2.417     3.37 | 5.417    13.50 | 8.417     3.94 | 11.42     2.25
                2.500     3.37 | 5.500    13.50 | 8.500     3.94 | 11.50     2.25
                2.583     3.37 | 5.583    54.00 | 8.583     3.94 | 11.58     2.25
                2.667     3.37 | 5.667    54.00 | 8.667     3.94 | 11.67     2.25
                2.750     3.37 | 5.750    54.00 | 8.750     3.94 | 11.75     2.25
                2.833     3.37 | 5.833   148.50 | 8.833     3.94 | 11.83     2.25
                2.917     3.37 | 5.917   148.50 | 8.917     3.94 | 11.92     2.25
                3.000     3.37 | 6.000   148.50 | 9.000     3.94 | 12.00     2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.33 (ii)     5.30 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.09          0.02         0.115 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00        106.10
     TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
     RUNOFF COEFFICIENT   =       0.99          0.77          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20052)|   Area    (ha)=   0.29
|ID= 1 DT= 5.0 min |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23          0.06
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      43.97         40.00
     Mannings n          =       0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                 TIME     RAIN |  TIME     RAIN |'  TIME    RAIN |  TIME     RAIN
                  hrs    mm/hr |   hrs    mm/hr |'   hrs   mm/hr |   hrs    mm/hr
                0.083     2.81 | 3.083     4.50 | 6.083    20.25 |  9.08     3.94
                0.167     2.81 | 3.167     4.50 | 6.167    20.25 |  9.17     3.94
                0.250     2.81 | 3.250     4.50 | 6.250    20.25 |  9.25     3.94
                0.333     2.81 | 3.333     4.50 | 6.333    20.25 |  9.33     3.94
                0.417     2.81 | 3.417     4.50 | 6.417    20.25 |  9.42     3.94
                0.500     2.81 | 3.500     4.50 | 6.500    20.25 |  9.50     3.94
                0.583     2.81 | 3.583     4.50 | 6.583     9.00 |  9.58     3.94
                0.667     2.81 | 3.667     4.50 | 6.667     9.00 |  9.67     3.94
                0.750     2.81 | 3.750     4.50 | 6.750     9.00 |  9.75     3.94
                0.833     2.81 | 3.833     4.50 | 6.833     9.00 |  9.83     3.94
                0.917     2.81 | 3.917     4.50 | 6.917     9.00 |  9.92     3.94
                1.000     2.81 | 4.000     4.50 | 7.000     9.00 | 10.00     3.94
                1.083     2.81 | 4.083     6.75 | 7.083     6.75 | 10.08     2.25
                1.167     2.81 | 4.167     6.75 | 7.167     6.75 | 10.17     2.25
                1.250     2.81 | 4.250     6.75 | 7.250     6.75 | 10.25     2.25
                1.333     2.81 | 4.333     6.75 | 7.333     6.75 | 10.33     2.25
                1.417     2.81 | 4.417     6.75 | 7.417     6.75 | 10.42     2.25
                1.500     2.81 | 4.500     6.75 | 7.500     6.75 | 10.50     2.25
                1.583     2.81 | 4.583     9.00 | 7.583     6.75 | 10.58     2.25
                1.667     2.81 | 4.667     9.00 | 7.667     6.75 | 10.67     2.25
                1.750     2.81 | 4.750     9.00 | 7.750     6.75 | 10.75     2.25
                1.833     2.81 | 4.833     9.00 | 7.833     6.75 | 10.83     2.25
                1.917     2.81 | 4.917     9.00 | 7.917     6.75 | 10.92     2.25
                2.000     2.81 | 5.000     9.00 | 8.000     6.75 | 11.00     2.25
                2.083     3.37 | 5.083    13.50 | 8.083     3.94 | 11.08     2.25
                2.167     3.37 | 5.167    13.50 | 8.167     3.94 | 11.17     2.25
                2.250     3.37 | 5.250    13.50 | 8.250     3.94 | 11.25     2.25
                2.333     3.37 | 5.333    13.50 | 8.333     3.94 | 11.33     2.25
                2.417     3.37 | 5.417    13.50 | 8.417     3.94 | 11.42     2.25
                2.500     3.37 | 5.500    13.50 | 8.500     3.94 | 11.50     2.25
                2.583     3.37 | 5.583    54.00 | 8.583     3.94 | 11.58     2.25
                2.667     3.37 | 5.667    54.00 | 8.667     3.94 | 11.67     2.25
                2.750     3.37 | 5.750    54.00 | 8.750     3.94 | 11.75     2.25
                2.833     3.37 | 5.833   148.50 | 8.833     3.94 | 11.83     2.25
                2.917     3.37 | 5.917   148.50 | 8.917     3.94 | 11.92     2.25
                3.000     3.37 | 6.000   148.50 | 9.000     3.94 | 12.00     2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.42 (ii)     4.71 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.13          0.02         0.146 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00        107.82
     TOTAL RAINFALL   (mm)=     112.50        112.50        112.50
     RUNOFF COEFFICIENT   =       0.99          0.77          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.54          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.32         40.00
     Mannings n          =       0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                            ---- TRANSFORMED HYETOGRAPH ----
                 TIME     RAIN |  TIME     RAIN |'  TIME    RAIN |  TIME     RAIN
                  hrs    mm/hr |   hrs    mm/hr |'   hrs   mm/hr |   hrs    mm/hr
                0.083     2.81 | 3.083     4.50 | 6.083    20.25 |  9.08     3.94
                0.167     2.81 | 3.167     4.50 | 6.167    20.25 |  9.17     3.94
                0.250     2.81 | 3.250     4.50 | 6.250    20.25 |  9.25     3.94
                0.333     2.81 | 3.333     4.50 | 6.333    20.25 |  9.33     3.94
                0.417     2.81 | 3.417     4.50 | 6.417    20.25 |  9.42     3.94
                0.500     2.81 | 3.500     4.50 | 6.500    20.25 |  9.50     3.94
                0.583     2.81 | 3.583     4.50 | 6.583     9.00 |  9.58     3.94
                0.667     2.81 | 3.667     4.50 | 6.667     9.00 |  9.67     3.94
                0.750     2.81 | 3.750     4.50 | 6.750     9.00 |  9.75     3.94
                0.833     2.81 | 3.833     4.50 | 6.833     9.00 |  9.83     3.94
                0.917     2.81 | 3.917     4.50 | 6.917     9.00 |  9.92     3.94
                1.000     2.81 | 4.000     4.50 | 7.000     9.00 | 10.00     3.94
                1.083     2.81 | 4.083     6.75 | 7.083     6.75 | 10.08     2.25
                1.167     2.81 | 4.167     6.75 | 7.167     6.75 | 10.17     2.25
                1.250     2.81 | 4.250     6.75 | 7.250     6.75 | 10.25     2.25
                1.333     2.81 | 4.333     6.75 | 7.333     6.75 | 10.33     2.25
                1.417     2.81 | 4.417     6.75 | 7.417     6.75 | 10.42     2.25
                1.500     2.81 | 4.500     6.75 | 7.500     6.75 | 10.50     2.25
                1.583     2.81 | 4.583     9.00 | 7.583     6.75 | 10.58     2.25
                1.667     2.81 | 4.667     9.00 | 7.667     6.75 | 10.67     2.25
                1.750     2.81 | 4.750     9.00 | 7.750     6.75 | 10.75     2.25
                1.833     2.81 | 4.833     9.00 | 7.833     6.75 | 10.83     2.25
                1.917     2.81 | 4.917     9.00 | 7.917     6.75 | 10.92     2.25
                2.000     2.81 | 5.000     9.00 | 8.000     6.75 | 11.00     2.25
                2.083     3.37 | 5.083    13.50 | 8.083     3.94 | 11.08     2.25
                2.167     3.37 | 5.167    13.50 | 8.167     3.94 | 11.17     2.25
                2.250     3.37 | 5.250    13.50 | 8.250     3.94 | 11.25     2.25
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            2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
            2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
            2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
            2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
            2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
            2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
            2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
            2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
            3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       1.69 (ii)    5.08 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.22         0.03         0.256 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        107.58
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS   PERVIOUS (i)
     Surface Area     (ha)=       0.49         0.09
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      62.18        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
            0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
            0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
            0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
            0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
            0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
            0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
            0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
            0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
            0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
            0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
            0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
            1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
            1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
            1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
            1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
            1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
            1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
            1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
            1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
            1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
            1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
            1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
            1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
            2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
            2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
            2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
            2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
            2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
            2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
            2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
            2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
            2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
            2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
            2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
            2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
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            3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
               over (min)         5.00         5.00
     Storage Coeff.  (min)=       1.64 (ii)    4.93 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.32         0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.20         0.03         0.234 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        107.82
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20092)|   Area    (ha)=   0.63
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                            IMPERVIOUS   PERVIOUS (i)
     Surface Area     (ha)=       0.51         0.12
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      64.81        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
            0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
            0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
            0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
            0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
            0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
            0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
            0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
            0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
            0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
            0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
            0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
            1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
            1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
            1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
            1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
            1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
            1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
            1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
            1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
            1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
            1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
            1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
            1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
            2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
            2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
            2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
            2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
            2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
            2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
            2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
            2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
            2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
            2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
            2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
            2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
            3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       1.68 (ii)    5.37 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                          *TOTALS*
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     PEAK FLOW       (cms)=       0.21         0.04         0.250 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        106.84
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20091)|   Area    (ha)=   0.40
|ID= 1 DT= 5.0 min |   Total Imp(%)=  77.00   Dir. Conn.(%)=  77.00
--------------------
                            IMPERVIOUS   PERVIOUS (i)
     Surface Area     (ha)=       0.31         0.09
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      51.64        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
            0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
            0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
            0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
            0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
            0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
            0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
            0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
            0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
            0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
            0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
            0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
            1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
            1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
            1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
            1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
            1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
            1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
            1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
            1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
            1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
            1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
            1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
            1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
            2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
            2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
            2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
            2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
            2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
            2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
            2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
            2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
            2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
            2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
            2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
            2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
            3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       1.47 (ii)    5.53 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.16
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.13         0.03         0.157 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        105.86
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
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```
       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB             |
| STANDHYD ( 20102)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                            IMPERVIOUS   PERVIOUS (i)
     Surface Area     (ha)=       0.35         0.12
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      55.98        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
            0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
            0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
            0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
            0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
            0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
            0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
            0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
            0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
            0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
            0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
            0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
            1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
            1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
            1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
            1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
            1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
            1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
            1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
            1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
            1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
            1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
            1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
            1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
            2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
            2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
            2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
            2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
            2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
            2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
            2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
            2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
            2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
            2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
            2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
            2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
            3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
               over (min)         5.00        10.00
     Storage Coeff.  (min)=       1.54 (ii)    5.87 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.14         0.04         0.183 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        105.13
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20101)|   Area    (ha)=   0.25
|ID= 1 DT= 5.0 min |   Total Imp(%)=  82.00   Dir. Conn.(%)=  82.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.20         0.05
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     40.82        40.00
     Mannings n          =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
           0.083    2.81 | 3.083   4.50 | 6.083   20.25 |  9.08    3.94
           0.167    2.81 | 3.167   4.50 | 6.167   20.25 |  9.17    3.94
           0.250    2.81 | 3.250   4.50 | 6.250   20.25 |  9.25    3.94
           0.333    2.81 | 3.333   4.50 | 6.333   20.25 |  9.33    3.94
           0.417    2.81 | 3.417   4.50 | 6.417   20.25 |  9.42    3.94
           0.500    2.81 | 3.500   4.50 | 6.500   20.25 |  9.50    3.94
           0.583    2.81 | 3.583   4.50 | 6.583    9.00 |  9.58    3.94
           0.667    2.81 | 3.667   4.50 | 6.667    9.00 |  9.67    3.94
           0.750    2.81 | 3.750   4.50 | 6.750    9.00 |  9.75    3.94
           0.833    2.81 | 3.833   4.50 | 6.833    9.00 |  9.83    3.94
           0.917    2.81 | 3.917   4.50 | 6.917    9.00 |  9.92    3.94
           1.000    2.81 | 4.000   4.50 | 7.000    9.00 | 10.00    3.94
           1.083    2.81 | 4.083   6.75 | 7.083    6.75 | 10.08    2.25
           1.167    2.81 | 4.167   6.75 | 7.167    6.75 | 10.17    2.25
           1.250    2.81 | 4.250   6.75 | 7.250    6.75 | 10.25    2.25
           1.333    2.81 | 4.333   6.75 | 7.333    6.75 | 10.33    2.25
           1.417    2.81 | 4.417   6.75 | 7.417    6.75 | 10.42    2.25
           1.500    2.81 | 4.500   6.75 | 7.500    6.75 | 10.50    2.25
           1.583    2.81 | 4.583   9.00 | 7.583    6.75 | 10.58    2.25
           1.667    2.81 | 4.667   9.00 | 7.667    6.75 | 10.67    2.25
           1.750    2.81 | 4.750   9.00 | 7.750    6.75 | 10.75    2.25
           1.833    2.81 | 4.833   9.00 | 7.833    6.75 | 10.83    2.25
           1.917    2.81 | 4.917   9.00 | 7.917    6.75 | 10.92    2.25
           2.000    2.81 | 5.000   9.00 | 8.000    6.75 | 11.00    2.25
           2.083    3.37 | 5.083  13.50 | 8.083    3.94 | 11.08    2.25
           2.167    3.37 | 5.167  13.50 | 8.167    3.94 | 11.17    2.25
           2.250    3.37 | 5.250  13.50 | 8.250    3.94 | 11.25    2.25
           2.333    3.37 | 5.333  13.50 | 8.333    3.94 | 11.33    2.25
           2.417    3.37 | 5.417  13.50 | 8.417    3.94 | 11.42    2.25
           2.500    3.37 | 5.500  13.50 | 8.500    3.94 | 11.50    2.25
           2.583    3.37 | 5.583  54.00 | 8.583    3.94 | 11.58    2.25
           2.667    3.37 | 5.667  54.00 | 8.667    3.94 | 11.67    2.25
           2.750    3.37 | 5.750  54.00 | 8.750    3.94 | 11.75    2.25
           2.833    3.37 | 5.833 148.50 | 8.833    3.94 | 11.83    2.25
           2.917    3.37 | 5.917 148.50 | 8.917    3.94 | 11.92    2.25
           3.000    3.37 | 6.000 148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00         5.00
     Storage Coeff.  (min)=       1.27 (ii)    4.87 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.33         0.22
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.08         0.02         0.101 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        107.08
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0121)|
|   1 +  2 =  3    |        AREA    QPEAK    TPEAK    R.V.
--------------------        (ha)    (cms)    (hrs)    (mm)
        ID1= 1 ( 20101):    0.25   0.101     6.00   107.08
      + ID2= 2 ( 20102):    0.47   0.183     6.00   105.13
        ===================================================
        ID = 3 (  0121):    0.72   0.284     6.00   105.81
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     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB              |
| STANDHYD ( 20111)|   Area    (ha)=   0.87
|ID= 1 DT= 5.0 min |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.58         0.29
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     76.16        40.00
     Mannings n          =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
           0.083    2.81 | 3.083   4.50 | 6.083   20.25 |  9.08    3.94
           0.167    2.81 | 3.167   4.50 | 6.167   20.25 |  9.17    3.94
           0.250    2.81 | 3.250   4.50 | 6.250   20.25 |  9.25    3.94
           0.333    2.81 | 3.333   4.50 | 6.333   20.25 |  9.33    3.94
           0.417    2.81 | 3.417   4.50 | 6.417   20.25 |  9.42    3.94
           0.500    2.81 | 3.500   4.50 | 6.500   20.25 |  9.50    3.94
           0.583    2.81 | 3.583   4.50 | 6.583    9.00 |  9.58    3.94
           0.667    2.81 | 3.667   4.50 | 6.667    9.00 |  9.67    3.94
           0.750    2.81 | 3.750   4.50 | 6.750    9.00 |  9.75    3.94
           0.833    2.81 | 3.833   4.50 | 6.833    9.00 |  9.83    3.94
           0.917    2.81 | 3.917   4.50 | 6.917    9.00 |  9.92    3.94
           1.000    2.81 | 4.000   4.50 | 7.000    9.00 | 10.00    3.94
           1.083    2.81 | 4.083   6.75 | 7.083    6.75 | 10.08    2.25
           1.167    2.81 | 4.167   6.75 | 7.167    6.75 | 10.17    2.25
           1.250    2.81 | 4.250   6.75 | 7.250    6.75 | 10.25    2.25
           1.333    2.81 | 4.333   6.75 | 7.333    6.75 | 10.33    2.25
           1.417    2.81 | 4.417   6.75 | 7.417    6.75 | 10.42    2.25
           1.500    2.81 | 4.500   6.75 | 7.500    6.75 | 10.50    2.25
           1.583    2.81 | 4.583   9.00 | 7.583    6.75 | 10.58    2.25
           1.667    2.81 | 4.667   9.00 | 7.667    6.75 | 10.67    2.25
           1.750    2.81 | 4.750   9.00 | 7.750    6.75 | 10.75    2.25
           1.833    2.81 | 4.833   9.00 | 7.833    6.75 | 10.83    2.25
           1.917    2.81 | 4.917   9.00 | 7.917    6.75 | 10.92    2.25
           2.000    2.81 | 5.000   9.00 | 8.000    6.75 | 11.00    2.25
           2.083    3.37 | 5.083  13.50 | 8.083    3.94 | 11.08    2.25
           2.167    3.37 | 5.167  13.50 | 8.167    3.94 | 11.17    2.25
           2.250    3.37 | 5.250  13.50 | 8.250    3.94 | 11.25    2.25
           2.333    3.37 | 5.333  13.50 | 8.333    3.94 | 11.33    2.25
           2.417    3.37 | 5.417  13.50 | 8.417    3.94 | 11.42    2.25
           2.500    3.37 | 5.500  13.50 | 8.500    3.94 | 11.50    2.25
           2.583    3.37 | 5.583  54.00 | 8.583    3.94 | 11.58    2.25
           2.667    3.37 | 5.667  54.00 | 8.667    3.94 | 11.67    2.25
           2.750    3.37 | 5.750  54.00 | 8.750    3.94 | 11.75    2.25
           2.833    3.37 | 5.833 148.50 | 8.833    3.94 | 11.83    2.25
           2.917    3.37 | 5.917 148.50 | 8.917    3.94 | 11.92    2.25
           3.000    3.37 | 6.000 148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.85 (ii)    6.81 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.14
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.24         0.09         0.331 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        103.41
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
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                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.72         0.18
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     77.46        40.00
     Mannings n          =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
           0.083    2.81 | 3.083   4.50 | 6.083   20.25 |  9.08    3.94
           0.167    2.81 | 3.167   4.50 | 6.167   20.25 |  9.17    3.94
           0.250    2.81 | 3.250   4.50 | 6.250   20.25 |  9.25    3.94
           0.333    2.81 | 3.333   4.50 | 6.333   20.25 |  9.33    3.94
           0.417    2.81 | 3.417   4.50 | 6.417   20.25 |  9.42    3.94
           0.500    2.81 | 3.500   4.50 | 6.500   20.25 |  9.50    3.94
           0.583    2.81 | 3.583   4.50 | 6.583    9.00 |  9.58    3.94
           0.667    2.81 | 3.667   4.50 | 6.667    9.00 |  9.67    3.94
           0.750    2.81 | 3.750   4.50 | 6.750    9.00 |  9.75    3.94
           0.833    2.81 | 3.833   4.50 | 6.833    9.00 |  9.83    3.94
           0.917    2.81 | 3.917   4.50 | 6.917    9.00 |  9.92    3.94
           1.000    2.81 | 4.000   4.50 | 7.000    9.00 | 10.00    3.94
           1.083    2.81 | 4.083   6.75 | 7.083    6.75 | 10.08    2.25
           1.167    2.81 | 4.167   6.75 | 7.167    6.75 | 10.17    2.25
           1.250    2.81 | 4.250   6.75 | 7.250    6.75 | 10.25    2.25
           1.333    2.81 | 4.333   6.75 | 7.333    6.75 | 10.33    2.25
           1.417    2.81 | 4.417   6.75 | 7.417    6.75 | 10.42    2.25
           1.500    2.81 | 4.500   6.75 | 7.500    6.75 | 10.50    2.25
           1.583    2.81 | 4.583   9.00 | 7.583    6.75 | 10.58    2.25
           1.667    2.81 | 4.667   9.00 | 7.667    6.75 | 10.67    2.25
           1.750    2.81 | 4.750   9.00 | 7.750    6.75 | 10.75    2.25
           1.833    2.81 | 4.833   9.00 | 7.833    6.75 | 10.83    2.25
           1.917    2.81 | 4.917   9.00 | 7.917    6.75 | 10.92    2.25
           2.000    2.81 | 5.000   9.00 | 8.000    6.75 | 11.00    2.25
           2.083    3.37 | 5.083  13.50 | 8.083    3.94 | 11.08    2.25
           2.167    3.37 | 5.167  13.50 | 8.167    3.94 | 11.17    2.25
           2.250    3.37 | 5.250  13.50 | 8.250    3.94 | 11.25    2.25
           2.333    3.37 | 5.333  13.50 | 8.333    3.94 | 11.33    2.25
           2.417    3.37 | 5.417  13.50 | 8.417    3.94 | 11.42    2.25
           2.500    3.37 | 5.500  13.50 | 8.500    3.94 | 11.50    2.25
           2.583    3.37 | 5.583  54.00 | 8.583    3.94 | 11.58    2.25
           2.667    3.37 | 5.667  54.00 | 8.667    3.94 | 11.67    2.25
           2.750    3.37 | 5.750  54.00 | 8.750    3.94 | 11.75    2.25
           2.833    3.37 | 5.833 148.50 | 8.833    3.94 | 11.83    2.25
           2.917    3.37 | 5.917 148.50 | 8.917    3.94 | 11.92    2.25
           3.000    3.37 | 6.000 148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.87 (ii)    5.65 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.30         0.06         0.356 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        106.60
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.90         0.21
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     86.02        40.00
     Mannings n          =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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                        ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
           0.083    2.81 | 3.083   4.50 | 6.083   20.25 |  9.08    3.94
           0.167    2.81 | 3.167   4.50 | 6.167   20.25 |  9.17    3.94
           0.250    2.81 | 3.250   4.50 | 6.250   20.25 |  9.25    3.94
           0.333    2.81 | 3.333   4.50 | 6.333   20.25 |  9.33    3.94
           0.417    2.81 | 3.417   4.50 | 6.417   20.25 |  9.42    3.94
           0.500    2.81 | 3.500   4.50 | 6.500   20.25 |  9.50    3.94
           0.583    2.81 | 3.583   4.50 | 6.583    9.00 |  9.58    3.94
           0.667    2.81 | 3.667   4.50 | 6.667    9.00 |  9.67    3.94
           0.750    2.81 | 3.750   4.50 | 6.750    9.00 |  9.75    3.94
           0.833    2.81 | 3.833   4.50 | 6.833    9.00 |  9.83    3.94
           0.917    2.81 | 3.917   4.50 | 6.917    9.00 |  9.92    3.94
           1.000    2.81 | 4.000   4.50 | 7.000    9.00 | 10.00    3.94
           1.083    2.81 | 4.083   6.75 | 7.083    6.75 | 10.08    2.25
           1.167    2.81 | 4.167   6.75 | 7.167    6.75 | 10.17    2.25
           1.250    2.81 | 4.250   6.75 | 7.250    6.75 | 10.25    2.25
           1.333    2.81 | 4.333   6.75 | 7.333    6.75 | 10.33    2.25
           1.417    2.81 | 4.417   6.75 | 7.417    6.75 | 10.42    2.25
           1.500    2.81 | 4.500   6.75 | 7.500    6.75 | 10.50    2.25
           1.583    2.81 | 4.583   9.00 | 7.583    6.75 | 10.58    2.25
           1.667    2.81 | 4.667   9.00 | 7.667    6.75 | 10.67    2.25
           1.750    2.81 | 4.750   9.00 | 7.750    6.75 | 10.75    2.25
           1.833    2.81 | 4.833   9.00 | 7.833    6.75 | 10.83    2.25
           1.917    2.81 | 4.917   9.00 | 7.917    6.75 | 10.92    2.25
           2.000    2.81 | 5.000   9.00 | 8.000    6.75 | 11.00    2.25
           2.083    3.37 | 5.083  13.50 | 8.083    3.94 | 11.08    2.25
           2.167    3.37 | 5.167  13.50 | 8.167    3.94 | 11.17    2.25
           2.250    3.37 | 5.250  13.50 | 8.250    3.94 | 11.25    2.25
           2.333    3.37 | 5.333  13.50 | 8.333    3.94 | 11.33    2.25
           2.417    3.37 | 5.417  13.50 | 8.417    3.94 | 11.42    2.25
           2.500    3.37 | 5.500  13.50 | 8.500    3.94 | 11.50    2.25
           2.583    3.37 | 5.583  54.00 | 8.583    3.94 | 11.58    2.25
           2.667    3.37 | 5.667  54.00 | 8.667    3.94 | 11.67    2.25
           2.750    3.37 | 5.750  54.00 | 8.750    3.94 | 11.75    2.25
           2.833    3.37 | 5.833 148.50 | 8.833    3.94 | 11.83    2.25
           2.917    3.37 | 5.917 148.50 | 8.917    3.94 | 11.92    2.25
           3.000    3.37 | 6.000 148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
                over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.99 (ii)    5.68 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.31         0.15
                                                          *TOTALS*
     PEAK FLOW       (cms)=       0.37         0.07         0.440 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00          6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00        106.84
     TOTAL RAINFALL   (mm)=     112.50       112.50        112.50
     RUNOFF COEFFICIENT   =       0.99         0.77          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (  2005)|   Area    (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.25         0.03
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     43.20        40.00
     Mannings n          =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                        ---- TRANSFORMED HYETOGRAPH ----
            TIME    RAIN | TIME    RAIN |' TIME    RAIN |  TIME    RAIN
             hrs   mm/hr |  hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
           0.083    2.81 | 3.083   4.50 | 6.083   20.25 |  9.08    3.94
           0.167    2.81 | 3.167   4.50 | 6.167   20.25 |  9.17    3.94
           0.250    2.81 | 3.250   4.50 | 6.250   20.25 |  9.25    3.94
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                0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
                0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
                0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
                0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
                0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
                0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
                0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
                0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
                1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
                1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
                1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
                1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
                1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
                1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
                1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
                1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
                1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
                1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
                1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
                1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
                2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
                2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
                2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
                2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
                2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
                2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
                2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
                2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
                2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
                2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
                2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
                2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
                3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
               over (min)          5.00          5.00
     Storage Coeff.  (min)=        1.32 (ii)     4.05 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.24
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.10          0.01           0.114 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00            6.00
     RUNOFF VOLUME    (mm)=      111.50         87.00          109.04
     TOTAL RAINFALL   (mm)=      112.50        112.50          112.50
     RUNOFF COEFFICIENT   =        0.99          0.77            0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20121)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62          0.49
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      86.02         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
                0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
                0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
                0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
                0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
                0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
                0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
                0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
                0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
                0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
                0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
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                1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
                1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
                1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
                1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
                1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
                1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
                1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
                1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
                1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
                1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
                1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
                1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
                2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
                2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
                2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
                2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
                2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
                2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
                2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
                2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
                2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
                2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
                2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
                2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
                3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
               over (min)          5.00         10.00
     Storage Coeff.  (min)=        1.99 (ii)     8.88 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.31          0.12
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.26          0.14           0.398 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00            6.00
     RUNOFF VOLUME    (mm)=      111.50         87.00          100.72
     TOTAL RAINFALL   (mm)=      112.50        112.50          112.50
     RUNOFF COEFFICIENT   =        0.99          0.77            0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200111)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.09          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      25.82         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
                0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
                0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
                0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
                0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
                0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
                0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
                0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
                0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
                0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
                0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
                1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
                1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
                1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
                1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
                1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
                1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
                1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
                1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
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                1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
                1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
                1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
                1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
                2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
                2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
                2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
                2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
                2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
                2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
                2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
                2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
                2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
                2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
                2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
                2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
                3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
               over (min)          5.00          5.00
     Storage Coeff.  (min)=        0.97 (ii)     3.76 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.34          0.25
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.04          0.00           0.041 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00            6.00
     RUNOFF VOLUME    (mm)=      111.50         87.00          108.92
     TOTAL RAINFALL   (mm)=      112.50        112.50          112.50
     RUNOFF COEFFICIENT   =        0.99          0.77            0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200121)|   Area    (ha)=   0.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.10          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      27.08         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
                0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
                0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
                0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
                0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
                0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
                0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
                0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
                0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
                0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
                0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
                1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
                1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
                1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
                1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
                1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
                1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
                1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
                1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
                1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
                1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
                1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
                1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
                2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
                2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
                2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
                2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
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                2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
                2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
                2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
                2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
                2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
                2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
                2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
                2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
                3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=      148.50        132.61
               over (min)          5.00          5.00
     Storage Coeff.  (min)=        1.00 (ii)     4.08 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.34          0.24
                                                             *TOTALS*
     PEAK FLOW       (cms)=        0.04          0.01           0.045 (iii)
     TIME TO PEAK    (hrs)=        6.00          6.00            6.00
     RUNOFF VOLUME    (mm)=      111.50         87.00          108.30
     TOTAL RAINFALL   (mm)=      112.50        112.50          112.50
     RUNOFF COEFFICIENT   =        0.99          0.77            0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0142)|
|   1 +  2 =  3    |          AREA    QPEAK    TPEAK     R.V.
--------------------          (ha)    (cms)    (hrs)     (mm)
         ID1= 1 (200111):     0.10   0.041     6.00   108.92
       + ID2= 2 (200121):     0.11   0.045     6.00   108.30
         ===============================================
         ID = 3 (  0142):     0.21   0.085     6.00   108.60

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
-------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0144)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE    |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)    |   (cms)     (ha.m.)
                          0.0000     0.0000    |   0.0830     0.0025

                                 AREA     QPEAK      TPEAK        R.V.
                                 (ha)     (cms)      (hrs)        (mm)
   INFLOW : ID= 2 (  0142)      0.210      0.085       6.00     108.60
   OUTFLOW: ID= 1 (  0144)      0.210      0.081       6.00     108.59

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 94.38
                  TIME SHIFT OF PEAK FLOW         (min)=  0.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0025

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--------------------
| CALIB              |
| STANDHYD (200112)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.08          0.02
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      25.69         40.00
     Mannings n           =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                                ---- TRANSFORMED HYETOGRAPH ----
                 TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                  hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
                0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
                0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
                0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
                0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
                0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
                0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
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         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
         1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
         1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
         1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
         1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
         1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
         1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
         1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
         2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
         2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
         2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
         2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
         2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
         2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
         2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
         2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
         2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
         2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
         2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
         2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
         3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       0.96 (ii)     4.84 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.22
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.03          0.01          0.040 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00         106.33
     TOTAL RAINFALL   (mm)=     112.50        112.50         112.50
     RUNOFF COEFFICIENT  =        0.99          0.77           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (200122)|   Area    (ha)=   0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.11          0.02
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    29.44         40.00
     Mannings n          =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
         0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
         0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
         0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
         0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
         0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
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         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
         1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
         1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
         1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
         1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
         1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
         1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
         1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
         2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
         2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
         2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
         2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
         2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
         2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
         2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
         2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
         2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
         2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
         2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
         2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
         3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.05 (ii)     4.23 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.24
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.05          0.01          0.053 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00         108.06
     TOTAL RAINFALL   (mm)=     112.50        112.50         112.50
     RUNOFF COEFFICIENT  =        0.99          0.77           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0145)|
|  1 + 2 =  3      |          AREA    QPEAK     TPEAK      R.V.
--------------------          (ha)    (cms)     (hrs)      (mm)
       ID1= 1 (200112):       0.10    0.040      6.00    106.33
     + ID2= 2 (200122):       0.13    0.053      6.00    108.06
       ==================================================
       ID = 3 (  0145):       0.23    0.092      6.00    107.31

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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--------------------
| RESERVOIR(  0146)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |      OUTFLOW    STORAGE   |   OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |    (cms)     (ha.m.)
                           0.0000     0.0000   |    0.0910     0.0027

                              AREA     QPEAK      TPEAK       R.V.
                              (ha)     (cms)      (hrs)       (mm)
    INFLOW : ID= 2 (  0145)    0.229      0.092       6.00      107.31
    OUTFLOW: ID= 1 (  0146)    0.229      0.087       6.00      107.31

                 PEAK    FLOW    REDUCTION [Qout/Qin](%)= 94.15
                 TIME SHIFT OF PEAK FLOW          (min)=  0.00
                 MAXIMUM  STORAGE   USED        (ha.m.)=  0.0027

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--------------------
| CALIB              |
| STANDHYD ( 20021)|   Area    (ha)=   0.70
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.62          0.08
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    68.31         40.00
     Mannings n          =     0.013         0.290
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         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
         0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
         0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
         0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
         0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
         0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
         1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
         1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
         1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
         1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
         1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
         1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
         1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
         2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
         2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
         2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
         2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
         2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
         2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
         2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
         2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
         2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
         2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
         2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
         2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
         3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.74 (ii)     4.59 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.32          0.23
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.26          0.03          0.285 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00         108.80
     TOTAL RAINFALL   (mm)=     112.50        112.50         112.50
     RUNOFF COEFFICIENT  =        0.99          0.77           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0147)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |      OUTFLOW    STORAGE   |   OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |    (cms)     (ha.m.)
                           0.0000     0.0000   |    0.2820     0.0040

                              AREA     QPEAK      TPEAK       R.V.
                              (ha)     (cms)      (hrs)       (mm)
    INFLOW : ID= 2 ( 20021)    0.700      0.285       6.00      108.80
    OUTFLOW: ID= 1 (  0147)    0.700      0.283       6.00      108.80

                 PEAK    FLOW    REDUCTION [Qout/Qin](%)= 99.58
                 TIME SHIFT OF PEAK FLOW          (min)=  0.00
                 MAXIMUM  STORAGE   USED        (ha.m.)=  0.0040

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| CALIB              |
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| STANDHYD ( 20031)|   Area    (ha)=   0.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=     0.39          0.04
     Dep. Storage     (mm)=     1.00          1.00
     Average Slope     (%)=     1.00          2.00
     Length            (m)=    53.54         40.00
     Mannings n          =     0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                             ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
         0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
         0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
         0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
         0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
         0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
         1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
         1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
         1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
         1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
         1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
         1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
         1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
         2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
         2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
         2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
         2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
         2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
         2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
         2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
         2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
         2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
         2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
         2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
         2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
         3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.50 (ii)     4.23 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.24
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.16          0.02          0.175 (iii)
     TIME TO PEAK    (hrs)=       6.00          6.00           6.00
     RUNOFF VOLUME    (mm)=     111.50         87.00         109.05
     TOTAL RAINFALL   (mm)=     112.50        112.50         112.50
     RUNOFF COEFFICIENT  =        0.99          0.77           0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0149)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |      OUTFLOW    STORAGE   |   OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |    (cms)     (ha.m.)
                           0.0000     0.0000   |    0.1420     0.0094

                              AREA     QPEAK      TPEAK       R.V.
                              (ha)     (cms)      (hrs)       (mm)
    INFLOW : ID= 2 ( 20031)    0.430      0.175       6.00      109.05
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   OUTFLOW: ID= 1 ( 0149)      0.430      0.133      6.00      109.02

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 75.92
                  TIME SHIFT OF PEAK FLOW        (min)=  0.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0094

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--------------------
| CALIB              |
| STANDHYD ( 20032)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.41          0.06
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
               0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
               0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
               0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
               0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
               0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
               0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
               0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
               0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
               0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
               0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
               1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
               1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
               1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
               1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
               1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
               1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
               1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
               1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
               1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
               1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
               1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
               1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
               2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
               2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
               2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
               2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
               2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
               2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
               2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
               2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
               2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
               2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
               2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
               2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
               3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.54 (ii)     4.62 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.22
                                                              *TOTALS*
     PEAK FLOW        (cms)=       0.17          0.02           0.191 (iii)
     TIME TO PEAK     (hrs)=       6.00          6.00            6.00
     RUNOFF VOLUME     (mm)=     111.50         87.00          108.31
     TOTAL RAINFALL    (mm)=     112.50        112.50          112.50
     RUNOFF COEFFICIENT   =        0.99          0.77            0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| RESERVOIR( 0150)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000    |  0.1540      0.0102

                             AREA     QPEAK      TPEAK        R.V.
                             (ha)     (cms)      (hrs)        (mm)
   INFLOW : ID= 2 ( 20032)   0.470     0.191      6.00      108.31
   OUTFLOW: ID= 1 ( 0150)    0.470     0.144      6.00      108.28

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 75.58
                  TIME SHIFT OF PEAK FLOW        (min)=  0.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0102

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--------------------
| CALIB              |
| STANDHYD ( 20041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.31          0.04
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     48.30         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
               0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
               0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
               0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
               0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
               0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
               0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
               0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
               0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
               0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
               0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
               1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
               1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
               1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
               1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
               1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
               1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
               1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
               1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
               1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
               1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
               1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
               1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
               2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
               2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
               2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
               2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
               2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
               2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
               2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
               2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
               2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
               2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
               2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
               2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
               3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.41 (ii)     4.26 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.23
                                                              *TOTALS*
     PEAK FLOW        (cms)=       0.13          0.01           0.142 (iii)
     TIME TO PEAK     (hrs)=       6.00          6.00            6.00
     RUNOFF VOLUME     (mm)=     111.50         87.00          108.80
     TOTAL RAINFALL    (mm)=     112.50        112.50          112.50
     RUNOFF COEFFICIENT   =        0.99          0.77            0.97

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
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```
        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 0151)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000    |  0.1350      0.0051

                             AREA     QPEAK      TPEAK        R.V.
                             (ha)     (cms)      (hrs)        (mm)
   INFLOW : ID= 2 ( 20041)   0.350     0.142      6.00      108.80
   OUTFLOW: ID= 1 ( 0151)    0.350     0.128      6.00      108.79

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 90.12
                  TIME SHIFT OF PEAK FLOW        (min)=  0.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0051

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--------------------
| CALIB              |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.55          0.10
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     65.83         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
               0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
               0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
               0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
               0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
               0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
               0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
               0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
               0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
               0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
               0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
               1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
               1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
               1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
               1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
               1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
               1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
               1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
               1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
               1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
               1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
               1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
               1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
               2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
               2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
               2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
               2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
               2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
               2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
               2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
               2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
               2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
               2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
               2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
               2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
               3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50        132.61
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.70 (ii)     4.99 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
```

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     Unit Hyd. peak  (cms)=        0.32          0.22
                                                              *TOTALS*
     PEAK FLOW        (cms)=       0.23          0.03           0.263 (iii)
     TIME TO PEAK     (hrs)=       6.00          6.00            6.00
     RUNOFF VOLUME     (mm)=     111.50         87.00          107.82
     TOTAL RAINFALL    (mm)=     112.50        112.50          112.50
     RUNOFF COEFFICIENT   =        0.99          0.77            0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 0154)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000    |  0.2410      0.0099

                             AREA     QPEAK      TPEAK        R.V.
                             (ha)     (cms)      (hrs)        (mm)
   INFLOW : ID= 2 ( 20061)   0.650     0.263      6.00      107.82
   OUTFLOW: ID= 1 ( 0154)    0.650     0.230      6.00      107.81

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 87.65
                  TIME SHIFT OF PEAK FLOW        (min)=  0.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0099

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--------------------
| CALIB              |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.58          0.15
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     69.76         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
               0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
               0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
               0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
               0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
               0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
               0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
               0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
               0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
               0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
               0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
               1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
               1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
               1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
               1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
               1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
               1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
               1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
               1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
               1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
               1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
               1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
               1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
               2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
               2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
               2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
               2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
               2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
               2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
               2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
               2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
               2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
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              2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
              2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
              2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
              3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
               over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.76 (ii)    5.54 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.32         0.16
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.24         0.05       0.289 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00        6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00      106.60
     TOTAL RAINFALL   (mm)=     112.50       112.50      112.50
     RUNOFF COEFFICIENT   =       0.99         0.77        0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR(  0155)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.2430     0.0135

                              AREA     QPEAK      TPEAK        R.V.
                              (ha)     (cms)      (hrs)        (mm)
   INFLOW : ID= 2 ( 20062)    0.730      0.289       6.00      106.60
   OUTFLOW: ID= 1 (  0155)    0.730      0.227       6.00      106.59

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 78.52
                  TIME SHIFT OF PEAK FLOW        (min)=  0.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0135

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--------------------
| CALIB            |
| STANDHYD (200812)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  70.00   Dir. Conn.(%)=  70.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.27         0.11
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      50.33        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
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             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
               over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.44 (ii)    6.14 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.15
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.11         0.04       0.147 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00        6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00      104.14
     TOTAL RAINFALL   (mm)=     112.50       112.50      112.50
     RUNOFF COEFFICIENT   =       0.99         0.77        0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200811)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.06         0.01
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      21.60        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
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             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
               over (min)        5.00         5.00
     Storage Coeff.  (min)=       0.87 (ii)    4.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00         5.00
     Unit Hyd. peak  (cms)=       0.34         0.23
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.02         0.00       0.028 (iii)
     TIME TO PEAK    (hrs)=       5.92         6.00        6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00      107.57
     TOTAL RAINFALL   (mm)=     112.50       112.50      112.50
     RUNOFF COEFFICIENT   =       0.99         0.77        0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0110)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK      R.V.
--------------------         (ha)    (cms)    (hrs)      (mm)
       ID1= 1 (200811):      0.07    0.028     6.00    107.57
     + ID2= 2 (200812):      0.38    0.147     6.00    104.14
       ===================================================
       ID = 3 (  0110):      0.45    0.175     6.00    104.68

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0158)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.0750     0.0162

                              AREA     QPEAK      TPEAK        R.V.
                              (ha)     (cms)      (hrs)        (mm)
   INFLOW : ID= 2 (  0110)    0.450      0.175       6.00      104.68
   OUTFLOW: ID= 1 (  0158)    0.450      0.074       6.08      104.57

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 42.25
                  TIME SHIFT OF PEAK FLOW        (min)=  5.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0162

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--------------------
| CALIB            |
| STANDHYD (200822)|   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.23         0.16
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      50.99        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
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             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
             1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
             1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
             1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
             1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
             1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
             2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
             2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
             2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
             2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
             2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
             2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
             2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
             2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
             2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
             2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
             2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
             2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
             3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

     Max.Eff.Inten.(mm/hr)=     148.50       132.61
               over (min)        5.00        10.00
     Storage Coeff.  (min)=       1.46 (ii)    8.35 (ii)
     Unit Hyd. Tpeak (min)=       5.00        10.00
     Unit Hyd. peak  (cms)=       0.33         0.12
                                                        *TOTALS*
     PEAK FLOW       (cms)=       0.09         0.05       0.142 (iii)
     TIME TO PEAK    (hrs)=       6.00         6.00        6.00
     RUNOFF VOLUME    (mm)=     111.50        87.00      101.44
     TOTAL RAINFALL   (mm)=     112.50       112.50      112.50
     RUNOFF COEFFICIENT   =       0.99         0.77        0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB            |
| STANDHYD (200821)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00   Dir. Conn.(%)=  83.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.06         0.01
     Dep. Storage     (mm)=       1.00         1.00
     Average Slope     (%)=       1.00         2.00
     Length            (m)=      21.60        40.00
     Mannings n           =      0.013        0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
              TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
               hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
             0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
             0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
             0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
             0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
             0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
             0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
             0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
             0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
             0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
             0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
             0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
             1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
             1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
             1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
             1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
             1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
             1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
             1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
```

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        1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
        1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
        1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
        1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
        1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
        2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
        2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
        2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
        2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
        2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
        2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
        2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
        2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
        2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
        2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
        2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
        2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
        3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

   Max.Eff.Inten.(mm/hr)=     148.50        132.61
              over (min)          5.00          5.00
   Storage Coeff.  (min)=         0.87 (ii)     4.36 (ii)
   Unit Hyd. Tpeak (min)=         5.00          5.00
   Unit Hyd. peak  (cms)=         0.34          0.23
                                                          *TOTALS*
   PEAK FLOW       (cms)=         0.02          0.00        0.028 (iii)
   TIME TO PEAK    (hrs)=         5.92          6.00        6.00
   RUNOFF VOLUME    (mm)=       111.50         87.00      107.32
   TOTAL RAINFALL   (mm)=       112.50        112.50      112.50
   RUNOFF COEFFICIENT   =         0.99          0.77        0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0111)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (200821):      0.07    0.028     6.00   107.32
     + ID2= 2 (200822):      0.39    0.142     6.00   101.44
       ==================================================
       ID = 3 (  0111):      0.46    0.171     6.00   102.34

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| RESERVOIR( 0159)|      OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |      OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000    |   0.0850     0.0141

                             AREA      QPEAK      TPEAK       R.V.
                             (ha)      (cms)      (hrs)       (mm)
 INFLOW : ID= 2 (  0111)     0.460      0.171       6.00      102.34
 OUTFLOW: ID= 1 (  0159)     0.460      0.083       6.08      102.26

              PEAK   FLOW   REDUCTION [Qout/Qin](%)= 48.79
              TIME SHIFT OF PEAK FLOW         (min)=  5.00
              MAXIMUM  STORAGE   USED        (ha.m.)=  0.0141

------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
   Surface Area     (ha)=      0.40          0.07
   Dep. Storage     (mm)=      1.00          1.00
   Average Slope     (%)=      1.00          2.00
   Length            (m)=     55.98         40.00
   Mannings n           =     0.013         0.290

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
```

```
                         ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
         0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
         0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
         0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
         0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
         0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
         1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
         1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
         1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
         1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
         1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
         1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
         1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
         2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
         2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
         2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
         2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
         2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
         2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
         2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
         2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
         2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
         2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
         2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
         2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
         3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

   Max.Eff.Inten.(mm/hr)=     148.50        132.61
              over (min)          5.00          5.00
   Storage Coeff.  (min)=         1.54 (ii)     4.83 (ii)
   Unit Hyd. Tpeak (min)=         5.00          5.00
   Unit Hyd. peak  (cms)=         0.33          0.22
                                                          *TOTALS*
   PEAK FLOW       (cms)=         0.16          0.03        0.190 (iii)
   TIME TO PEAK    (hrs)=         6.00          6.00        6.00
   RUNOFF VOLUME    (mm)=       111.50         87.00      107.82
   TOTAL RAINFALL   (mm)=       112.50        112.50      112.50
   RUNOFF COEFFICIENT   =         0.99          0.77        0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                           IMPERVIOUS    PERVIOUS (i)
   Surface Area     (ha)=      0.40          0.07
   Dep. Storage     (mm)=      1.00          1.00
   Average Slope     (%)=      1.00          2.00
   Length            (m)=     55.98         40.00
   Mannings n           =     0.013         0.290

       NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                         ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    2.81 | 3.083    4.50 | 6.083   20.25 |  9.08    3.94
         0.167    2.81 | 3.167    4.50 | 6.167   20.25 |  9.17    3.94
         0.250    2.81 | 3.250    4.50 | 6.250   20.25 |  9.25    3.94
         0.333    2.81 | 3.333    4.50 | 6.333   20.25 |  9.33    3.94
         0.417    2.81 | 3.417    4.50 | 6.417   20.25 |  9.42    3.94
```

```
         0.500    2.81 | 3.500    4.50 | 6.500   20.25 |  9.50    3.94
         0.583    2.81 | 3.583    4.50 | 6.583    9.00 |  9.58    3.94
         0.667    2.81 | 3.667    4.50 | 6.667    9.00 |  9.67    3.94
         0.750    2.81 | 3.750    4.50 | 6.750    9.00 |  9.75    3.94
         0.833    2.81 | 3.833    4.50 | 6.833    9.00 |  9.83    3.94
         0.917    2.81 | 3.917    4.50 | 6.917    9.00 |  9.92    3.94
         1.000    2.81 | 4.000    4.50 | 7.000    9.00 | 10.00    3.94
         1.083    2.81 | 4.083    6.75 | 7.083    6.75 | 10.08    2.25
         1.167    2.81 | 4.167    6.75 | 7.167    6.75 | 10.17    2.25
         1.250    2.81 | 4.250    6.75 | 7.250    6.75 | 10.25    2.25
         1.333    2.81 | 4.333    6.75 | 7.333    6.75 | 10.33    2.25
         1.417    2.81 | 4.417    6.75 | 7.417    6.75 | 10.42    2.25
         1.500    2.81 | 4.500    6.75 | 7.500    6.75 | 10.50    2.25
         1.583    2.81 | 4.583    9.00 | 7.583    6.75 | 10.58    2.25
         1.667    2.81 | 4.667    9.00 | 7.667    6.75 | 10.67    2.25
         1.750    2.81 | 4.750    9.00 | 7.750    6.75 | 10.75    2.25
         1.833    2.81 | 4.833    9.00 | 7.833    6.75 | 10.83    2.25
         1.917    2.81 | 4.917    9.00 | 7.917    6.75 | 10.92    2.25
         2.000    2.81 | 5.000    9.00 | 8.000    6.75 | 11.00    2.25
         2.083    3.37 | 5.083   13.50 | 8.083    3.94 | 11.08    2.25
         2.167    3.37 | 5.167   13.50 | 8.167    3.94 | 11.17    2.25
         2.250    3.37 | 5.250   13.50 | 8.250    3.94 | 11.25    2.25
         2.333    3.37 | 5.333   13.50 | 8.333    3.94 | 11.33    2.25
         2.417    3.37 | 5.417   13.50 | 8.417    3.94 | 11.42    2.25
         2.500    3.37 | 5.500   13.50 | 8.500    3.94 | 11.50    2.25
         2.583    3.37 | 5.583   54.00 | 8.583    3.94 | 11.58    2.25
         2.667    3.37 | 5.667   54.00 | 8.667    3.94 | 11.67    2.25
         2.750    3.37 | 5.750   54.00 | 8.750    3.94 | 11.75    2.25
         2.833    3.37 | 5.833  148.50 | 8.833    3.94 | 11.83    2.25
         2.917    3.37 | 5.917  148.50 | 8.917    3.94 | 11.92    2.25
         3.000    3.37 | 6.000  148.50 | 9.000    3.94 | 12.00    2.25

   Max.Eff.Inten.(mm/hr)=     148.50        132.61
              over (min)          5.00          5.00
   Storage Coeff.  (min)=         1.54 (ii)     4.83 (ii)
   Unit Hyd. Tpeak (min)=         5.00          5.00
   Unit Hyd. peak  (cms)=         0.33          0.22
                                                          *TOTALS*
   PEAK FLOW       (cms)=         0.16          0.03        0.190 (iii)
   TIME TO PEAK    (hrs)=         6.00          6.00        6.00
   RUNOFF VOLUME    (mm)=       111.50         87.00      107.82
   TOTAL RAINFALL   (mm)=       112.50        112.50      112.50
   RUNOFF COEFFICIENT   =         0.99          0.77        0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
          CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
          THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0136)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
       ID1= 1 (201021):      0.47    0.190     6.00   107.82
     + ID2= 2 (201022):      0.47    0.190     6.00   107.82
       ==================================================
       ID = 3 (  0136):      0.94    0.380     6.00   107.82

   NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| RESERVOIR( 0163)|      OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |      OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000    |   0.3400     0.0159

                             AREA      QPEAK      TPEAK       R.V.
                             (ha)      (cms)      (hrs)       (mm)
 INFLOW : ID= 2 (  0136)     0.940      0.380       6.00      107.82
 OUTFLOW: ID= 1 (  0163)     0.940      0.322       6.00      107.81

              PEAK   FLOW   REDUCTION [Qout/Qin](%)= 84.82
              TIME SHIFT OF PEAK FLOW         (min)=  0.00
              MAXIMUM  STORAGE   USED        (ha.m.)=  0.0159

------------------------------------------------------------------------------

FINISH
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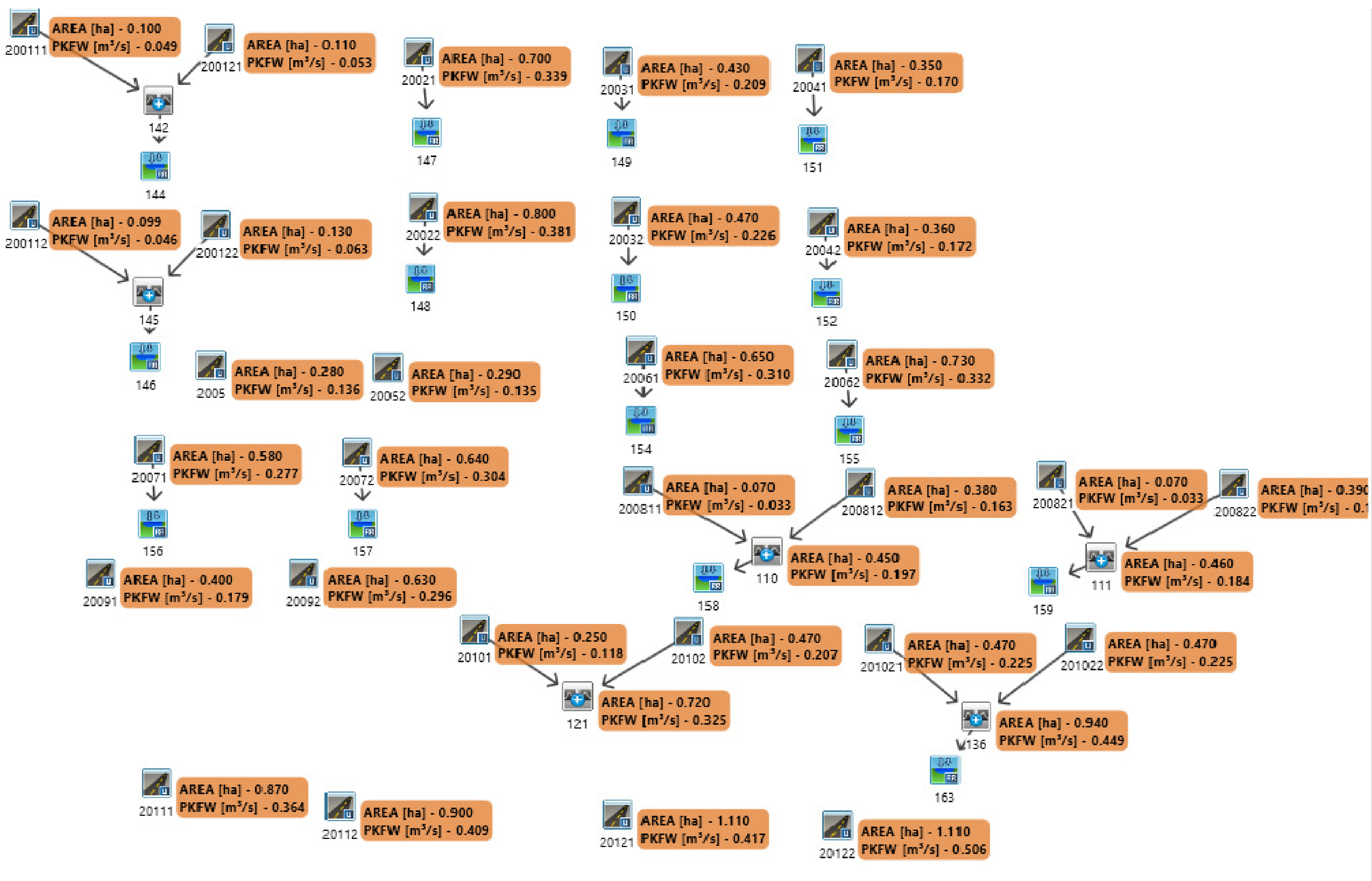
100-Yr Post-Development Required Storage Volume Roadway Drainage Areas (4 -hr Chicago Storm)



```
=============================================================================================

     V    V   I    SSSSS  U    U    A     L              (v 6.1.2002)
     V    V   I    SS     U    U   A A    L
      V  V    I      SS   U    U  AAAAA   L
      V  V    I       SS  U    U  A    A  L
       VV     I    SSSSS  UUUUU   A    A  LLLLL

      OOO    TTTTT  TTTTT  H    H   Y    Y  M    M   OOO     TM
     O   O     T      T    H    H    Y Y    MM MM   O   O
     O   O     T      T    H    H     Y     M    M  O   O
      OOO      T      T    H    H     Y     M    M   OOO
Developed and Distributed by Smart City Water Inc
```



```
                   ***** D E T A I L E D   O U T P U T *****

  Input   filename: C:\Program Files (x86)\Visual OTTHYMO 6.1\VO2\voin.dat
  Output  filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\8c053552
  Summary filename: C:\Users\caef070146\AppData\Local\Civica\VH5\50564c49-8c07-4086-8157-8729fb3caba3\8c053552

DATE: 05-18-2022                          TIME: 01:00:02

USER:

COMMENTS: ____________________________________________________________

-------------------------------------------------------------------------------------------------
  **********************************************
  ** SIMULATION : Run 06                      **
  **********************************************

--------------------
|    READ STORM      |    Filename: C:\Users\caef070146\AppD
|                    |              ata\Local\Temp\
|                    |              a1f7ca31-3d46-4039-a87f-5fd84ced39d0\4c83eb39
| Ptotal= 87.58 mm   |    Comments: 100-year, 4 hr-Chicago, City of Barrie
--------------------
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
             0.17    6.41 |  1.17   45.22 |  2.17   14.50 |  3.17    7.56
             0.33    7.29 |  1.33  180.15 |  2.33   12.44 |  3.33    7.04
             0.50    8.52 |  1.50   58.54 |  2.50   10.94 |  3.50    6.60
             0.67   10.36 |  1.67   31.96 |  2.67    9.80 |  3.67    6.22
             0.83   13.45 |  1.83   22.45 |  2.83    8.90 |  3.83    5.89
             1.00   19.96 |  2.00   17.52 |  3.00    8.16 |  4.00    5.59

-------------------------------------------------------------------------

--------------------
| CALIB              |
| STANDHYD ( 20052)  |   Area     (ha)=   0.29
|ID= 1 DT= 5.0 min   |   Total Imp(%)=  78.00   Dir. Conn.(%)=  78.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.23          0.06
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     43.97         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
            0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
            0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
            0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
            0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
            0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
            0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
            0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
            0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
            0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
            0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
            1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.23 (ii)     4.91 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.22
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.11          0.02          0.135 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         81.50
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT  =        0.99          0.73          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20092)  |   Area     (ha)=   0.63
|ID= 1 DT= 5.0 min   |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.51          0.12
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     64.81         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
            0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
            0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
            0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
            0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
            0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
            0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
            0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
            0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
            0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
            0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
            1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.56 (ii)     4.97 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.22
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.26          0.04          0.296 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         82.19
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT  =        0.99          0.73          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD ( 20091)  |   Area     (ha)=   0.40
|ID= 1 DT= 5.0 min   |   Total Imp(%)=  77.00   Dir. Conn.(%)=  77.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.31          0.09
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     51.64         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
            0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
            0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
            0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
            0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
            0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
            0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
            0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
            0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
            0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
            0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
            1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.36 (ii)     5.12 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.15          0.03          0.179 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         81.27
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT  =        0.99          0.73          0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20102)  |   Area     (ha)=   0.47
|ID= 1 DT= 5.0 min   |   Total Imp(%)=  74.00   Dir. Conn.(%)=  74.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.35          0.12
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
            0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
            0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
            0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
            0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
            0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
            0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
            0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
            0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
            0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
            0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
            1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.43 (ii)     5.44 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.17          0.04          0.207 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         80.58
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT  =        0.99          0.73          0.92

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20101)  |   Area     (ha)=   0.25
|ID= 1 DT= 5.0 min   |   Total Imp(%)=  82.00   Dir. Conn.(%)=  82.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.20          0.05
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     40.82         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.

                            ---- TRANSFORMED HYETOGRAPH ----
             TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
              hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
            0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
            0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
            0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
            0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
            0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
            0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
            0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
            0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
            0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
            0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
            0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
            1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.18 (ii)     4.50 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.23
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.10          0.02          0.118 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54         82.42
     TOTAL RAINFALL   (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT  =        0.99          0.73          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

      (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  89.0    Ia = Dep. Storage  (Above)
     (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
    (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| ADD HYD  (  0121)|
|   1 + 2 =  3     |          AREA    QPEAK    TPEAK      R.V.
--------------------          (ha)    (cms)    (hrs)      (mm)
        ID1= 1 ( 20101):      0.25    0.118     1.33     82.42
      + ID2= 2 ( 20102):      0.47    0.207     1.33     80.58
        ===============================================
        ID = 3 (  0121):      0.72    0.325     1.33     81.22

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
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| CALIB              |
| STANDHYD ( 20111)  |   Area     (ha)=   0.87
|ID= 1 DT= 5.0 min   |   Total Imp(%)=  67.00   Dir. Conn.(%)=  67.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.58          0.29
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     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      76.16         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.71 (ii)     6.31 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.15
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.29          0.08          0.364 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54          78.97
     TOTAL RAINFALL   (mm)=      87.58         87.58          87.58
     RUNOFF COEFFICIENT   =       0.99          0.73           0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =   89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20112)|   Area    (ha)=   0.90
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.72          0.18
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      77.46         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.73 (ii)     5.23 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.36          0.05          0.409 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54          81.97
     TOTAL RAINFALL   (mm)=      87.58         87.58          87.58
     RUNOFF COEFFICIENT   =       0.99          0.73           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =   89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD ( 20122)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  81.00   Dir. Conn.(%)=  81.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.90          0.21
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      86.02         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.84 (ii)     5.26 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.45          0.06          0.506 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54          82.20
     TOTAL RAINFALL   (mm)=      87.58         87.58          87.58
     RUNOFF COEFFICIENT   =       0.99          0.73           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =   89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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| CALIB              |
| STANDHYD (  2005)|   Area    (ha)=   0.28
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.25          0.03
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      43.20         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.22 (ii)     3.75 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.25
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.13          0.01          0.136 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54          84.27
     TOTAL RAINFALL   (mm)=      87.58         87.58          87.58
     RUNOFF COEFFICIENT   =       0.99          0.73           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =   89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB              |
| STANDHYD ( 20121)|   Area    (ha)=   1.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  56.00   Dir. Conn.(%)=  56.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.62          0.49
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      86.02         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.84 (ii)     8.70 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.12
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.31          0.12          0.417 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54          76.44
     TOTAL RAINFALL   (mm)=      87.58         87.58          87.58
     RUNOFF COEFFICIENT   =       0.99          0.73           0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =   89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200121)|   Area    (ha)=   0.11
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.10          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      27.08         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       0.92 (ii)     3.77 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.25
                                                           *TOTALS*
     PEAK FLOW       (cms)=       0.05          0.01          0.053 (iii)
     TIME TO PEAK    (hrs)=       1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=      86.58         63.54          83.56
     TOTAL RAINFALL   (mm)=      87.58         87.58          87.58
     RUNOFF COEFFICIENT   =       0.99          0.73           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =   89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB              |
| STANDHYD (200111)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.50   Dir. Conn.(%)=  89.50
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.09          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      25.82         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59
```

```
     Max.Eff.Inten.(mm/hr)=     180.15       134.19
               over (min)        5.00          5.00
     Storage Coeff.  (min)=      0.90 (ii)     3.48 (ii)
     Unit Hyd. Tpeak (min)=      5.00          5.00
     Unit Hyd. peak  (cms)=      0.34          0.26
                                                           *TOTALS*
     PEAK FLOW       (cms)=      0.04          0.00          0.049 (iii)
     TIME TO PEAK    (hrs)=      1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=     86.58         63.54          84.14
     TOTAL RAINFALL   (mm)=     87.58         87.58          87.58
     RUNOFF COEFFICIENT   =      0.99          0.73           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0142)|
|   1 +  2 =  3    |          AREA    QPEAK     TPEAK      R.V.
--------------------          (ha)    (cms)     (hrs)      (mm)
       ID1= 1 (200111):       0.10    0.049      1.33      84.14
     + ID2= 2 (200121):       0.11    0.053      1.33      83.56
       ==================================================
       ID = 3 (  0142):       0.21    0.102      1.33      83.84

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0144)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |  0.0980      0.0025

                                 AREA      QPEAK      TPEAK        R.V.
                                 (ha)      (cms)      (hrs)        (mm)
   INFLOW : ID= 2 (  0142)      0.210      0.102       1.33       83.84
   OUTFLOW: ID= 1 (  0144)      0.210      0.088       1.33       83.83

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 86.25
                   TIME SHIFT OF PEAK FLOW         (min)=  0.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0025

------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (200122)|   Area    (ha)=   0.13
|ID= 1 DT= 5.0 min |   Total Imp(%)=  86.00   Dir. Conn.(%)=  86.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.11         0.02
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     29.44        40.00
     Mannings n           =     0.013        0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15       134.19
               over (min)        5.00          5.00
     Storage Coeff.  (min)=      0.97 (ii)     3.92 (ii)
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     Unit Hyd. Tpeak (min)=      5.00          5.00
     Unit Hyd. peak  (cms)=      0.34          0.24
                                                           *TOTALS*
     PEAK FLOW       (cms)=      0.06          0.01          0.063 (iii)
     TIME TO PEAK    (hrs)=      1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=     86.58         63.54          83.33
     TOTAL RAINFALL   (mm)=     87.58         87.58          87.58
     RUNOFF COEFFICIENT   =      0.99          0.73           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| CALIB            |
| STANDHYD (200112)|   Area    (ha)=   0.10
|ID= 1 DT= 5.0 min |   Total Imp(%)=  79.00   Dir. Conn.(%)=  79.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.08         0.02
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     25.69        40.00
     Mannings n           =     0.013        0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15       134.19
               over (min)        5.00          5.00
     Storage Coeff.  (min)=      0.89 (ii)     4.48 (ii)
     Unit Hyd. Tpeak (min)=      5.00          5.00
     Unit Hyd. peak  (cms)=      0.34          0.23
                                                           *TOTALS*
     PEAK FLOW       (cms)=      0.04          0.01          0.046 (iii)
     TIME TO PEAK    (hrs)=      1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=     86.58         63.54          81.73
     TOTAL RAINFALL   (mm)=     87.58         87.58          87.58
     RUNOFF COEFFICIENT   =      0.99          0.73           0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0145)|
|   1 +  2 =  3    |          AREA    QPEAK     TPEAK      R.V.
--------------------          (ha)    (cms)     (hrs)      (mm)
       ID1= 1 (200112):       0.10    0.046      1.33      81.73
     + ID2= 2 (200122):       0.13    0.063      1.33      83.33
       ==================================================
       ID = 3 (  0145):       0.23    0.109      1.33      82.63

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0146)|     OVERFLOW IS OFF
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```
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |  0.1070      0.0024

                                 AREA      QPEAK      TPEAK        R.V.
                                 (ha)      (cms)      (hrs)        (mm)
   INFLOW : ID= 2 (  0145)      0.229      0.109       1.33       82.63
   OUTFLOW: ID= 1 (  0146)      0.229      0.097       1.33       82.63

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 89.01
                   TIME SHIFT OF PEAK FLOW         (min)=  0.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0024

------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20021)|   Area    (ha)=   0.70
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.62         0.08
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     68.31        40.00
     Mannings n           =     0.013        0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15       134.19
               over (min)        5.00          5.00
     Storage Coeff.  (min)=      1.61 (ii)     4.25 (ii)
     Unit Hyd. Tpeak (min)=      5.00          5.00
     Unit Hyd. peak  (cms)=      0.32          0.24
                                                           *TOTALS*
     PEAK FLOW       (cms)=      0.31          0.03          0.339 (iii)
     TIME TO PEAK    (hrs)=      1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=     86.58         63.54          84.04
     TOTAL RAINFALL   (mm)=     87.58         87.58          87.58
     RUNOFF COEFFICIENT   =      0.99          0.73           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0147)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |  0.3660      0.0083

                                 AREA      QPEAK      TPEAK        R.V.
                                 (ha)      (cms)      (hrs)        (mm)
   INFLOW : ID= 2 ( 20021)      0.700      0.339       1.33       84.04
   OUTFLOW: ID= 1 (  0147)      0.700      0.299       1.33       84.04

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 88.14
                   TIME SHIFT OF PEAK FLOW         (min)=  0.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0074

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--------------------
| CALIB            |
| STANDHYD ( 20022)|   Area    (ha)=   0.80
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.68         0.12
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     73.03        40.00
     Mannings n           =     0.013        0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
               TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
              0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
              0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
              0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
              0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
              0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
              0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
              0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
              0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
              0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
              0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
              0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
              1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15       134.19
               over (min)        5.00          5.00
     Storage Coeff.  (min)=      1.67 (ii)     4.72 (ii)
     Unit Hyd. Tpeak (min)=      5.00          5.00
     Unit Hyd. peak  (cms)=      0.32          0.22
                                                           *TOTALS*
     PEAK FLOW       (cms)=      0.34          0.04          0.381 (iii)
     TIME TO PEAK    (hrs)=      1.33          1.33           1.33
     RUNOFF VOLUME    (mm)=     86.58         63.54          83.12
     TOTAL RAINFALL   (mm)=     87.58         87.58          87.58
     RUNOFF COEFFICIENT   =      0.99          0.73           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
             CN*  =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
             THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0148)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |  0.3660      0.0084

                                 AREA      QPEAK      TPEAK        R.V.
                                 (ha)      (cms)      (hrs)        (mm)
   INFLOW : ID= 2 ( 20022)      0.800      0.381       1.33       83.12
   OUTFLOW: ID= 1 (  0148)      0.800      0.333       1.33       83.12

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 87.23
                   TIME SHIFT OF PEAK FLOW         (min)=  0.00
                   MAXIMUM  STORAGE   USED       (ha.m.)=  0.0084

------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20031)|   Area    (ha)=   0.43
|ID= 1 DT= 5.0 min |   Total Imp(%)=  90.00   Dir. Conn.(%)=  90.00
--------------------
                             IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.39         0.04
     Dep. Storage     (mm)=      1.00         1.00
     Average Slope     (%)=      1.00         2.00
     Length            (m)=     53.54        40.00
     Mannings n           =     0.013        0.290

          NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.
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```
                        ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
         0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
         0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
         0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
         0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
         0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
         0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
         0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
         0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
         0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
         0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
         1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

    Max.Eff.Inten.(mm/hr)=     180.15        134.19
               over (min)       5.00          5.00
    Storage Coeff.  (min)=      1.39 (ii)     3.92 (ii)
    Unit Hyd. Tpeak (min)=      5.00          5.00
    Unit Hyd. peak  (cms)=      0.33          0.24
                                                          *TOTALS*
    PEAK FLOW       (cms)=      0.19          0.02          0.209 (iii)
    TIME TO PEAK    (hrs)=      1.33          1.33           1.33
    RUNOFF VOLUME    (mm)=     86.58         63.54          84.27
    TOTAL RAINFALL   (mm)=     87.58         87.58          87.58
    RUNOFF COEFFICIENT   =      0.99          0.73           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------
--------------------
| RESERVOIR( 0149)|      OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min    |      OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |  0.1590      0.0080

                               AREA      QPEAK       TPEAK        R.V.
                               (ha)      (cms)       (hrs)        (mm)
  INFLOW : ID= 2 ( 20031)      0.430      0.209       1.33        84.27
  OUTFLOW: ID= 1 (  0149)      0.430      0.139       1.42        84.25

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)= 66.51
                 TIME SHIFT OF PEAK FLOW          (min)=  5.00
                 MAXIMUM  STORAGE   USED        (ha.m.)=  0.0080

--------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20032)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  87.00   Dir. Conn.(%)=  87.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=     0.41          0.06
    Dep. Storage     (mm)=     1.00          1.00
    Average Slope     (%)=     1.00          2.00
    Length            (m)=    55.98         40.00
    Mannings n           =    0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
         0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
         0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
         0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
         0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
         0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
         0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
         0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
         0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
         0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
         0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
         1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59
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    Max.Eff.Inten.(mm/hr)=     180.15        134.19
               over (min)       5.00          5.00
    Storage Coeff.  (min)=      1.43 (ii)     4.28 (ii)
    Unit Hyd. Tpeak (min)=      5.00          5.00
    Unit Hyd. peak  (cms)=      0.33          0.23
                                                          *TOTALS*
    PEAK FLOW       (cms)=      0.20          0.02          0.226 (iii)
    TIME TO PEAK    (hrs)=      1.33          1.33           1.33
    RUNOFF VOLUME    (mm)=     86.58         63.54          83.57
    TOTAL RAINFALL   (mm)=     87.58         87.58          87.58
    RUNOFF COEFFICIENT   =      0.99          0.73           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------
--------------------
| RESERVOIR( 0150)|      OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min    |      OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |  0.1820      0.0079

                               AREA      QPEAK       TPEAK        R.V.
                               (ha)      (cms)       (hrs)        (mm)
  INFLOW : ID= 2 ( 20032)      0.470      0.226       1.33        83.57
  OUTFLOW: ID= 1 (  0150)      0.470      0.157       1.33        83.57

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)= 69.53
                 TIME SHIFT OF PEAK FLOW          (min)=  0.00
                 MAXIMUM  STORAGE   USED        (ha.m.)=  0.0079

--------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20041)|   Area    (ha)=   0.35
|ID= 1 DT= 5.0 min |   Total Imp(%)=  89.00   Dir. Conn.(%)=  89.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=     0.31          0.04
    Dep. Storage     (mm)=     1.00          1.00
    Average Slope     (%)=     1.00          2.00
    Length            (m)=    48.30         40.00
    Mannings n           =    0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
         0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
         0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
         0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
         0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
         0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
         0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
         0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
         0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
         0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
         0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
         1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

    Max.Eff.Inten.(mm/hr)=     180.15        134.19
               over (min)       5.00          5.00
    Storage Coeff.  (min)=      1.30 (ii)     3.95 (ii)
    Unit Hyd. Tpeak (min)=      5.00          5.00
    Unit Hyd. peak  (cms)=      0.33          0.24
                                                          *TOTALS*
    PEAK FLOW       (cms)=      0.16          0.01          0.170 (iii)
    TIME TO PEAK    (hrs)=      1.33          1.33           1.33
    RUNOFF VOLUME    (mm)=     86.58         63.54          84.04
    TOTAL RAINFALL   (mm)=     87.58         87.58          87.58
    RUNOFF COEFFICIENT   =      0.99          0.73           0.96

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
```

```
       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------
--------------------
| RESERVOIR( 0151)|      OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min    |      OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |  0.1490      0.0051

                               AREA      QPEAK       TPEAK        R.V.
                               (ha)      (cms)       (hrs)        (mm)
  INFLOW : ID= 2 ( 20041)      0.350      0.170       1.33        84.04
  OUTFLOW: ID= 1 (  0151)      0.350      0.131       1.33        84.03

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)= 77.28
                 TIME SHIFT OF PEAK FLOW          (min)=  0.00
                 MAXIMUM  STORAGE   USED        (ha.m.)=  0.0051

--------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20042)|   Area    (ha)=   0.36
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=     0.31          0.05
    Dep. Storage     (mm)=     1.00          1.00
    Average Slope     (%)=     1.00          2.00
    Length            (m)=    48.99         40.00
    Mannings n           =    0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
         0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
         0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
         0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
         0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
         0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
         0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
         0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
         0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
         0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
         0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
         1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

    Max.Eff.Inten.(mm/hr)=     180.15        134.19
               over (min)       5.00          5.00
    Storage Coeff.  (min)=      1.32 (ii)     4.36 (ii)
    Unit Hyd. Tpeak (min)=      5.00          5.00
    Unit Hyd. peak  (cms)=      0.33          0.23
                                                          *TOTALS*
    PEAK FLOW       (cms)=      0.15          0.02          0.172 (iii)
    TIME TO PEAK    (hrs)=      1.33          1.33           1.33
    RUNOFF VOLUME    (mm)=     86.58         63.54          83.11
    TOTAL RAINFALL   (mm)=     87.58         87.58          87.58
    RUNOFF COEFFICIENT   =      0.99          0.73           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------
--------------------
| RESERVOIR( 0152)|      OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min    |      OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |  0.1670      0.0038

                               AREA      QPEAK       TPEAK        R.V.
```

```
                               (ha)      (cms)       (hrs)        (mm)
  INFLOW : ID= 2 ( 20042)      0.360      0.172       1.33        83.11
  OUTFLOW: ID= 1 (  0152)      0.360      0.152       1.33        83.11

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)= 88.31
                 TIME SHIFT OF PEAK FLOW          (min)=  0.00
                 MAXIMUM  STORAGE   USED        (ha.m.)=  0.0038

--------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20061)|   Area    (ha)=   0.65
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
    Surface Area     (ha)=     0.55          0.10
    Dep. Storage     (mm)=     1.00          1.00
    Average Slope     (%)=     1.00          2.00
    Length            (m)=    65.83         40.00
    Mannings n           =    0.013         0.290

        NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                        ---- TRANSFORMED HYETOGRAPH ----
          TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
           hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
         0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
         0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
         0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
         0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
         0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
         0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
         0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
         0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
         0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
         0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
         0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
         1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

    Max.Eff.Inten.(mm/hr)=     180.15        134.19
               over (min)       5.00          5.00
    Storage Coeff.  (min)=      1.57 (ii)     4.62 (ii)
    Unit Hyd. Tpeak (min)=      5.00          5.00
    Unit Hyd. peak  (cms)=      0.33          0.22
                                                          *TOTALS*
    PEAK FLOW       (cms)=      0.28          0.03          0.310 (iii)
    TIME TO PEAK    (hrs)=      1.33          1.33           1.33
    RUNOFF VOLUME    (mm)=     86.58         63.54          83.12
    TOTAL RAINFALL   (mm)=     87.58         87.58          87.58
    RUNOFF COEFFICIENT   =      0.99          0.73           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------
--------------------
| RESERVOIR( 0154)|      OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min    |      OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                         0.0000     0.0000    |  0.2690      0.0091

                               AREA      QPEAK       TPEAK        R.V.
                               (ha)      (cms)       (hrs)        (mm)
  INFLOW : ID= 2 ( 20061)      0.650      0.310       1.33        83.12
  OUTFLOW: ID= 1 (  0154)      0.650      0.238       1.33        83.11

                 PEAK   FLOW   REDUCTION [Qout/Qin](%)= 76.64
                 TIME SHIFT OF PEAK FLOW          (min)=  0.00
                 MAXIMUM  STORAGE   USED        (ha.m.)=  0.0091

--------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20062)|   Area    (ha)=   0.73
|ID= 1 DT= 5.0 min |   Total Imp(%)=  80.00   Dir. Conn.(%)=  80.00
--------------------
                          IMPERVIOUS    PERVIOUS (i)
```

```
     Surface Area     (ha)=       0.58          0.15
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      69.76         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                 0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                 0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                 0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                 0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                 0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                 0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                 0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                 0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                 0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                 0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                 0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                 1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.63 (ii)     5.13 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.32          0.16
                                                           *TOTALS*
     PEAK FLOW        (cms)=       0.29          0.04          0.332 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.42          1.33
     RUNOFF VOLUME     (mm)=      86.58         63.54         81.96
     TOTAL RAINFALL    (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 0155)|      OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |      OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000    |  0.2600      0.0114

                                  AREA     QPEAK      TPEAK        R.V.
                                  (ha)     (cms)      (hrs)        (mm)
   INFLOW : ID= 2 ( 20062)       0.730      0.332       1.33       81.96
   OUTFLOW: ID= 1 (  0155)       0.730      0.232       1.42       81.96

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 69.75
                   TIME SHIFT OF PEAK FLOW          (min)=  5.00
                   MAXIMUM  STORAGE   USED        (ha.m.)=  0.0114

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD ( 20071)|   Area    (ha)=   0.58
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.49          0.09
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      62.18         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                 0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                 0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                 0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
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                 0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                 0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                 0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                 0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                 0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                 0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                 0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                 0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                 1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.52 (ii)     4.56 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.23
                                                           *TOTALS*
     PEAK FLOW        (cms)=       0.25          0.03          0.277 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME     (mm)=      86.58         63.54         83.12
     TOTAL RAINFALL    (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 0156)|      OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |      OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000    |  0.2800      0.0051

                                  AREA     QPEAK      TPEAK        R.V.
                                  (ha)     (cms)      (hrs)        (mm)
   INFLOW : ID= 2 ( 20071)       0.580      0.277       1.33       83.12
   OUTFLOW: ID= 1 (  0156)       0.580      0.258       1.33       83.12

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 93.20
                   TIME SHIFT OF PEAK FLOW          (min)=  0.00
                   MAXIMUM  STORAGE   USED        (ha.m.)=  0.0050

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--------------------
| CALIB            |
| STANDHYD ( 20072)|   Area    (ha)=   0.64
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.54          0.10
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      65.32         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                 0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                 0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                 0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                 0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                 0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                 0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                 0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                 0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                 0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                 0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                 0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                 1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       1.56 (ii)     4.70 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.33          0.22
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                                                           *TOTALS*
     PEAK FLOW        (cms)=       0.27          0.04          0.304 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME     (mm)=      86.58         63.54         82.89
     TOTAL RAINFALL    (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| RESERVOIR( 0157)|      OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |      OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000    |  0.2600      0.0092

                                  AREA     QPEAK      TPEAK        R.V.
                                  (ha)     (cms)      (hrs)        (mm)
   INFLOW : ID= 2 ( 20072)       0.640      0.304       1.33       82.89
   OUTFLOW: ID= 1 (  0157)       0.640      0.229       1.33       82.88

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 75.20
                   TIME SHIFT OF PEAK FLOW          (min)=  0.00
                   MAXIMUM  STORAGE   USED        (ha.m.)=  0.0092

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--------------------
| CALIB            |
| STANDHYD (200812)|   Area    (ha)=   0.38
|ID= 1 DT= 5.0 min |   Total Imp(%)=  70.00   Dir. Conn.(%)=  70.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.27          0.11
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      50.33         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                 0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                 0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                 0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                 0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                 0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                 0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                 0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                 0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                 0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                 0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                 0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                 1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00         10.00
     Storage Coeff.  (min)=       1.34 (ii)     5.68 (ii)
     Unit Hyd. Tpeak (min)=       5.00         10.00
     Unit Hyd. peak  (cms)=       0.33          0.15
                                                           *TOTALS*
     PEAK FLOW        (cms)=       0.13          0.03          0.163 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.42          1.33
     RUNOFF VOLUME     (mm)=      86.58         63.54         79.65
     TOTAL RAINFALL    (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
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--------------------
| CALIB            |
| STANDHYD (200811)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  84.00   Dir. Conn.(%)=  84.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=       0.06          0.01
     Dep. Storage     (mm)=       1.00          1.00
     Average Slope     (%)=       1.00          2.00
     Length            (m)=      21.60         40.00
     Mannings n          =       0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                  TIME    RAIN |  TIME    RAIN |' TIME    RAIN |  TIME    RAIN
                   hrs   mm/hr |   hrs   mm/hr |'  hrs   mm/hr |   hrs   mm/hr
                 0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
                 0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
                 0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
                 0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
                 0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
                 0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
                 0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
                 0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
                 0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
                 0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
                 0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
                 1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)        5.00          5.00
     Storage Coeff.  (min)=       0.80 (ii)     3.95 (ii)
     Unit Hyd. Tpeak (min)=       5.00          5.00
     Unit Hyd. peak  (cms)=       0.34          0.24
                                                           *TOTALS*
     PEAK FLOW        (cms)=       0.03          0.00          0.033 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.33          1.33
     RUNOFF VOLUME     (mm)=      86.58         63.54         82.86
     TOTAL RAINFALL    (mm)=      87.58         87.58         87.58
     RUNOFF COEFFICIENT   =       0.99          0.73          0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

        (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN* =  89.0    Ia = Dep. Storage  (Above)
       (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
            THAN THE STORAGE COEFFICIENT.
      (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

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--------------------
| ADD HYD  (  0110)|
|  1 +  2 =  3     |        AREA     QPEAK     TPEAK       R.V.
--------------------        (ha)     (cms)     (hrs)       (mm)
       ID1= 1 (200811):     0.07     0.033      1.33      82.86
     + ID2= 2 (200812):     0.38     0.163      1.33      79.65
       ==================================================
       ID = 3 (  0110):     0.45     0.197      1.33      80.15

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR( 0158)|      OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |      OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------       (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000    |  0.0780      0.0122

                                  AREA     QPEAK      TPEAK        R.V.
                                  (ha)     (cms)      (hrs)        (mm)
   INFLOW : ID= 2 (  0110)       0.450      0.197       1.33       80.15
   OUTFLOW: ID= 1 (  0158)       0.450      0.078       1.50       80.07

                   PEAK   FLOW   REDUCTION [Qout/Qin](%)= 39.60
                   TIME SHIFT OF PEAK FLOW          (min)= 10.00
                   MAXIMUM  STORAGE   USED        (ha.m.)=  0.0122

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| CALIB            |
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| STANDHYD (200822)|   Area    (ha)=   0.39
|ID= 1 DT= 5.0 min |   Total Imp(%)=  59.00   Dir. Conn.(%)=  59.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.23          0.16
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     50.99         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)         5.00         10.00
     Storage Coeff.  (min)=        1.35 (ii)     8.21 (ii)
     Unit Hyd. Tpeak (min)=        5.00         10.00
     Unit Hyd. peak  (cms)=        0.33          0.13
                                                            *TOTALS*
     PEAK FLOW        (cms)=       0.12          0.04          0.151 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.42           1.33
     RUNOFF VOLUME     (mm)=      86.58         63.54          77.12
     TOTAL RAINFALL    (mm)=      87.58         87.58          87.58
     RUNOFF COEFFICIENT   =        0.99          0.73           0.88

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (200821)|   Area    (ha)=   0.07
|ID= 1 DT= 5.0 min |   Total Imp(%)=  83.00   Dir. Conn.(%)=  83.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.06          0.01
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     21.60         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        0.80 (ii)     4.04 (ii)
```

```
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.34          0.24
                                                            *TOTALS*
     PEAK FLOW        (cms)=       0.03          0.00          0.033 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.33           1.33
     RUNOFF VOLUME     (mm)=      86.58         63.54          82.63
     TOTAL RAINFALL    (mm)=      87.58         87.58          87.58
     RUNOFF COEFFICIENT   =        0.99          0.73           0.94

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0111)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (200821):     0.07   0.033     1.33    82.63
      + ID2= 2 (200822):     0.39   0.151     1.33    77.12
        ==============================================
        ID = 3 (  0111):     0.46   0.184     1.33    77.96

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0159)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
                          0.0000     0.0000   |   0.1010     0.0090

                               AREA     QPEAK      TPEAK        R.V.
                               (ha)     (cms)      (hrs)        (mm)
  INFLOW : ID= 2 (  0111)      0.460     0.184       1.33       77.96
  OUTFLOW: ID= 1 (  0159)      0.460     0.099       1.42       77.92

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 53.86
                  TIME SHIFT OF PEAK FLOW         (min)=  5.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0090

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (201021)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.40          0.07
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.43 (ii)     4.47 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.23
                                                            *TOTALS*
```

```
     PEAK FLOW        (cms)=       0.20          0.02          0.225 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.33           1.33
     RUNOFF VOLUME     (mm)=      86.58         63.54          83.12
     TOTAL RAINFALL    (mm)=      87.58         87.58          87.58
     RUNOFF COEFFICIENT   =        0.99          0.73           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--------------------
| CALIB            |
| STANDHYD (201022)|   Area    (ha)=   0.47
|ID= 1 DT= 5.0 min |   Total Imp(%)=  85.00   Dir. Conn.(%)=  85.00
--------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=      0.40          0.07
     Dep. Storage     (mm)=      1.00          1.00
     Average Slope     (%)=      1.00          2.00
     Length            (m)=     55.98         40.00
     Mannings n          =      0.013         0.290

         NOTE:  RAINFALL WAS TRANSFORMED TO   5.0 MIN. TIME STEP.


                             ---- TRANSFORMED HYETOGRAPH ----
                TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
                 hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
               0.083    6.41 | 1.083   45.22 | 2.083   14.50 |  3.08    7.56
               0.167    6.41 | 1.167   45.22 | 2.167   14.50 |  3.17    7.56
               0.250    7.29 | 1.250  180.15 | 2.250   12.44 |  3.25    7.04
               0.333    7.29 | 1.333  180.15 | 2.333   12.44 |  3.33    7.04
               0.417    8.52 | 1.417   58.54 | 2.417   10.94 |  3.42    6.60
               0.500    8.52 | 1.500   58.54 | 2.500   10.94 |  3.50    6.60
               0.583   10.36 | 1.583   31.96 | 2.583    9.80 |  3.58    6.22
               0.667   10.36 | 1.667   31.96 | 2.667    9.80 |  3.67    6.22
               0.750   13.45 | 1.750   22.45 | 2.750    8.90 |  3.75    5.89
               0.833   13.45 | 1.833   22.45 | 2.833    8.90 |  3.83    5.89
               0.917   19.96 | 1.917   17.52 | 2.917    8.16 |  3.92    5.59
               1.000   19.96 | 2.000   17.52 | 3.000    8.16 |  4.00    5.59

     Max.Eff.Inten.(mm/hr)=     180.15        134.19
                over (min)         5.00          5.00
     Storage Coeff.  (min)=        1.43 (ii)     4.47 (ii)
     Unit Hyd. Tpeak (min)=        5.00          5.00
     Unit Hyd. peak  (cms)=        0.33          0.23
                                                            *TOTALS*
     PEAK FLOW        (cms)=       0.20          0.02          0.225 (iii)
     TIME TO PEAK     (hrs)=       1.33          1.33           1.33
     RUNOFF VOLUME     (mm)=      86.58         63.54          83.12
     TOTAL RAINFALL    (mm)=      87.58         87.58          87.58
     RUNOFF COEFFICIENT   =        0.99          0.73           0.95

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
            CN*  =  89.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------

--------------------
| ADD HYD  (  0136)|
|   1 +  2 =  3    |         AREA    QPEAK    TPEAK     R.V.
--------------------         (ha)    (cms)    (hrs)     (mm)
        ID1= 1 (201021):     0.47   0.225     1.33    83.12
      + ID2= 2 (201022):     0.47   0.225     1.33    83.12
        ==============================================
        ID = 3 (  0136):     0.94   0.449     1.33    83.12

     NOTE:  PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.
--------------------------------------------------------------------------------
--------------------
| RESERVOIR(  0163)|     OVERFLOW IS OFF
| IN= 2---> OUT= 1 |
| DT=  5.0 min     |     OUTFLOW    STORAGE   |  OUTFLOW    STORAGE
--------------------      (cms)     (ha.m.)   |   (cms)     (ha.m.)
```

```
                          0.0000     0.0000   |   0.3800     0.0140

                               AREA     QPEAK      TPEAK        R.V.
                               (ha)     (cms)      (hrs)        (mm)
  INFLOW : ID= 2 (  0136)      0.940     0.449       1.33       83.12
  OUTFLOW: ID= 1 (  0163)      0.940     0.334       1.33       83.12

                  PEAK   FLOW   REDUCTION [Qout/Qin](%)= 74.38
                  TIME SHIFT OF PEAK FLOW         (min)=  0.00
                  MAXIMUM  STORAGE   USED       (ha.m.)=  0.0140

--------------------------------------------------------------------------------

 FINISH
===========================================================================================
```

APPENDIX

D

CulvertMaster Results

Culvert Calculator Report
25th Innisfil Side Road (101) <duplicate>

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	224.61	m	Headwater Depth/Height	0.88	
Computed Headwater Eleva	224.61	m	Discharge	3.7780	m³/s
Inlet Control HW Elev.	224.49	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	224.61	m	Control Type	Outlet Control	

Grades					
Upstream Invert	223.00	m	Downstream Invert	222.78	m
Length	29.00	m	Constructed Slope	0.007586	m/m

Hydraulic Profile					
Profile	M2		Depth, Downstream	0.95	m
Slope Type	Mild		Normal Depth	1.09	m
Flow Regime	Subcritical		Critical Depth	0.95	m
Velocity Downstream	2.73	m/s	Critical Slope	0.011742	m/m

Section					
Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	1.83	m
Section Size	1800 mm		Rise	1.83	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	224.61	m	Upstream Velocity Head	0.28	m
Ke	0.90		Entrance Loss	0.25	m

Inlet Control Properties					
Inlet Control HW Elev.	224.49	m	Flow Control	Unsubmerged	
Inlet Type	Projecting		Area Full	2.6	m²
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
25th Innisfil Side Road (101) Requirement size

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	224.52	m	Headwater Depth/Height	1.00	
Computed Headwater Eleva	224.52	m	Discharge	8.5303	m³/s
Inlet Control HW Elev.	224.40	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	224.52	m	Control Type	Entrance Control	

Grades

Upstream Invert	223.00	m	Downstream Invert	222.78	m
Length	29.00	m	Constructed Slope	0.007586	m/m

Hydraulic Profile

Profile	S2		Depth, Downstream	0.65	m
Slope Type	Steep		Normal Depth	0.59	m
Flow Regime	Supercritical		Critical Depth	0.82	m
Velocity Downstream	3.61	m/s	Critical Slope	0.002902	m/m

Section

Section Shape	Box		Mannings Coefficient	0.013	
Section Material	Concrete		Span	3.66	m
Section Size	3660 x 1520 mm		Rise	1.52	m
Number Sections	1				

Outlet Control Properties

Outlet Control HW Elev.	224.52	m	Upstream Velocity Head	0.41	m
Ke	0.70		Entrance Loss	0.29	m

Inlet Control Properties

Inlet Control HW Elev.	224.40	m	Flow Control	Unsubmerged	
Inlet Type	0° wingwall flares		Area Full	5.6	m²
K	0.06100		HDS 5 Chart	8	
M	0.75000		HDS 5 Scale	3	
C	0.04230		Equation Form	1	
Y	0.82000				

Culvert Calculator Report
25th Innisfil Side Road (102-1

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	227.97	m	Headwater Depth/Height	0.94	
Computed Headwater Eleva	227.97	m	Discharge	0.1786	m³/s
Inlet Control HW Elev.	227.91	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	227.97	m	Control Type	Outlet Control	

Grades					
Upstream Invert	227.47	m	Downstream Invert	227.43	m
Length	12.00	m	Constructed Slope	0.003333	m/m

Hydraulic Profile					
Profile	M2		Depth, Downstream	0.28	m
Slope Type	Mild		Normal Depth	N/A	m
Flow Regime	Subcritical		Critical Depth	0.28	m
Velocity Downstream	1.49	m/s	Critical Slope	0.017839	m/m

Section					
Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	0.53	m
Section Size	525 mm		Rise	0.53	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	227.97	m	Upstream Velocity Head	0.05	m
Ke	0.90		Entrance Loss	0.04	m

Inlet Control Properties					
Inlet Control HW Elev.	227.91	m	Flow Control	Unsubmerged	
Inlet Type	Projecting		Area Full	0.2	m²
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
25th Innisfil Side Road (102) <duplicate>

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	224.07	m	Headwater Depth/Height	1.69	
Computed Headwater Eleva	224.50	m	Discharge	0.5020	m^3/s
Inlet Control HW Elev.	224.34	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	224.50	m	Control Type	Outlet Control	

Grades

Upstream Invert	223.47	m	Downstream Invert	223.43	m
Length	12.00	m	Constructed Slope	0.003333	m/m

Hydraulic Profile

Profile	CompositeM2PressureProfile		Depth, Downstream	0.46	m
Slope Type	Mild		Normal Depth	N/A	m
Flow Regime	Subcritical		Critical Depth	0.46	m
Velocity Downstream	2.11	m/s	Critical Slope	0.024521	m/m

Section

Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	0.61	m
Section Size	600 mm		Rise	0.61	m
Number Sections	1				

Outlet Control Properties

Outlet Control HW Elev.	224.50	m	Upstream Velocity Head	0.15	m
Ke	0.90		Entrance Loss	0.14	m

Inlet Control Properties

Inlet Control HW Elev.	224.34	m	Flow Control	Transition	
Inlet Type	Projecting		Area Full	0.3	m^2
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
25th Innisfil Side Road (102) Required culvert size

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	224.67	m	Headwater Depth/Height	0.98	
Computed Headwater Eleva	224.67	m	Discharge	4.9864	m³/s
Inlet Control HW Elev.	224.58	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	224.67	m	Control Type	Entrance Control	

Grades

Upstream Invert	223.47	m	Downstream Invert	223.43	m
Length	12.00	m	Constructed Slope	0.003333	m/m

Hydraulic Profile

Profile	S2		Depth, Downstream	0.63	m
Slope Type	Steep		Normal Depth	0.63	m
Flow Regime	Supercritical		Critical Depth	0.65	m
Velocity Downstream	2.59	m/s	Critical Slope	0.003072	m/m

Section

Section Shape	Box		Mannings Coefficient	0.013	
Section Material	Concrete		Span	3.05	m
Section Size	3050 x 1220 mm		Rise	1.22	m
Number Sections	1				

Outlet Control Properties

Outlet Control HW Elev.	224.67	m	Upstream Velocity Head	0.32	m
Ke	0.70		Entrance Loss	0.23	m

Inlet Control Properties

Inlet Control HW Elev.	224.58	m	Flow Control	Unsubmerged	
Inlet Type	0° wingwall flares		Area Full	3.7	m²
K	0.06100		HDS 5 Chart	8	
M	0.75000		HDS 5 Scale	3	
C	0.04230		Equation Form	1	
Y	0.82000				

Culvert Calculator Report
25th Innisfil Side Road (103) <duplicate> <duplicate>

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	224.18	m	Headwater Depth/Height	1.13	
Computed Headwater Eleva	224.18	m	Discharge	3.6897	m³/s
Inlet Control HW Elev.	224.07	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	224.18	m	Control Type	Entrance Control	

Grades					
Upstream Invert	222.80	m	Downstream Invert	222.52	m
Length	15.68	m	Constructed Slope	0.017857	m/m

Hydraulic Profile					
Profile	S2		Depth, Downstream	0.53	m
Slope Type	Steep		Normal Depth	0.44	m
Flow Regime	Supercritical		Critical Depth	0.75	m
Velocity Downstream	3.82	m/s	Critical Slope	0.004048	m/m

Section					
Section Shape	Box		Mannings Coefficient	0.013	
Section Material	Concrete		Span	1.83	m
Section Size	1830 x 1220 mm		Rise	1.22	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	224.18	m	Upstream Velocity Head	0.37	m
Ke	0.70		Entrance Loss	0.26	m

Inlet Control Properties					
Inlet Control HW Elev.	224.07	m	Flow Control	N/A	
Inlet Type	0° wingwall flares		Area Full	2.2	m²
K	0.06100		HDS 5 Chart	8	
M	0.75000		HDS 5 Scale	3	
C	0.04230		Equation Form	1	
Y	0.82000				

Culvert Calculator Report
25th Innisfil Side Road (103) <Required culvert size

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	224.18 m	Headwater Depth/Height	1.13
Computed Headwater Eleva	224.18 m	Discharge	7.3793 m³/s
Inlet Control HW Elev.	224.07 m	Tailwater Elevation	0.00 m
Outlet Control HW Elev.	224.18 m	Control Type	Entrance Control

Grades

Upstream Invert	222.80 m	Downstream Invert	222.52 m
Length	15.68 m	Constructed Slope	0.017857 m/m

Hydraulic Profile

Profile	S2	Depth, Downstream	0.51 m
Slope Type	Steep	Normal Depth	0.41 m
Flow Regime	Supercritical	Critical Depth	0.75 m
Velocity Downstream	3.92 m/s	Critical Slope	0.002884 m/m

Section

Section Shape	Box	Mannings Coefficient	0.013
Section Material	Concrete	Span	3.66 m
Section Size	3660 x 1220 mm	Rise	1.22 m
Number Sections	1		

Outlet Control Properties

Outlet Control HW Elev.	224.18 m	Upstream Velocity Head	0.37 m
Ke	0.70	Entrance Loss	0.26 m

Inlet Control Properties

Inlet Control HW Elev.	224.07 m	Flow Control	Unsubmerged
Inlet Type	0° wingwall flares	Area Full	4.5 m²
K	0.06100	HDS 5 Chart	8
M	0.75000	HDS 5 Scale	3
C	0.04230	Equation Form	1
Y	0.82000		

Culvert Calculator Report
25th Innisfil Side Road (104) <duplicate> <duplicate> <duplicate>

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	224.84	m	Headwater Depth/Height	1.01	
Computed Headwater Eleva	224.84	m	Discharge	0.6624	m³/s
Inlet Control HW Elev.	224.78	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	224.84	m	Control Type	Outlet Control	

Grades

Upstream Invert	223.99	m	Downstream Invert	223.80	m
Length	14.00	m	Constructed Slope	0.013571	m/m

Hydraulic Profile

Profile	M2		Depth, Downstream	0.49	m
Slope Type	Mild		Normal Depth	0.52	m
Flow Regime	Subcritical		Critical Depth	0.49	m
Velocity Downstream	1.99	m/s	Critical Slope	0.016233	m/m

Section

Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	0.84	m
Section Size	825 mm		Rise	0.84	m
Number Sections	1				

Outlet Control Properties

Outlet Control HW Elev.	224.84	m	Upstream Velocity Head	0.18	m
Ke	0.90		Entrance Loss	0.16	m

Inlet Control Properties

Inlet Control HW Elev.	224.78	m	Flow Control	N/A	
Inlet Type	Projecting		Area Full	0.6	m²
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
25th Innisfil Side Road (104) required culvert size

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	225.10	m	Headwater Depth/Height	0.91	
Computed Headwater Eleva	225.10	m	Discharge	4.4361	m³/s
Inlet Control HW Elev.	225.00	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	225.10	m	Control Type	Entrance Control	

Grades					
Upstream Invert	223.99	m	Downstream Invert	223.80	m
Length	14.00	m	Constructed Slope	0.013571	m/m

Hydraulic Profile					
Profile	S2		Depth, Downstream	0.44	m
Slope Type	Steep		Normal Depth	0.37	m
Flow Regime	Supercritical		Critical Depth	0.60	m
Velocity Downstream	3.34	m/s	Critical Slope	0.003059	m/m

Section					
Section Shape	Box		Mannings Coefficient	0.013	
Section Material	Concrete		Span	3.05	m
Section Size	3050 x 1220 mm		Rise	1.22	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	225.10	m	Upstream Velocity Head	0.30	m
Ke	0.70		Entrance Loss	0.21	m

Inlet Control Properties					
Inlet Control HW Elev.	225.00	m	Flow Control	Unsubmerged	
Inlet Type	0° wingwall flares		Area Full	3.7	m²
K	0.06100		HDS 5 Chart	8	
M	0.75000		HDS 5 Scale	3	
C	0.04230		Equation Form	1	
Y	0.82000				

Culvert Calculator Report
25th Innisfil Side Road (105-1)

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	224.50	m	Headwater Depth/Height	0.98	
Computed Headwater Eleva	224.50	m	Discharge	1.5474	m³/s
Inlet Control HW Elev.	224.37	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	224.50	m	Control Type	Entrance Control	

Grades					
Upstream Invert	223.30	m	Downstream Invert	222.93	m
Length	12.30	m	Constructed Slope	0.030081	m/m

Hydraulic Profile					
Profile	S2		Depth, Downstream	0.55	m
Slope Type	Steep		Normal Depth	0.54	m
Flow Regime	Supercritical		Critical Depth	0.68	m
Velocity Downstream	3.04	m/s	Critical Slope	0.013915	m/m

Section					
Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	1.22	m
Section Size	1200 mm		Rise	1.22	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	224.50	m	Upstream Velocity Head	0.28	m
Ke	0.90		Entrance Loss	0.25	m

Inlet Control Properties					
Inlet Control HW Elev.	224.37	m	Flow Control	Unsubmerged	
Inlet Type	Projecting		Area Full	1.2	m²
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
25th Innisfil Side Road (105-1) Required culvert

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	224.52	m	Headwater Depth/Height	1.00	
Computed Headwater Eleva	224.52	m	Discharge	3.5781	m³/s
Inlet Control HW Elev.	224.41	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	224.52	m	Control Type	Entrance Control	

Grades

Upstream Invert	223.30	m	Downstream Invert	222.93	m
Length	12.30	m	Constructed Slope	0.030081	m/m

Hydraulic Profile

Profile	S2		Depth, Downstream	0.42	m
Slope Type	Steep		Normal Depth	0.32	m
Flow Regime	Supercritical		Critical Depth	0.66	m
Velocity Downstream	4.02	m/s	Critical Slope	0.003617	m/m

Section

Section Shape	Box		Mannings Coefficient	0.013	
Section Material	Concrete		Span	2.13	m
Section Size	2130 x 1220 mm		Rise	1.22	m
Number Sections	1				

Outlet Control Properties

Outlet Control HW Elev.	224.52	m	Upstream Velocity Head	0.33	m
Ke	0.70		Entrance Loss	0.23	m

Inlet Control Properties

Inlet Control HW Elev.	224.41	m	Flow Control	Unsubmerged	
Inlet Type	0° wingwall flares		Area Full	2.6	m²
K	0.06100		HDS 5 Chart	8	
M	0.75000		HDS 5 Scale	3	
C	0.04230		Equation Form	1	
Y	0.82000				

Culvert Calculator Report
25th Innisfil Side Road (105-2)

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	224.50	m	Headwater Depth/Height	1.98	
Computed Headwater Eleva	224.50	m	Discharge	1.3846	m³/s
Inlet Control HW Elev.	224.43	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	224.50	m	Control Type	Outlet Control	

Grades

Upstream Invert	222.84	m	Downstream Invert	222.75	m
Length	12.57	m	Constructed Slope	0.007160	m/m

Hydraulic Profile

Profile	CompositeM2PressureProfile		Depth, Downstream	0.70	m
Slope Type	Mild		Normal Depth	N/A	m
Flow Regime	Subcritical		Critical Depth	0.70	m
Velocity Downstream	2.80	m/s	Critical Slope	0.028027	m/m

Section

Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	0.84	m
Section Size	825 mm		Rise	0.84	m
Number Sections	1				

Outlet Control Properties

Outlet Control HW Elev.	224.50	m	Upstream Velocity Head	0.32	m
Ke	0.90		Entrance Loss	0.29	m

Inlet Control Properties

Inlet Control HW Elev.	224.43	m	Flow Control	Submerged	
Inlet Type	Projecting		Area Full	0.6	m²
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
25th Innisfil Side Road (105-2) required Culvert Size

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	224.50	m	Headwater Depth/Height	1.82	
Computed Headwater Eleva	224.50	m	Discharge	2.8602	m³/s
Inlet Control HW Elev.	224.50	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	224.37	m	Control Type	Inlet Control	

Grades

Upstream Invert	222.84	m	Downstream Invert	222.75	m
Length	12.57	m	Constructed Slope	0.007160	m/m

Hydraulic Profile

Profile	S2		Depth, Downstream	0.76	m
Slope Type	Steep		Normal Depth	0.75	m
Flow Regime	Supercritical		Critical Depth	0.82	m
Velocity Downstream	3.09	m/s	Critical Slope	0.005531	m/m

Section

Section Shape	Box		Mannings Coefficient	0.013	
Section Material	Concrete		Span	1.22	m
Section Size	1220 x 910 mm		Rise	0.91	m
Number Sections	1				

Outlet Control Properties

Outlet Control HW Elev.	224.37	m	Upstream Velocity Head	0.41	m
Ke	0.70		Entrance Loss	0.29	m

Inlet Control Properties

Inlet Control HW Elev.	224.50	m	Flow Control	Submerged	
Inlet Type	0° wingwall flares		Area Full	1.1	m²
K	0.06100		HDS 5 Chart	8	
M	0.75000		HDS 5 Scale	3	
C	0.04230		Equation Form	1	
Y	0.82000				

Culvert Calculator Report
25th Innisfil Side Road (106)

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	226.85 m	Headwater Depth/Height	1.15
Computed Headwater Eleva	226.85 m	Discharge	0.4443 m³/s
Inlet Control HW Elev.	226.79 m	Tailwater Elevation	0.00 m
Outlet Control HW Elev.	226.85 m	Control Type	Entrance Control

Grades

Upstream Invert	226.15 m	Downstream Invert	225.96 m
Length	12.60 m	Constructed Slope	0.015079 m/m

Hydraulic Profile

Profile	S2	Depth, Downstream	0.29 m
Slope Type	Steep	Normal Depth	0.28 m
Flow Regime	Supercritical	Critical Depth	0.38 m
Velocity Downstream	2.51 m/s	Critical Slope	0.006721 m/m

Section

Section Shape	Box	Mannings Coefficient	0.013
Section Material	Concrete	Span	0.61 m
Section Size	610 x 610 mm	Rise	0.61 m
Number Sections	1		

Outlet Control Properties

Outlet Control HW Elev.	226.85 m	Upstream Velocity Head	0.19 m
Ke	0.70	Entrance Loss	0.13 m

Inlet Control Properties

Inlet Control HW Elev.	226.79 m	Flow Control	Unsubmerged
Inlet Type	0° wingwall flares	Area Full	0.4 m²
K	0.06100	HDS 5 Chart	8
M	0.75000	HDS 5 Scale	3
C	0.04230	Equation Form	1
Y	0.82000		

Culvert Calculator Report
25th Innisfil Side Road (106) <Required culvert

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	226.85	m	Headwater Depth/Height	1.15	
Computed Headwater Eleva	226.85	m	Discharge	0.8886	m³/s
Inlet Control HW Elev.	226.79	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	226.85	m	Control Type	Entrance Control	

Grades

Upstream Invert	226.15	m	Downstream Invert	225.96	m
Length	12.60	m	Constructed Slope	0.015079	m/m

Hydraulic Profile

Profile	S2		Depth, Downstream	0.29	m
Slope Type	Steep		Normal Depth	0.28	m
Flow Regime	Supercritical		Critical Depth	0.38	m
Velocity Downstream	2.51	m/s	Critical Slope	0.006721	m/m

Section

Section Shape	Box		Mannings Coefficient	0.013	
Section Material	Concrete		Span	0.61	m
Section Size	610 x 610 mm		Rise	0.61	m
Number Sections	2				

Outlet Control Properties

Outlet Control HW Elev.	226.85	m	Upstream Velocity Head	0.19	m
Ke	0.70		Entrance Loss	0.13	m

Inlet Control Properties

Inlet Control HW Elev.	226.79	m	Flow Control	Unsubmerged	
Inlet Type	0° wingwall flares		Area Full	0.7	m²
K	0.06100		HDS 5 Chart	8	
M	0.75000		HDS 5 Scale	3	
C	0.04230		Equation Form	1	
Y	0.82000				

Culvert Calculator Report
25th Innisfil Side Road (107)

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	230.10	m	Headwater Depth/Height	0.95	
Computed Headwater Eleva	230.10	m	Discharge	0.5762	m³/s
Inlet Control HW Elev.	230.00	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	230.10	m	Control Type	Entrance Control	

Grades

Upstream Invert	229.30	m	Downstream Invert	228.72	m
Length	12.82	m	Constructed Slope	0.045242	m/m

Hydraulic Profile

Profile	S2		Depth, Downstream	0.33	m
Slope Type	Steep		Normal Depth	0.33	m
Flow Regime	Supercritical		Critical Depth	0.45	m
Velocity Downstream	2.81	m/s	Critical Slope	0.015524	m/m

Section

Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	0.84	m
Section Size	825 mm		Rise	0.84	m
Number Sections	1				

Outlet Control Properties

Outlet Control HW Elev.	230.10	m	Upstream Velocity Head	0.18	m
Ke	0.90		Entrance Loss	0.16	m

Inlet Control Properties

Inlet Control HW Elev.	230.00	m	Flow Control	Unsubmerged	
Inlet Type	Projecting		Area Full	0.6	m²
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
25th Innisfil Side Road (107) required culvert

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	230.20	m	Headwater Depth/Height	0.98	
Computed Headwater Eleva	230.20	m	Discharge	1.6194	m³/s
Inlet Control HW Elev.	230.11	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	230.20	m	Control Type	Entrance Control	

Grades

Upstream Invert	229.30	m	Downstream Invert	228.72	m
Length	12.82	m	Constructed Slope	0.045242	m/m

Hydraulic Profile

Profile	S2		Depth, Downstream	0.26	m
Slope Type	Steep		Normal Depth	0.21	m
Flow Regime	Supercritical		Critical Depth	0.49	m
Velocity Downstream	4.06	m/s	Critical Slope	0.004070	m/m

Section

Section Shape	Box		Mannings Coefficient	0.013	
Section Material	Concrete		Span	1.52	m
Section Size	1520 x 910 mm		Rise	0.91	m
Number Sections	1				

Outlet Control Properties

Outlet Control HW Elev.	230.20	m	Upstream Velocity Head	0.24	m
Ke	0.70		Entrance Loss	0.17	m

Inlet Control Properties

Inlet Control HW Elev.	230.11	m	Flow Control	Unsubmerged	
Inlet Type	0° wingwall flares		Area Full	1.4	m²
K	0.06100		HDS 5 Chart	8	
M	0.75000		HDS 5 Scale	3	
C	0.04230		Equation Form	1	
Y	0.82000				

Culvert Calculator Report
25th Innisfil Side Road (108-1)

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	236.41	m	Headwater Depth/Height	1.15	
Computed Headwater Eleva	236.41	m	Discharge	0.6665	m³/s
Inlet Control HW Elev.	236.35	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	236.41	m	Control Type	Entrance Control	

Grades					
Upstream Invert	235.71	m	Downstream Invert	235.43	m
Length	12.05	m	Constructed Slope	0.023237	m/m

Hydraulic Profile					
Profile	S2		Depth, Downstream	0.25	m
Slope Type	Steep		Normal Depth	0.22	m
Flow Regime	Supercritical		Critical Depth	0.38	m
Velocity Downstream	2.96	m/s	Critical Slope	0.005120	m/m

Section					
Section Shape	Box		Mannings Coefficient	0.013	
Section Material	Concrete		Span	0.91	m
Section Size	910 x 610 mm		Rise	0.61	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	236.41	m	Upstream Velocity Head	0.19	m
Ke	0.70		Entrance Loss	0.13	m

Inlet Control Properties					
Inlet Control HW Elev.	236.35	m	Flow Control	Unsubmerged	
Inlet Type	0° wingwall flares		Area Full	0.6	m²
K	0.06100		HDS 5 Chart	8	
M	0.75000		HDS 5 Scale	3	
C	0.04230		Equation Form	1	
Y	0.82000				

Culvert Calculator Report
25th Innisfil Side Road (108-1) Required Culvert

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	236.61	m	Headwater Depth/Height	0.98	
Computed Headwater Eleva	236.61	m	Discharge	2.2671	m³/s
Inlet Control HW Elev.	236.53	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	236.61	m	Control Type	Entrance Control	

Grades					
Upstream Invert	235.71	m	Downstream Invert	235.43	m
Length	12.05	m	Constructed Slope	0.023237	m/m

Hydraulic Profile					
Profile	S2		Depth, Downstream	0.31	m
Slope Type	Steep		Normal Depth	0.26	m
Flow Regime	Supercritical		Critical Depth	0.49	m
Velocity Downstream	3.39	m/s	Critical Slope	0.003478	m/m

Section					
Section Shape	Box		Mannings Coefficient	0.013	
Section Material	Concrete		Span	2.13	m
Section Size	2130 x 910 mm		Rise	0.91	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	236.61	m	Upstream Velocity Head	0.24	m
Ke	0.70		Entrance Loss	0.17	m

Inlet Control Properties					
Inlet Control HW Elev.	236.53	m	Flow Control	Unsubmerged	
Inlet Type	0° wingwall flares		Area Full	2.0	m²
K	0.06100		HDS 5 Chart	8	
M	0.75000		HDS 5 Scale	3	
C	0.04230		Equation Form	1	
Y	0.82000				

Culvert Calculator Report
25th Innisfil Side Road (108-2) <duplicate>

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	236.82	m	Headwater Depth/Height	0.98	
Computed Headwater Eleva	236.82	m	Discharge	0.7538	m³/s
Inlet Control HW Elev.	236.72	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	236.82	m	Control Type	Entrance Control	

Grades					
Upstream Invert	235.92	m	Downstream Invert	235.53	m
Length	12.42	m	Constructed Slope	0.031401	m/m

Hydraulic Profile					
Profile	S2		Depth, Downstream	0.41	m
Slope Type	Steep		Normal Depth	0.41	m
Flow Regime	Supercritical		Critical Depth	0.51	m
Velocity Downstream	2.63	m/s	Critical Slope	0.015316	m/m

Section					
Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	Aluminum		Span	0.91	m
Section Size	900 mm		Rise	0.91	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	236.82	m	Upstream Velocity Head	0.21	m
Ke	0.90		Entrance Loss	0.19	m

Inlet Control Properties					
Inlet Control HW Elev.	236.72	m	Flow Control	Unsubmerged	
Inlet Type	Projecting		Area Full	0.7	m²
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
25th Innisfil Side Road (109)

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	236.82	m	Headwater Depth/Height	7.06	
Computed Headwater Eleva	236.82	m	Discharge	0.6233	m^3/s
Inlet Control HW Elev.	236.44	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	236.82	m	Control Type	Outlet Control	

Grades

Upstream Invert	233.59	m	Downstream Invert	233.11	m
Length	12.42	m	Constructed Slope	0.038647	m/m

Hydraulic Profile

Profile	CompositeM2PressureProfile		Depth, Downstream	0.45	m
Slope Type	Mild		Normal Depth	N/A	m
Flow Regime	Subcritical		Critical Depth	0.45	m
Velocity Downstream	3.81	m/s	Critical Slope	0.135736	m/m

Section

Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	0.46	m
Section Size	450 mm		Rise	0.46	m
Number Sections	1				

Outlet Control Properties

Outlet Control HW Elev.	236.82	m	Upstream Velocity Head	0.73	m
Ke	0.90		Entrance Loss	0.66	m

Inlet Control Properties

Inlet Control HW Elev.	236.44	m	Flow Control	Submerged	
Inlet Type	Projecting		Area Full	0.2	m^2
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
25th Innisfil Side Road (109) Required culvert

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	234.19	m	Headwater Depth/Height	5.30	
Computed Headwater Eleva	236.82	m	Discharge	1.1694	m³/s
Inlet Control HW Elev.	236.82	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	236.68	m	Control Type	Inlet Control	

Grades					
Upstream Invert	233.59	m	Downstream Invert	233.11	m
Length	12.42	m	Constructed Slope	0.038647	m/m

Hydraulic Profile					
Profile	CompositeM2PressureProfile		Depth, Downstream	0.60	m
Slope Type	Mild		Normal Depth	N/A	m
Flow Regime	Subcritical		Critical Depth	0.60	m
Velocity Downstream	4.03	m/s	Critical Slope	0.101488	m/m

Section					
Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	0.61	m
Section Size	600 mm		Rise	0.61	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	236.68	m	Upstream Velocity Head	0.82	m
Ke	0.90		Entrance Loss	0.74	m

Inlet Control Properties					
Inlet Control HW Elev.	236.82	m	Flow Control	Submerged	
Inlet Type	Projecting		Area Full	0.3	m²
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
25th Innisfil Side Road (110)

Solve For: Discharge

Culvert Summary						
Allowable HW Elevation	230.80	m	Headwater Depth/Height	1.00	
Computed Headwater Eleva	230.80	m	Discharge	42.8156	m^3/s
Inlet Control HW Elev.	230.55	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	230.80	m	Control Type	Entrance Control	

Grades					
Upstream Invert	227.60	m	Downstream Invert	227.55	m
Length	12.20	m	Constructed Slope	0.004098	m/m

Hydraulic Profile					
Profile	S2		Depth, Downstream	1.61	m
Slope Type	Steep		Normal Depth	1.46	m
Flow Regime	Supercritical		Critical Depth	1.73	m
Velocity Downstream	4.43	m/s	Critical Slope	0.002531	m/m

Section					
Section Shape	Box		Mannings Coefficient	0.013	
Section Material	Concrete		Span	6.01	m
Section Size	6010 x 3200mm		Rise	3.20	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	230.80	m	Upstream Velocity Head	0.86	m
Ke	0.70		Entrance Loss	0.61	m

Inlet Control Properties					
Inlet Control HW Elev.	230.55	m	Flow Control	Unsubmerged	
Inlet Type	0° wingwall flares		Area Full	19.2	m^2
K	0.06100		HDS 5 Chart	8	
M	0.75000		HDS 5 Scale	3	
C	0.04230		Equation Form	1	
Y	0.82000				

Culvert Calculator Report
25th Innisfil Side Road (111)

Solve For: Discharge

Culvert Summary						
Allowable HW Elevation	245.93	m	Headwater Depth/Height	0.98	
Computed Headwater Eleva	245.93	m	Discharge	0.1054	m³/s
Inlet Control HW Elev.	245.83	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	245.93	m	Control Type	Outlet Control	

Grades					
Upstream Invert	245.48	m	Downstream Invert	245.47	m
Length	22.00	m	Constructed Slope	0.000455	m/m

Hydraulic Profile					
Profile	M2		Depth, Downstream	0.22	m
Slope Type	Mild		Normal Depth	N/A	m
Flow Regime	Subcritical		Critical Depth	0.22	m
Velocity Downstream	1.31	m/s	Critical Slope	0.018173	m/m

Section					
Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	0.46	m
Section Size	450 mm		Rise	0.46	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	245.93	m	Upstream Velocity Head	0.02	m
Ke	0.90		Entrance Loss	0.02	m

Inlet Control Properties					
Inlet Control HW Elev.	245.83	m	Flow Control	Unsubmerged	
Inlet Type	Projecting		Area Full	0.2	m²
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
25th Innisfil Side Road (111) Required Culvert

Solve For: Discharge

Culvert Summary

Allowable HW Elevation	246.48	m	Headwater Depth/Height	1.09	
Computed Headwater Eleva	246.48	m	Discharge	2.7777	m³/s
Inlet Control HW Elev.	246.43	m	Tailwater Elevation	0.00	m
Outlet Control HW Elev.	246.48	m	Control Type	Outlet Control	

Grades

Upstream Invert	245.48	m	Downstream Invert	245.47	m
Length	22.00	m	Constructed Slope	0.000455	m/m

Hydraulic Profile

Profile	M2		Depth, Downstream	0.56	m
Slope Type	Mild		Normal Depth	N/A	m
Flow Regime	Subcritical		Critical Depth	0.56	m
Velocity Downstream	2.34	m/s	Critical Slope	0.003527	m/m

Section

Section Shape	Box		Mannings Coefficient	0.013	
Section Material	Concrete		Span	2.13	m
Section Size	2130 x 910 mm		Rise	0.91	m
Number Sections	1				

Outlet Control Properties

Outlet Control HW Elev.	246.48	m	Upstream Velocity Head	0.18	m
Ke	0.70		Entrance Loss	0.12	m

Inlet Control Properties

Inlet Control HW Elev.	246.43	m	Flow Control	Unsubmerged	
Inlet Type	0° wingwall flares		Area Full	2.0	m²
K	0.06100		HDS 5 Chart	8	
M	0.75000		HDS 5 Scale	3	
C	0.04230		Equation Form	1	
Y	0.82000				