

**FINAL DRAINAGE REPORT  
FOR THE**

**SOUTH INNISFIL CREEK  
DRAIN & BRANCHES**

**TOWN OF INNISFIL  
COUNTY OF SIMCOE**



**15 AUGUST 2013**  
**TOM H. MARENTETTE, P.ENG.**  
FILE No. 05-4787

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#### **APPENDICES**

29. 06-1189-519 Golder Associates Geotechnical Report dated February 2007
30. 12-1170-0057(1000) Golder Associates Geotechnical Report dated February 2013

File No. 05-4787

Town of Innisfil  
2147 Innisfil Beach Road  
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**Final Drainage Report for the  
SOUTH INNISFIL CREEK DRAIN & BRANCHES  
in the Town of Innisfil  
County of Simcoe**

To Mayor Baguley and Council:

**1. Background**

On March 31, 2005 an order by the Court of the Drainage Referee of Ontario was issued in Barrie, Ontario that the Town of Innisfil forthwith appoint an engineer pursuant to Section 78 of the Ontario Drainage Act. On May 9, 2005 the Town of Innisfil appointed the engineering firm of Dillon Consulting Limited as "Engineer" to prepare and complete preliminary and final reports in accordance with Section 78 of the Drainage Act to alter, improve and/or extend, the South Innisfil Creek Drain, and in particular to address the concerns with flooding of the area known as the market garden farming area which is adjacent to the drain.

The Court also requested that the Engineer consider the following in the course of preparing both the preliminary and final reports provided by this Court Order.

The Court Order (as per Item No. 4 therein) listed the following action items for consideration:

- a) the incorporation and repair/improvement, as required, of the channel joining the Drain (denoted as the South Innisfil Creek Drain & Branches) and the Innisfil Creek and Nottawasaga River Drainage Works;
- b) the repair and improvement of the Drain to provide the required capacity;
- c) the addition of one (1) or more storm water management facilities to the Drain;
- d) the incorporation and improvement, as required, of the original outlet (Branch 'A' of the Drain) of the Hnydczak Drain;
- e) the incorporation, improvement, replacement or removal of all crossings on the Drain, and the necessity of additional crossings;
- f) the preparation of complete assessment schedules for construction and maintenance of all components of the Drain;
- g) the requirements of the Nottawasaga Valley Conservation Authority ('NVCA') and the Department of Fisheries and Oceans.

We conducted a site meeting with the landowners at the Community Centre in Stroud, Ontario on August 3, 2005. A record of the meeting is provided in Schedule 'A', which is appended hereto.



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## 2. Preliminary Report

On February 24, 2006 we submitted our preliminary report to the Honourable Court of the Drainage Referee on the South Innisfil Creek Drain and Branches and on July 24, 2006 the report was presented to the Drainage Referee by Tim R. Oliver, P.Eng. of Dillon Consulting Limited.

The engineer, Mr. Oliver presented each of the three (3) options and provided a description of the works to be included with each;

- Option No.1 – Proposed Drain Overflow Area at County Road 89 & 5 Sideroad and Drain Improvements to the South Innisfil Creek Drain and Branches.
- Option No.2 – Option 1 improvements and the addition of a Proposed Drain Overflow Area on the east of 10 Sideroad south of 4<sup>th</sup> line
- Option No.3 – Option 1 improvements and the addition of a Proposed Drain Overflow Area south of 5th Line.

The total construction cost estimate for each option and a general statement of the cost benefit analysis was presented as well. Mr. Oliver presented his recommendations and provided some basis for his direction. He also advised of uncertain construction costs and possible cost escalations. Mr. Oliver also advised that he had made significant efforts to accommodate environmental concerns and he further advised that the reservoir areas and meandering sections would enhance the cold water stream features. In addition, he advised that the proposed excavation would remove existing shallow areas with the lowering of culverts which would improve fish passage. Drain overflow areas would also be used to revitalize parts of the drain's ecology as well.

The Drainage Referee reviewed several documents filed at the proceedings by Counsel for the Municipality. The general theme of petitions received from various groups of landowners was that no work be done as the parties benefitting were limited in number.

Counsel for the applicants, Mr. John Archibald of Theall & Associates requested that the Drainage Referee recommend Option No. 3 for several reasons:

- a) It was less expensive;
- b) It provided more protection for larger storms; and
- c) It involved less risk with respect to construction costs.

Counsel for the applicants noted that his clients collectively represented 65% of the valued (muck area). Mr. Archibald further requested that time limits be placed on the provision of a full report and that the Drainage Referee provide the mechanisms for further directions including the provision that the Drainage Referee address assessment. He concluded by urging that the Drainage Referee award costs in favour of his clients and that such costs be included in the cost of the drain.

Counsel for the Municipality, Ms. Mary E. Vallee of Graham, Wilson & Green urged that Option 2 be considered by the Drainage Referee because it benefitted more owners. However, she indicated that the Municipality was not taking a strong position on the matters before the Drainage Referee. Ms. Vallee concluded by stating that in her opinion the saw mill pond area should not be addressed at this time as part of the current project, and in her opinion it would require a new petition.

### 3. Issues Considered by Drainage Referee

The issues considered by the Drainage Referee were:

- a) Whether the preliminary report should be followed by a full and complete drainage report.
- b) If a full drainage report was ordered which of the three (3) options provided in the preliminary drainage report should be proceeded with.

### 4. Drainage Referee's Decision (Court File No. 04-B7552)

“The Drainage Referee having read the report (a thorough and complete report) and having listened to the witnesses and arguments of counsel, determined that an order should be made requiring the Municipality to direct Dillon Consulting Limited to complete a full report. The options to be pursued in the complete report are option number 1 and option number 3. The Drainage Referee is of the opinion that the project is cost beneficial and that engineering work proposed is sound. The watershed is very large with many assessed owners, many of whom have the advantage of being upstream owners and therefore do not perceive the need for drainage of their own properties. However, their properties do contribute to flows to the downstream lands and on occasion in severe storm conditions these flows have caused damage and havoc to the lands of downstream owners. In the circumstances of this watershed, the downstream lands are of a uniquely productive nature providing specialty crops particularly of carrots and onions which are extremely valuable and sensitive to the recurring floods. The “raison d’etre” (reason for existence) of the Drainage Act has always been to support downstream land owners who suffer losses as a result of floods from upstream lands. The watershed illustrates this principal graphically and has a history of organized drainage transcending a century. Farm lands of marginal quality occasionally cannot support the cost of drainage schemes, but farm lands that are intensively cultivated and of high value justify the cost. Such is the case here where the evidence provided indicated that the current onion crops can yield gross revenues reaching up to \$12,000.00 per hectare. In addition, it would appear that this is an environmentally sound project which will provide much improved fish habitat proving once again that properly engineered drainage projects are not detrimental, but are rather complementary to other good environmental practices.

The Drainage Referee is of the opinion that option number 3 is the option that should be pursued with these circumstances. Not only was it promoted by the applicants and their expert witness, Mr. Smart, but there were two additional arguments that are in its favour. Mr. Oliver quite candidly advised that the cost of excavation with respect to option number 2 could exceed projections as much as \$300,000.00 or \$400,000.00 because of the uncertain cost of the excavation and disposal of material. This introduced an element of risk that was not acceptable. Secondly, option number 3 provided a greater measure of protection in the event of a severe storm. The history of this watershed is marked by the series of severe storms which have utterly wiped out the specialty crops in the muck areas. It appears that option number 3 will provide the greatest protection in the event that these severe storms do recur.

Finally, throughout both hearings the measure of support for the project was very significant while the opposition was very limited despite the large number of assessed owners affected. That consideration weighed heavily in favour of the project.”

## **5. Court Order**

As contained in Court File No. 04-B7552, Dated August 31, 2006 - Ontario Superior Court of Justice, In the matter of an appeal before the Drainage Referee, the Court Order is as follow:

1. It is therefore ordered that the Municipality retain the engineering firm of Dillon Consulting Limited to prepare a complete drainage report adopting option number 1 and option number 3 of the preliminary report, a full assessment schedule and an allowance schedule is to be incorporated therein.
2. That the Municipality conduct a meeting of the Council to consider the report and provide appeals by assessed owners only with respect to assessment and allowances.
3. With respect to the issue of legal cost the Drainage Referee is prepared to address the issue only after receiving written submissions from legal counsel.

## **6. Final Report**

This final report is based on the initial observations and preliminary recommendations provided in the preliminary report dated February 24, 2006. The final recommendations presented in this report are a result of detailed analysis, geotechnical investigation and reports as referenced in the Appendix attached to this report. A review of the hydraulic model provided by the NVCA was completed which included topographic survey data collected as part of the preliminary report. The recommended works in this report also include orders by the Court of the Drainage Referee as described in the above paragraph, "Order."

Mr. Tom H. Marentette, P.Eng. of Dillon Consulting Limited is responsible for the preparation and delivery of this final report.

## **7. Drainage History - South Innisfil Creek & Branches**

The last repair and improvement to the South Innisfil Creek Drain & Branches under an Engineer's report was by D.H. Weir, P.Eng. dated November 9, 1956. This report recommended the cleanout, straightening and improving of the South Innisfil Creek Drain from the 5<sup>th</sup> Line road bridge downstream to a sufficient outlet as determined by the Engineer to be at the 5 Sideroad road bridge.

Under that same report, three (3) branch drains of the South Innisfil Creek Drain were constructed, namely the 10 Sideroad Branch Drain, 3<sup>rd</sup> Line Branch Drain and 3<sup>rd</sup> Line Branch Drain Spur. These branch drains accompanied by the main South Innisfil Creek Drain, as described herein, encompass what is known under municipal by-law as the South Innisfil Creek Drain & Branches (denoted the "Drain").

Prior to this 1956 report, the main channel portion of the drain was straightened and obstructions were removed along its entire length under a report by M. Gaviller, O.L.S. dated February 1903. The subsidiary branches of the South Innisfil Creek Drain located in Concession 1, namely Branch 'A' Drain and Branch 'B' Drain were later constructed under a report by D.H. Weir, P.Eng. in 1954. The main drain has been a municipal drain for over 100 years starting from the former Township boundary in Concession 1 (at Simcoe County Road 89 bridge) and heads upstream in a north-east direction crossing the 5 Sideroad, Highway 400, 2<sup>nd</sup> Line, 10 Sideroad, 3<sup>rd</sup> Line, 4<sup>th</sup> Line and 5<sup>th</sup> Line. All the above drains are entirely situated within the Town of Innisfil.

Downstream of Concession 1 in the Town of Innisfil, the outlet for the drain is a natural watercourse being Innisfil Creek, an upper tributary of the Nottawasaga River. The Innisfil Creek continues downstream in a south-west direction as a natural watercourse through Concessions 15, 14 & 13 within the Town of Innisfil, and crossing into Concession 13 within the Town of Bradford - West Gwillimbury to County Road No. 27. Beyond this point, in Concessions 11 & 12 of the Town of New Tecumseth, several sections of the Innisfil Creek exist as a municipal drain under several different by-laws before the Innisfil Creek eventually reaches its outlet into the Nottawasaga River in Concession 12, located in the Town of New Tecumseth.

## **8. Previous Studies**

Several previous studies on the South Innisfil Creek Drain were undertaken by several consultants under the direction of the local Conservation Authority in reaction to significant flood events that occurred back in the 1970's and early 1980's era. The Nottawasaga Valley Conservation Authority funded these studies for the most part.

From a drainage perspective, the previous studies recognize the challenges and complexities of this watershed. The nearly annual flooding phenomena experienced in whole or part over the Innisfil Creek Basin has certainly been frustrating to those landowners who have suffered monetary damages to buildings and property and most often the significant losses in crop production.

The first study on the South Innisfil Creek Drain, to our knowledge, was a hydrological modeling analysis prepared by Dillon Consulting Limited in 1977. The Dillon study was primarily a flood plain and fill line study for the NVCA's flood plain management program that remains useful for planning and development purposes within the watershed.

Subsequent studies in 1981 and 1983 by Ainley & Associates Limited and Triton Engineering Services Limited respectively had both concluded that the construction of a storm water detention facility to capture drainage flows on the South Innisfil Creek Drain may offer the best level of flood protection provided that it is supported by a more in depth hydrological analysis. Drain diversions and improved channelization works were also suggested in the 1981 Ainley study. However, the study also indicated a more in depth analysis of the watershed characteristics through a master drainage plan would be necessary to determine the extent of this work.

It is our understanding that the Town of Innisfil completed preventative drain maintenance recently (2001) on a portion of the South Innisfil Creek Drain and Branches (from the Innisfil Creek Golf Course upstream beyond the 2<sup>nd</sup> Line) including a bottom cleanout and removal of obstructions.

## **9. Description of the Watershed**

The broad watershed area for the South Innisfil Creek Drain and Branches can best be described as "bowl shaped." It spans approximately 12 km in a north-south direction from 7<sup>th</sup> Line in the Town of Innisfil down to 14<sup>th</sup> Line in the Town of Innisfil and spans approximately 10 km in a west-east direction from Lot 2 to Lot 17 with the receiving drain (main drain portion of the South Innisfil Creek Drain) centrally located that drains to the south-west or lowest corner of the watershed.

The land elevation at the watershed perimeter is consistently anywhere from 60 metres to 80 metres higher than the lands close to the drain. The upper lands begin to slope moderately at an average 4 - 6% gradient before abruptly hitting the lowlands that are very



flat (topography varying less than 0.50 m in elevation). These lower lands extend out approximately 1 km from the drain throughout two thirds of the drain length. The lowlands consist primarily of a workable muck soil that is known to be very productive for the market garden crops (carrots and onions) that are grown there. The muck soils by area represent approximately 10% of the total South Innisfil Creek Drain watershed. Workable lands for cash crops (non muck soils) represent approximately 45% of the watershed area. Roads and residential areas represent approximately 10% of the watershed area and the remaining 35% of the watershed consists of a mix of pasture, forage type crops, marshy lands and partially forested areas.

The main drain channel itself has approximately 11 m of fall over the 9,892 m length with moderate drain slopes at the upper reach (0.30% grade) and flatter drain slopes at the lower end (0.04%). The lower drain section requires a wider and deeper channel section to convey the confluence of numerous tributary drains that come all the way down from the highlands. Many of these natural tributary drains do flow under inlet control as a result from these drains having to cross under several roadways before reaching the main drain. However, the storm flows of a 1 in 2 year return period are capable of passing through the road culverts uninhibited until they reach the main drain of the South Innisfil Creek Drain.

In preparation of the final report, and in review of ortho photography, digital elevation contours provided by NVCA and site reconnaissance, it was found that the existing watershed, as defined within the Town of Bradford West Gwillimbury and a portion within the Town of Innisfil, appears to outlet to the South Innisfil Creek Drain downstream of the existing drainage scheme and current study area. Although this area is defined and included in the current existing Hyndzak Drain Report prepared by JK Young Company, 1990, we have removed this area and corresponding lands from this report. The total area removed in the Town of Bradford West Gwillimbury under this report is approximately 279 hectares and approximately 250 hectares in the south portion of the Town of Innisfil.

The South Innisfil Creek Drain main drain recommended for improvement under this report consists of an open drain of approximately 9,322 metres in length and approximately 583 metres of the Innisfil Creek natural watercourse section downstream between County Road 89 to the 15<sup>th</sup> Line draining an overall watershed area of approximately 6,875 hectares within the Town of Innisfil.

## **10. Survey and Existing Conditions**

We commenced our survey and examination of the South Innisfil Creek Drain & Branches during July and August of 2005. Our detailed survey of the main drain started at the 15<sup>th</sup> Line road bridge and then headed upstream to the 5<sup>th</sup> Line road bridge. It comprised the recording of topographic data and inspection of the drain, including road bridge culverts, farm access culverts, natural tributary and municipal drain inlets, and the outlet condition at the Innisfil Creek section at County Road 89.

We also surveyed the 10 Sideroad Branch Drain, 3<sup>rd</sup> Line Branch Drain and Spur and the original Branch 'A' (outlet portion) of the South Innisfil Creek Drain.

The 3<sup>rd</sup> Line Branch Drain is situated along the south side of 3<sup>rd</sup> Line and east of 10 Sideroad consisting of an open drain approximately 1,733 metres in length and draining approximately 821 hectares. The 3<sup>rd</sup> Line Branch Drain Spur picks up drainage from the north side of 3<sup>rd</sup> Line and outlets to the 3<sup>rd</sup> Line Branch Drain. It consists of an open drain

along the north side of the 3<sup>rd</sup> Line approximately 775 metres in length and draining approximately 483 hectares. The 10 Sideroad Branch Drain runs along the west side of 10 Sideroad between the 3<sup>rd</sup> Line and 4<sup>th</sup> Line consisting of an open drain approximately 1,500 metres in length and draining approximately 631 hectares including lands and roads.

The Hnydczak Outlet Relief Drain (formerly Branch 'A' – Outlet Portion) exists within the south part of Lots 6 and 7, Concession 1 starting from the east side of Highway 400 west to its outlet into the main portion of the South Innisfil Creek Drain near Station 1+134. It consists of an open drain approximately 668 metres in length and serves as a secondary or outlet relief drain for the Hnydczak Drain that drains approximately 1,097 hectares within the Town of Innisfil.

There are several other municipal drains which also drain directly to the main drain of the South Innisfil Creek Drain such as the Branch 'B' Drain, 2<sup>nd</sup> Line Branch Drains (north and south), Prokopchuk Drain and the Hnydczak Drain. There are also numerous natural tributary drains and roadside drains, that each outlet directly to the main drain of the South Innisfil Creek Drain between Concessions 1 and 5. No survey work was undertaken on these other drains since the Court Order did not make reference to them. It is our understanding that there were no other requests for improvement to these drains made under Section 78 of the Drainage Act and received by the Town of Innisfil.

Furthermore, as part of the preliminary report, we surveyed the bottom profile of the Innisfil Creek section from County Road 89 downstream to County Road 27. We noted obstructions and condition of the Innisfil Creek along this section, for a distance of approximately 9 km downstream of County Road 89. We also surveyed the existing creek bed elevation further downstream at 20 Sideroad in the Town of New Tecumseth.

In September 2011, in preparation of the final report, we conducted survey spot checks and periodic examinations of the South Innisfil Creek Drain & Branches to verify drain bottom elevations, review current general site conditions and record any obvious drain feature changes or additions.

Since the original survey was completed, a new bridge has been completed on 5 Sideroad across the lower portion of South Innisfil Creek and re-lining work was being completed on the twin CSP culverts crossing under Highway 400. This re-lining work consisted of shot-creteing the interior of existing CSP Pipes to a thickness of approximately 150 mm and constructing concrete riffles filled with smooth rock assumed to be for fish passage and aquatic enhancement.

Spot checks of the general condition of the drain including bottom elevations were found to be relatively unchanged. Survey and reconnaissance of a portion of the drain downstream from 5<sup>th</sup> Line confirmed that previously recorded beaver dams have either been removed or have washed away. There are some large trees that have fallen across the drain in this general area, but no beaver dams were observed in this section of the drain.

## **11. Determination of Sufficient Outlet**

As part of the preliminary report, we surveyed and examined Innisfil Creek downstream of County Road 89 (spot elevations and drain sections only) for approximately 9 km to County Road 27 into the Town of New Tecumseth where the Innisfil Creek starts again as a municipal drain. Through this section we observed the drain channel is very consistent in cross section (depth and width). It has a wider drain bottom (4 m to 9 m wide)

compared to most of the drain upstream of County Road 89. The Innisfil Creek profile has an average gradient of 0.10% throughout its length with noticeably higher base flow velocities and a shallower depth of flow in most sections than upstream. We also observed a well established meandering creek with several developing oxbows throughout its course.

We noted a number of partial obstructions throughout involving several log jams (13), smaller woody debris pile blockages (5), beaver dams (2) and a collapsed concrete slab bridge. However, none of these obstructions are significantly holding back the flow of water in the creek. The soil type through this reach was observed to be very sandy throughout the drain cross section where the creek flows seem to cut through and around obstructions in most cases.

There were no obvious signs of flooding that is often indicated by flattened grass or debris fallout on overhanging tree limbs over the creek or scattered nearby. Major storm flows that overwhelm the creek periodically, in our opinion, are likely buffered by the permeable sandy soils during the frost-free period of the year. The surrounding lands throughout this portion of Innisfil Creek are predominantly grassy lands with pockets of forested lands.

There is some workable agricultural land in the vicinity of the drain but it appears to be on higher ground for the most part. There are few surface inlet tributaries and no sign of agricultural drain tile inlets. A more visual floodplain is evident through sections of Innisfil Creek where neighbouring farmlands are mostly beyond the low-lying areas.

In consideration of all these aspects, it is our considered opinion that the costs would be substantial to incorporate this Innisfil Creek section and link the municipal drain section at County Road 89 with the municipal drain section downstream of County Road 27. The anticipated cost of just clearing a working corridor along the 9 km section of Innisfil Creek for future access and to permit drain maintenance including provision for allowances to obtain right-of-way, in our considered opinion, would likely outweigh the benefits gained for improved agricultural use of surrounding lands.

We have determined a sufficient outlet is provided from the south side of the 15<sup>th</sup> Line road bridge (Station -0+583) approximately 583 metres downstream of the County Road 89 road bridge (Station 0+000 to End of the existing municipal drain). A profile and typical section are included in this report for future maintenance of this section of the drain. We further recommend the incorporation of this said portion of Innisfil Creek as part of the extension of the South Innisfil Creek Drain and Branches.

## **12. Design Considerations**

From our hydrological analysis that was based on our survey of the physical features and watershed area for the existing drains that comprise the South Innisfil Creek Drain and Branches, it is our considered opinion that these municipal drains in their present condition lack the capacity necessary to convey the peak flows from a 1 in 2 year storm return period.

Based on the existing channel's cross section, bottom profile gradient, and size of existing culverts, we believe the majority of the existing drain sections are only capable of handling up to a 1 in 1.5 year storm return period. This is characteristic of the frequent flooding experienced within the watershed over the past few decades. This may have been adequate and accepted design standard at the time when previous improvements were made in accordance with the Engineer's report in 1956. However, now 56 years later, there is increased agricultural activity within the watershed, specifically with the

establishment and expansion of the Market Garden area over the past 30 years where the muck soils exist along the South Innisfil Creek Drain and Branches.

To our knowledge, there have been several significant floods in recent past with multiple occurrences in the year 2000, 2003 and as recently as June 2005. Despite this, we also recognize that some recent events like the June 9, 2005 storm were of much higher magnitude than a 1 in 2 year storm. We emphasize that municipal drains are typically not improved to attain a drainage capacity beyond a 1 in 2 year return period. Flooding in parts of the watershed (mainly lowlands) is an accepted fact of municipal drainage.

The main principle of municipal outlet drains, and the Drainage Act that governs them in the Province of Ontario, is to obtain a sufficient outlet, if at all possible, that will drain the runoff from the watershed over a reasonable amount of time and minimize loss of crops and damages. It is widely accepted that this drainage rate, commonly known as the drainage coefficient, ranges from 25 mm (1 inch) to maximum 38 mm (1.5 inches) of runoff drained from the watershed in a 24 hour period where there is sub-surface drainage or a tile drainage component on farm lands, which is true for most of the lands abutting the South Innisfil Creek Drain and Branches. Typically, a 1 in 2 year return period storm will often produce this runoff amount.

Some crops may withstand water on the fields for longer periods of time than 24 hours and therefore a lower drainage coefficient standard may be acceptable. In the case of the South Innisfil Creek Drain, the majority of the drain length is through the muck soil region that is categorized as a poorly drainable soil. The muck soils at the same time are used to grow specialty crops where a higher drainage coefficient is warranted. In our opinion, an increased level of flood protection is best achieved by improving the cross section of the drain along specific reaches and by constructing the option 1 & 3 storm overflow areas and incorporating them into the municipal drainage system. Periodic widening of the drain and berming was designed to facilitate conveyance of the 1:2 year storm event within the drain and provide for freeboard allowance of approximately 0.4 m.

The hydraulic capacities of culverts contained in this report were designed to meet the current design standards recommended by the Ministry of Agriculture, Food and Rural Affairs. The Design and Construction Guidelines suggest that an agricultural culvert be designed to freely pass the runoff generated from a 2 to 5 year return period storm.

The culverts have been designed to clearly pass the flow generated from a rainfall event having a frequency of occurrence of 1 in 2 years. The construction of the new crossings and culverts shall be in accordance with the drawings and specifications attached hereto.

Typically, access crossings are designed to provide a minimum clear driveable top width depending on residential or agricultural use. Culverts used for a residential access provide a minimum top width of 6.1 m (20 ft.) and for an agricultural use, provide a minimum top width of 7.3 m (24 ft.) to accommodate most modern farming equipment.

To enhance aquatic habitat, new and replacement culverts have been designed to be set to invert elevations that are approximately 10% of the design pipe diameter below the design gradeline.

### **Hydraulic Analysis –South Innisfil Creek**

In September 2011, a meeting with representatives of The Nottawasaga Valley Conservation Authority (NVCA) was held to discuss analytical methods for the proposed drain improvements. In advance of this meeting, we supplied the NVCA with a

brief summary of the existing hydrology data and our proposed approach. Various methods of calculating flows were discussed, including the Rational Method, VO2 (Visual Otthymo), and the methods used by the NVCA for their HEC-RAS Modelling. The preferred method (VO2) and general approach was supported by the NVCA. The NVCA indicated that they would likely need to review and approve the modelling in addition to the overflow area design itself.

NVCA indicated that they have three (3) different HEC-RAS models for the subject area. One model is for the Regional floodplain south of 5th Line, which has been obtained already. The second is a model more suited to assessing low flows (2-year storm), which can be used in evaluating the channel improvements. The third is a Regional floodplain model for north of 5th Line which is being provided by NVCA.

In November 2011, NVCA provided Dillon with a preliminary HEC-RAS (Hydrologic Engineering Centers River Analysis System) model which was still under their internal review. The model was provided by NVCA with the understanding that it is not “final,” and may not be ready for general use for as long as 6 months. In review of the model, it was found to be more appropriate for analysis of the Regional storm event as compared to a minor event required for our analysis purposes under the Drainage Act.

In general, there were deficiencies noted in the level of detail of the existing drain within the model provided. The model did not include all relevant structural crossings and the low-resolution topographic data was determined to be insufficient to determine the capacity of the drain under either existing or proposed conditions. A new hydraulic model was developed using only some of the topographic information received from the Conservation Authority, however in order to complete our analysis, we developed a new hydraulic model (HEC-RAS) to evaluate the existing and proposed 1:2 year event drain hydraulics and the corresponding hydraulic capacity of 13 crossing structures.

### **13. Allowances**

In accordance with Section 29 of the Drainage Act, we have made a determination of the amount to be paid for land that is necessary for improvements to the drain. We have included land allowances for widening of the drain and the establishment of permanent earth berming along the top of the South Innisfil Creek drain banks as required to provide additional conveyance capacity and improved contiguous protection from the design storm event. These berms will also assist in protecting the drain and banks from washouts and erosion.

Where berming is not required or recommended, we have included allowances for the establishment of a 3.0 m wide grass buffer strip to establish permanent vegetation along the entire length of the drain banks in order to intercept stormwater runoff and minimize washouts and soil erosion.

The lands which are recommended to be occupied by the 5<sup>th</sup> Line drain overflow area (Option 3) and the overflow area north of Highway 89 (Option 1) have been provided allowances in money for lands necessary to construct the drainage works.

In accordance with Section 30 of the Drainage Act, we have also provided allowances to the land owners for damages to lands and crops occasioned by the disposal of material removed from the drainage works. Along the South Innisfil Creek and the Hyndczak Outlet Relief Drain, excess spoils shall be placed and spread along the drain corridor outside of the recommended earth berm(s) to a maximum width of 9 meters wide as measured from the toe of the berm and a maximum thickness of 300 millimeters.

Along those sections of the South Innisfil Creek Drain where no work is specified under this report, working corridors measuring 6 meters wide from/in addition to the permanent 3 m wide grass buffer strip are hereby established by this report for future access to the drain for maintenance and placement of spoils. For further details of the location and extent of working corridors, please refer to “Working Corridors”, listed in Schedule F, “Special Provisions” attached to this report.

Allowances provided under Section 29 of the Drainage Act for land necessary for improvements to the drain were calculated based on property assessment rates for the affected area according to current MPAC 2012 (Municipal Property Assessment Corporation) values.

In accordance with Section 30 of the Ontario Drainage Act, we have also provided allowances to land owners for damages to lands and crops occasioned by the disposal of material removed from the drainage works.

We have included the sums of these allowances in the estimates of the cost for construction. They are detailed in the Schedules of Allowances identified as “Schedule B” in this report, which shows the distribution of these allowances.

#### **14. Overflow Drainage Works**

##### **a) Option No. 1 – Drain Improvements to the South Innisfil Creek Drain and Branches**

Option No. 1 entails improvements to the South Innisfil Creek Drain (Main Drain), Hnydczak Outlet Relief Drain, 3<sup>rd</sup> Line Branch Drain & Spur and the 10 Sideroad Branch Drain. The recommended works for Option No. 1 herein, will provide a minimum 1 in 2 year storm capacity and will represent a moderate improvement over the existing drain capacity. This improvement requires that some of the drains be widened, deepened, embanked and/or the drain slope increased where possible.

We determined from our hydrological analysis of the main drain and branches, as noted above, that they all lack the capacity required to convey a 1 in 2 year storm as a result of many undersized channel sizes, undersized access culverts and in some cases minimal grade. Considering that each of these drains are referenced by the Court Order, it is our considered opinion that improving the main drain and branch drains is beneficial to the surrounding lands dependent on these municipal branch drains for direct outlet.

The remainder of the watershed area is either drained towards the main drain via natural tributary streams, private drains and/or other municipal drains (2<sup>nd</sup> Line Branch Drains, Prokopchuk Drain, South Innisfil Branch 'B' Drain, & Hnydczak Drain). Those landowners that are directly affected by these drains may wish to consider a request to improve these drains under the recommendation and direction set out under a new Engineer's report (Section 78 of the Drainage Act).

In Option No. 1, we have also recommended an overflow area near the outlet of the South Innisfil Drain between County Road 89 and 5 Sideroad. The drain improvements as recommended herein will marginally increase the flow conveyance capacity during smaller storm events (up to 1 in 2 year storm) as a result of the improved channelization.

The capacity of the improved drain however will be limited to a 1 in 2 year storm peak flow which is typical of many municipal drains that outlet to a natural watercourse.

b) **Option No. 1 – Proposed Drain Overflow Area at County Road 89 & 5 Sideroad and Drain Improvements to South Innisfil Creek Drain and Branches**

In recognition of the sensitivity of this drain to erosion, any disturbance of the channel (widening and deepening) during or immediately following drain improvement works should be mitigated. We recommend a drain overflow area comprising a recessed area of approximately 5 hectares. The drain overflow area encompasses the section of drain between County Road 89 and 5 Sideroad (approximately 600 m drain length) and has the capacity to temporarily store over 50,000 m<sup>3</sup> of water to ensure that drain bank overflows on the Innisfil Creek section beyond County Road 89 do not occur during a 1 in 2 year storm or during a full drain flow condition upstream of 5 Sideroad.

As part of the drain overflow area, we recommend some minor improvements to the alignment of the drain and we recommend that the drain banks be lowered which will provide flood storage during higher flow events. This overflow area and modifications to the drain will assist in regulating drain flows passing through the overflow area such that storms up to 1 in 2 year return period will be attenuated in the Innisfil Creek downstream watercourse compared to existing conditions.

We recommend that most of the existing meandering in the drain channel through the drain overflow area be maintained. Alternatively, straightening the drain channel would increase the magnitude of flooding to Innisfil Creek during extreme storm events. Furthermore, we recommend erosion control measures such as a vegetative grass cover and the planting of shrub willows on the upper banks of the reshaped drain channel. The implementation and full establishment of this drain overflow area prior to the other upstream drain improvements will allow for some dissipation of the drain flow energy, reduce flow velocities without sacrificing drain capacity and furthermore promote colloidal sediment deposition.

In our opinion, this drain overflow effectively addresses one of the Nottawasaga Valley Conservation Authority's concerns over the transport of colloidal sediments from an area of different geomorphology impacting sensitive aquatic species found downstream of Innisfil Creek into the Nottawasaga River.

c) **Option No. 3 – Drain Improvements to the South Innisfil Creek Drain and Branches including the 5<sup>th</sup> Line Drain Overflow Area**

Option No. 3 includes all the improvements of Option No. 1 plus the addition of a drain overflow area located upstream of the benefit area in the vicinity of 5<sup>th</sup> Line.

We recommend this overflow area be located immediately south of 5<sup>th</sup> Line and west of South Innisfil Creek Drain. Its purpose is to provide for detention storage during the 2-year storm to attenuate flows and further increase the downstream conveyance capacity. A lateral weir in the main channel will direct flows into the overflow area where a culvert/pipe will act as an orifice to control outflow from the facility. That configuration was selected to minimize intrusion into the creek, as well as limit the ongoing maintenance requirements.

The overflow area will encompass an area of approximately 6 hectares to be located just south of 5<sup>th</sup> Line. The 5<sup>th</sup> Line option will provide approximately 50,000 cubic metres in the lower flood stage (up to ELEV. 234.0 m).

The overflow area allows the base flow and some of the drain flow at depths 1.5 m or less to remain in the drain so there are minimal effects on the ecology of the drain. The 5<sup>th</sup> Line overflow area captures approximately 75% of the 2 year storm flows. A stormwater management report was submitted to the NVCA on March 16, 2012 which provides details of hydraulic modelling and hydrology.

Our analysis with the Visual OTTHYMO (VO2) model predicts the 5<sup>th</sup> Line overflow option protects the immediate downstream area between 4<sup>th</sup> Line and 5<sup>th</sup> Line from a 1 in 5 year return period storm. For lands south of 3<sup>rd</sup> Line that use the main drain downstream from where the Prokopchuk Drain enters (Station 4+871), they remain protected from a 1 in 2 year storm provided by the drain improvements of Option No. 1. The 5<sup>th</sup> Line Overflow Area reduces the magnitude of drain improvements required downstream and lessens the severity of possible flooding from larger storm events exceeding the 1 in 2 year storm.

## **15. Observations, Recommendations and Cost Estimate**

The plans, profiles and recommendations included in this report were developed based on the results of detailed analysis of a hydraulic model and survey data collected as part of the preliminary report. The initial observations and recommendations included as part of the preliminary report provided a baseline for developing the scope of work which was analysed as part of the final hydraulic model. The work ordered by the Court of the Drainage Referee dated August 31, 2006 has also been included in the development of our final recommendations. In accordance with the above, we recommend the following:

### **a) South Innisfil Creek Drain (Main Drain Station 0+000 to 9+322)**

There is a localized build up of sediment within the drain from the 3<sup>rd</sup> Line upstream to 5<sup>th</sup> Line road. The balance of the drain downstream of 3<sup>rd</sup> Line has minimal sediment build up compared to the engineered drain profile from the previous 1956 report and may reflect recent maintenance work done on this portion of the drain.

Based on a hydraulic analysis of the drain, a considerable length of the drain (approximately three quarters of the main drain length) lacks the required channel cross section to convey the peak flows from a 1 in 2 year return period storm. The exception being a section of the main drain from 3<sup>rd</sup> Line north towards 4<sup>th</sup> Line (approximately 900 m distance) and a section of the main drain through part of the Market Garden area in Lots 9 & 10, Concession 2 (approximately 1,500 m distance). These two (2) drain segments potentially have more capacity than immediate upstream and downstream sections mainly due to the presence of elevated drain banks and a wider cross section. The raised banks were not found to be part of any previous Engineer's report and it is assumed that the raised drain banks were undertaken by the landowners themselves in an attempt to reduce the severity of flooding to their lands. Unfortunately, the presence of low drain banks upstream and downstream inevitably leads to serious flooding of the surrounding lands despite efforts to raise some of the drain banks.

Subsequent to our hydraulic analysis and in consideration of the existing topography adjacent to the drain and the existing farm and road culvert bottom elevations, we found that the following major adjustments are warranted in our opinion:

- Spot clean the drain bottom as shown on the design profiles.



- Excavation to widen portions of the drain along its reach including constructing of terracing or benches to incorporate natural channel design features. We recommend the drain include terraces or benches set 1 m above the drain bottom.
- Trucking/relocation of excavated drain spoils on-site within the working corridor, including trucking and disposal off-site of excess material.
- Placement and levelling of excess of drain spoils along the 9 m wide working corridor.
- Construction of earth berms along portions of the drain's length. The surrounding lands and existing drain banks for portions of the main drain and many of the branch drains and natural tributaries are high enough and do not require elevating. However, there are numerous tributary drain inlets along the course of the drain that have significant flows into the drain. Considering that drain widening and reshaping of the drain banks is required along a significant portion of the drain, including re-establishment of a vegetative cover to protect the drain banks from future erosion, we recommend pipe outlet sections with flap gates and stone erosion protection at stations: 1+134, 1+313, 1+975, 2+482, 3+783, 3+711, 4+299, 4+737, 4+871, 5+560, 5+578 & 5+587 be installed. The pipes will provide a conduit for conveying the outlet of tributary drainage and reduction in bank erosion. Flap gates installed on the end of these pipes will provide backwater control to protect lands from periodic high water conditions in the main drain.
- At Station 6+513, we recommend the existing swale inlet to the west side of the drain be filled in, re-directed and graded westerly towards 10 Sideroad with its new outlet into the 10 Sideroad Branch Drain via a new 900 mm diameter corrugated steel road culvert with flap gate on the outlet end. During significant storm events, neighbouring landowners reported severe flooding to their lands east of 10 Sideroad between the 3rd Line and 4th Line. It is our considered opinion that surface drainage along both sides of 10 Sideroad, in this vicinity, outlet to the 10 Sideroad Branch Drain.
- Grading and seeding of 3 m wide grass buffer strips extending from the existing top of bank along both sides of the drain reach in areas where no berming or work is specified.
- Two (2) private access bridges over the drain were removed in conjunction with the Court Order under the direction of the Town of Innisfil. These bridges served farm properties Roll No. 001-19800 and Roll No. 001-20200 and did not provide sufficient capacity for the drain to convey the 1 in 2 year peak flow. New replacement bridges serving these properties are part of the recommended work in this report.
- Four (4) golf cart bridges over the drain on property Roll No. 001-19400 were raised in conjunction with the Court Order under the direction of the Town of Innisfil. Upon our inspection, the under side of these bridges were noted as being raised approximately 600 mm to 700 mm higher than before. We observed that the bridges are all entirely above the existing drain banks. However, according to our hydraulic analysis which includes the channel and overflow improvements, the existing bridges are an obstruction to the 1 in 2 year drain flows and we recommend that these bridges be removed as part of the improvements



recommended in this report. The private bridges may be modified and re-installed outside the banks of the drain so as not to pose future obstruction to the drain. The soffit elevation of these bridges shall not be lower than the top of the berms detailed in the report drawings. Plans for the re-installation of these access bridges must be approved by the Town of Innisfil and the Nottawasaga Valley Conservation Authority prior to installation.

- Two (2) private farm bridge crossings serving properties Roll No. 001-20000 and Roll No. 001-20300 also do not provide sufficient capacity for the drain to convey the 1 in 2 year peak flow. We recommend these bridges be replaced with new structures as detailed in the report drawings.
- The existing private farm bridge crossing serving property Roll No. 001-20500 provides sufficient capacity for the drain to convey the 1 in 2 year peak flow. The structure appears to be in fairly good condition and serves the needs of the landowner. We have not conducted a structural assessment of the bridge, but currently it does affect the function of the design of drain as proposed under this report. We recommend that grading and rock protection of the abutments be installed as part of this report as shown on the typical culvert replacement drawings. We recommend that at such time as this bridge requires replacement or becomes an obstruction to the drain, that it be replaced with a new structure as detailed in the report drawings.
- The existing 3<sup>rd</sup> Line road bridge is a rigid span concrete culvert and currently provides sufficient hydraulic capacity. The top of the existing bridge footings are exposed, however the existing structure appears to be generally in fair condition and is not recommended for replacement at this time. A recommendation of size consideration for future maintenance is included in this report.
- The existing road bridge over 4<sup>th</sup> Line consists of a corrugated steel pipe arch and a lower round pipe culvert crossing. The pipe arch culvert is perched approximately 900 mm above the proposed new drain bottom and the two pipe culverts together do not provide sufficient capacity for the drain. The existing double culverts lead to increased maintenance as a result of debris build up that was observed between the culverts on the upstream end of the bridge reducing the drain's capacity. We recommend that these pipes be replaced with a new single CSP Arch pipe culvert with sheet steel and sloped rip-rap end walls.
- The existing road bridge culverts over County Road 89, 5 Sideroad, 2<sup>nd</sup> Line, 10 Sideroad and 5<sup>th</sup> Line, consist of rigid span concrete bridge structures and all appear to be in fair condition and are not recommended for replacement at this time. The bridges have sufficient hydraulic capacity and require cleaning only as part of the work recommended in this report.
- The existing culverts under Highway 400 and Rieve Boulevard are in good condition and have sufficient hydraulic capacity. We do not recommend replacement at this time. The Highway 400 crossing comprises perched twin 5100 mm x 2900 mm corrugated steel ellipse pipe culverts and a lower 2400 mm diameter corrugated steel pipe culvert (approximately 900 mm lower). At least one of the culverts crossing under the south bound lane of Highway 400 appears to be inverted against the flow of the drain. While this does not seem to affect its function at this time, this should be corrected in the future when replacement is required. During our survey in 2011, we noted that the interior of the CSP pipes

were cleaned and re-lined with shot-crete and concrete riffles filled with smooth rock were constructed on the floor for aquatic enhancement.

The Rieve Boulevard crossing comprises twin 4800 mm x 3650 mm corrugated steel ellipse culverts and a 2100 mm diameter corrugated steel pipe and appear to be in good condition.

- There are a series of 90° drain bends that were constructed in previous Engineer's reports to make efficient use of the land by routing the drain along roadways and property lines. Considering that some drain widening is necessary including re-establishment of a vegetative cover to protect the drain banks from severe erosion, we recommend stone erosion protection at the drain bends.
- There are numerous obstructions inhibiting the drain flows such as fallen or overhanging trees, log jams, and remnants of old temporary rock check dams that were partially or never removed following previous drain maintenance work. We recommend removal of these obstructions as noted on the drawings.
- The section of the main drain starting from the east side of 5 Sideroad for a distance approximately 400 m upstream (Station 0+650 to Station 1+050) goes through a heavily wooded area on property Roll No. 001-01400. As part of the drain improvements, we recommend only the existing trees that hinder the drain be removed on both sides of the drain.
- There are several private irrigation ponds that have been constructed adjacent to the drain. The recommended widening of the drain and establishment of a working corridor may cause all or a portion these ponds to be filled. The re-establishment of these ponds will be at the expense of the landowner.
- A 9 m wide working corridor is recommended to provide access to the drain for construction and for the placement and spreading of excess drain spoils to a maximum thickness of 300 mm.
- Supply, installation and removal of temporary access culverts across tributary drains as required for construction traffic access has been provided in the estimate of cost.
- Excavation and grading of the option 1 overflow area, located south of 5<sup>th</sup> Line.
- Excavation and grading of the option 3 overflow area, located north of 89 Highway and west of 5 Sideroad.

There exists a rather large beaver dam at approximately Station 8+900. According to recent site observations, the backwaters caused by the dam are currently supporting a forest of trees and marsh land which is considered will not survive should conditions change. Due to the fact that no other work is being done on this portion of the drain and given the fact that vehicular access would be difficult and expensive to construct at this time, it is recommended to leave the beaver dam in place at this time. A review of the hydraulic constraints as a result of this structure confirms that only minor impact to upstream headwaters occurs.

The drain contains some sections where meandering of the channel has formed naturally and was never straightened. For these meandering sections located between County Road 89 and 5 Sideroad and between 4<sup>th</sup> Line and 5<sup>th</sup> Line, we recommend the meandering of the drain channel be preserved in conjunction with the proposed drain widening work. We recognize the energy dissipation and hydraulic efficiencies provided by the natural meandering pattern. The exception being there are some extreme meanders with large

developing oxbows that do not facilitate the widening of the drain channel without some minor straightening. Construction of a localized drain overflow area with a lowering of the drain banks and a continuous sediment trap below the rest of the drain bottom profile in the more concentrated regions of drain meanders, in our considered opinion, is a very effective way to dissipate the energy as a result of a lower hydraulic gradeline for the drainage flows. Furthermore, the drain overflow area provides a temporary storm water detention area and sediment deposition area for colloidal sediments that are carried by higher and faster drain flows.

### **Future Replacement of 2<sup>nd</sup> Line Bridge**

We recommend that the 2<sup>nd</sup> Line Bridge (Station 2+785) be a future replacement according to the design details on the drawings attached hereto. The existing concrete bridge shall be replaced with 12 m long, 8052 mm x 3049 mm galvanized structural plate corrugated steel bridge with 381 mm x 140 mm corrugations and 8.0 mm thickness (AIL Super-Cor or equivalent) complete with 450 mm thick concrete raft footing including steel reinforcing steel bars and a 500 mm compacted Granular 'A' base, compacted Granular 'B' backfill around structure to under driveway surface, Granular 'A' (crushed limestone) driveway surface, vertical steel sheet pile end walls as specified by the culvert supplier and stone erosion protection around the culvert end walls and banks.

### **Future Replacement of 3<sup>rd</sup> Line Bridge**

We recommend that the 3<sup>rd</sup> Line Bridge (Station 5+760) be a future replacement according to the design details on the drawings attached hereto. The existing concrete bridge shall be replaced with 12 m long, 8052 mm x 3049 mm galvanized structural plate corrugated steel bridge with 381 mm x 140 mm corrugations and 8.0 mm thickness (AIL Super-Cor or equivalent) complete with 450 mm thick concrete raft footing including steel reinforcing steel bars and a 500 mm compacted Granular 'A' base, compacted Granular 'B' backfill around structure to under driveway surface, Granular 'A' (crushed limestone) driveway surface, vertical steel sheet pile end walls as specified by the culvert supplier and stone erosion protection around the culvert end walls and banks.

### **Future Replacement of 10 Sideroad Bridge**

We recommend that the 10 Sideroad Bridge (Station 5+567) be a future replacement according to the design details on the drawings attached hereto. The existing concrete bridge shall be replaced with 12 m long, 8052 mm x 3049 mm galvanized structural plate corrugated steel bridge with 381 mm x 140 mm corrugations and 8.0 mm thickness (AIL Super-Cor or equivalent) complete with 450 mm thick concrete raft footing including steel reinforcing steel bars and a 500 mm compacted Granular 'A' base, compacted Granular 'B' backfill around structure to under driveway surface, Granular 'A' (crushed limestone) driveway surface, vertical steel sheet pile end walls as specified by the culvert supplier and stone erosion protection around the culvert end walls and banks.

### **Future Replacement of Private Access Bridge**

We recommend that the private access bridge (Station 3+835, Roll No. 001-20400) be a future replacement according to the design details on the drawings attached hereto. The existing concrete bridge shall be replaced with 8 m long, 8052 mm x 3049 mm galvanized structural plate corrugated steel bridge with 381 mm x 140 mm corrugations and 8.0 mm thickness (AIL Super-Cor or equivalent) complete with 450 mm thick concrete raft footing including steel reinforcing steel bars and a 500 mm compacted Granular 'A' base,

compacted Granular 'B' backfill around structure to under driveway surface, Granular 'A' (crushed limestone) driveway surface, vertical steel sheet pile end walls as specified by the culvert supplier and stone erosion protection around the culvert end walls and banks.

We estimate the cost of the recommended work to be as follows:

**South Innisfil Creek Drain (Main Drain)**

<b>Item</b>	<b>Description</b>	<b>Amount</b>
1.	Station 0+640 to Station 5+750 & Station 7+430 to Station 8+200 – Brushing of the drain including the disposal by burning on-site or removal off-site with trimming and/or removal of existing trees as required to accommodate the drainage works.	\$20,000.00
2.	Stripping and stockpile of topsoil approximately 200 mm thick, as follows:	
	a) Station 1+050 to Station 1+580, totalling approximately 530 lineal metres of drain and approximately 2,780 m <sup>3</sup> of material.	\$5,560.00
	b) Station 1+700 to Station 2+400, totalling approximately 700 lineal metres of drain and approximately 4,690 m <sup>3</sup> of material.	\$9,380.00
	c) Station 2+400 to Station 2+760, totalling approximately 360 lineal metres of drain and approximately 2,520 m <sup>3</sup> of material.	\$5,040.00
	d) Station 2+820 to Station 4+900, totalling approximately 2,080 lineal metres of drain and approximately 14,630 m <sup>3</sup> of material.	\$29,260.00
	e) Station 4+900 to Station 5+560, totalling approximately 660 lineal metres of drain and approximately 3,190 m <sup>3</sup> of material.	\$6,380.00
	f) Station 5+600 to Station 5+750, totalling approximately 150 lineal metres of drain and approximately 770 m <sup>3</sup> of material.	\$1,540.00
	g) Station 7+430 to Station 8+200, totalling approximately 770 lineal metres of drain and approximately 4,760 m <sup>3</sup> of material.	\$9,520.00
3.	Excavation and levelling of excavated material works, as follows:	
	a) Drain bottom excavation and widening, as follows:	
	Station 0+000 to Station 0+640 and Station 1+050 to Station 8+200, totalling approximately 7,560 lineal metres of drain and approximately 94,150 m <sup>3</sup> of material.	\$329,500.00

Item	Description	Amount
	b) Levelling of excavated materials and raised banks, as follows:	
	i. Station 0+640 to Station 8+200, totalling approximately 7,560 lineal metres of drain and approximately 55,450 m <sup>3</sup> of material.	\$166,350.00
4.	Trucking of additional materials, as follows:	
	Station 0+000 to Station 9+315, totalling approximately 9,898 lineal metres of drain and approximately 38,700 m <sup>3</sup> of material.	\$270,900.00
5.	Hydraulic seeding of drain banks disturbed by drain widening, and raised banks from Station 0+640 to Station 8+200 (approximately 199,500 m <sup>2</sup> ).	\$149,650.00
6.	Seeding of grass buffer strips, as follows:	
	a) Seeding of 3.0 m wide grass buffer strip beyond the top of bank on both sides of the drain from Station 0+640 to Station 8+200 (approximately 54,000 m <sup>2</sup> ).	\$40,500.00
7.	Bridge works, as follows:	
<b><u>BRIDGE NO. 1 ON ROLL NO. 001-19800</u></b>		
	a) Station 3+071 – Remove & dispose existing 2.7 m wide wooden bridge, supply and installation of a new 8 m long, 8052 mm x 3049 mm galvanized structural plate corrugated steel bridge with 381 mm x 140 mm corrugations and 8.0 mm thickness (AIL Super-Cor or equivalent) complete with native backfill for excavated area (approximately 85 m <sup>3</sup> ), granular ‘B’ backfill at culvert (approximately 670 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 130 tonnes) and 300 mm base under pile caps and struts (approximately 330 tonnes), vertical steel sheet pile end walls (approximately 32 m) and stone erosion protection for culvert end walls and banks (approximately 500 m <sup>2</sup> ).	\$177,000.00
	b) Supply and install 20 HP 310 x 110 piles, complete with concrete pile caps and struts with rebar. (see Notes on Details 9-1D page 58 of 63)	\$149,500.00

Item	Description	Amount
<b><u>BRIDGE NO. 2 ON ROLL NO. 001-20000</u></b>		
	b) Station 3+477 – Remove & dispose existing 4.5 m wide concrete bridge, supply and installation of a new 8 m long, 8052 mm x 3049 mm galvanized structural plate corrugated steel bridge with 381 mm x 140 mm corrugations and 8.0 mm thickness (AIL Super-Cor or approved equivalent) complete with native backfill for excavated area (approximately 85 m <sup>3</sup> ), granular ‘B’ backfill at culvert (approximately 670 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 130 tonnes) and 300 mm base under pile caps and struts (approximately 330 tonnes), vertical steel sheet pile end walls (approximately 326 m) and stone erosion protection for culvert end walls and banks (approximately 500 m <sup>2</sup> ).	\$177,000.00
	c) Supply and install 20 HP 310 x 110 piles, complete with concrete pile caps and struts with rebar. (see Notes on Details 9-1D page 58 of 63)	\$149,500.00
<b><u>BRIDGE NO. 3 ON ROLL NO. 001-20200</u></b>		
	c) Station 3+656 – Remove & dispose existing 5 m wide concrete bridge, supply and installation of a new 8 m long, 8052 mm x 3049 mm galvanized structural plate corrugated steel bridge with 381 mm x 140 mm corrugations and 8.0 mm thickness (AIL Super-Cor or equivalent) complete with native backfill for excavated area (approximately 85 m <sup>3</sup> ), granular ‘B’ backfill at culvert (approximately 670 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 130 tonnes) and 300 mm base under pile caps and struts (approximately 330 tonnes), vertical steel sheet pile end walls (approximately 32 m) and stone erosion protection for culvert end walls and banks (approximately 500 m <sup>2</sup> ). Contractor to include coordination and cost of steel plate corrugated bridge manufacturers inspections.	\$177,000.00
	Supply and install 20 HP 310 x 110 piles, complete with concrete pile caps and struts with rebar. (see Notes on Details 9-1D page 58 of 63)	\$149,500.00

Item	Description	Amount
<b><u>BRIDGE NO. 4 ON ROLL NO. 001-20300</u></b>		
	d) Station 3+747 – Remove & dispose existing 3.5 m wide wooden bridge, supply and installation of a new 8 m long, 8052 mm x 3049 mm galvanized corrugated structural plate steel bridge arch with 381 mm x 140 mm corrugations and 8.0 mm thickness (AIL Super-Cor or equivalent) complete with native backfill for excavated area (approximately 85 m <sup>3</sup> ), granular 'B' backfill at culvert (approximately 670 tonnes), Granular 'A' (crushed limestone) driveway surface (approximately 130 tonnes) and 300 mm base under pile caps and struts (approximately 330 tonnes), vertical steel sheet pile end walls (approximately 32 m) and stone erosion protection for culvert end walls and banks (approximately 500 m <sup>2</sup> ).	\$177,000.00
	e) Supply and install 20 HP 310 x 110 piles, complete with concrete pile caps and struts with rebar. (see Notes on Details 9-1D page 58 of 63)	\$149,500.00
<b><u>BRIDGE NO. 5 ON 4<sup>th</sup> LINE</u></b>		
	f) Station 7+352 – Remove & dispose existing 24.5 m long 2400 mm diameter CSP, supply and installation of a new 33.5 m long, 3890 mm x 2690 mm galvanized corrugated steel pipe arch (CSPA) with 125 mm x 25 mm corrugations and 4.2 mm thickness complete with clear stone bedding 150 mm thick including under haunches (approximately 185 tonnes), full Granular 'A' (crushed limestone) backfill up to the underside of the road material (approximately 780 tonnes) and sloping stone end walls. (approximately 165 m <sup>2</sup> ) with armour stone wall for erosion protection (as referenced on drawings).	\$78,700.00
8.	<u>4<sup>th</sup> Line Road Restoration</u> - Supply and placement of 50 mm HL4 (one lift) base asphalt (approximately 18 tonnes) and 50 mm HL3 (one lift) surface asphalt (approximately 18 tonnes) to match existing driveable top width and surface elevation.	\$6,000.00
9.	Stations 1+753, 1+870, 2+118, 2+242 - Remove private golf cart bridges and salvage for reuse by owner (4 locations).	\$6,000.00
10.	Removal of obstructions (miscellaneous debris).	\$5,000.00



Item	Description	Amount
11.	Stone Erosion Protection work, as follows:	
	a) Stations 2+785, 2+798, 5+750, 5+774, 6+716, 7+338, 7+478, 7+660 – Supply and place stone erosion protection at tributary drain inlets (8 locations) – total 165 m <sup>2</sup> approximately.	\$8,250.00
	b) Stations 1+126, 1+246, 1+285, 1+431, 2+246, 4+518, 5+245, 6+874, 7+280, 7+388, 7+438, 7+606, 7+625, 7+827, 7+927, 8+314 – Supply and install stone erosion protection at drain bank washouts (16 locations) - total 465 m <sup>2</sup> approximately.	\$23,250.00
	c) Stations 2+995, 4+242, 4+690, 7+742, 7+930, 8+248 – Supply and install stone erosion protection on drain bends washouts (6 locations) - total 315 m <sup>2</sup> approximately.	\$15,750.00
	d) Supply and install temporary rock check dam (OPSD 219.211) (3 locations) - 20 tonnes each approximately – Station 2+800, 5+780, 7+370, (upstream 2 <sup>nd</sup> Line, 3 <sup>rd</sup> Line, 4 <sup>th</sup> Line).	\$6,000.00
	e) Station 3+835 (private access bridge Roll No. 001-20400) – Supply and install stone erosion protection for culvert banks (approximately 500 m <sup>2</sup> ).	\$25,000.00
12.	Private inlet drain work, as follows:	
	a) Station 1+134 (private inlet drain north side) – Supply and install 16 m of new 600 mm diameter solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints, c/w flap gate on outlet end and new filter fabric underlay with 300 mm thick stone erosion protection (approximately 30 m <sup>2</sup> ).	\$5,000.00
	b) Station 1+313 (private inlet drain north side) – Supply and install 16 m of new 450 mm diameter solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints, c/w flap gate on outlet end and new filter fabric underlay with 300 mm thick stone erosion protection (approximately 30 m <sup>2</sup> ).	\$4,000.00

Item	Description	Amount
	c) Station 1+975 (private inlet drain north side) – Supply and install 16 m of new 600 mm diameter solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints, c/w flap gate on outlet end and new filter fabric underlay with 300 mm thick stone erosion protection (approximately 30 m <sup>2</sup> ).	\$5,000.00
	d) Station 2+482 (South Innisfil Creek Drain ‘B’ from east) – Supply and install 16 m of new 900 mm diameter solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints, c/w flap gate on outlet end and new filter fabric underlay with 300 mm thick stone erosion protection (approximately 30 m <sup>2</sup> ).	\$9,200.00
	e) Station 3+012 (private inlet drain north side) – Supply and install 16 m of new 900 mm diameter solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints, c/w flap gate on outlet end and new filter fabric underlay with 300 mm thick stone erosion protection (approximately 30 m <sup>2</sup> ).	\$9,200.00
	f) Station 3+110 (private inlet drain north side) – Supply and install 16 m of new 450 mm diameter solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints, c/w flap gate on outlet end and new filter fabric underlay with 300 mm thick stone erosion protection (approximately 30 m <sup>2</sup> ).	\$4,000.00
	g) Station 3+322 (private inlet drain north side) – Supply and install 16 m of new 900 mm diameter solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints, c/w flap gate on outlet end and new filter fabric underlay with 300 mm thick stone erosion protection (approximately 30 m <sup>2</sup> ).	\$9,200.00

Item	Description	Amount
	h) Station 3+711 (private inlet drain north side) – Supply and install 16 metres of new 450 mm diameter solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints, c/w flap gate on outlet end and new filter fabric underlay with 300 mm thick stone erosion protection (approximately 30 m <sup>2</sup> ).	\$4,000.00
	i) Station 3+783 (private inlet drain south side) – Supply and install 16 m of new 450 mm diameter solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints, c/w flap gate on outlet end and new filter fabric underlay with 300 mm thick stone erosion protection (approximately 30 m <sup>2</sup> ).	\$4,000.00
	j) Station 4+299 (private inlet drain north side) – Supply and install 16 m of new 750 mm diameter solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints, c/w flap gate on outlet end and new filter fabric underlay with 300 mm thick stone erosion protection (approximately 15 m <sup>2</sup> ).	\$6,500.00
	k) Station 4+737 (300 mm diameter, corrugated steel pipe (CSP) inlet north side) – Supply and place flap gate on end of existing pipe.	\$1,000.00
	l) Station 4+871 (Prokopchuk Drain east side) – Supply and install 16 m of new 900 mm solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints, c/w flap gate on outlet end and new filter fabric underlay with 300 mm thick stone erosion protection (approximately 30 m <sup>2</sup> ).	\$9,200.00
	m) Station 5+556 (3 <sup>rd</sup> Line south road ditch west side) - Supply and install 16 m of new 750 mm diameter solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints, c/w flap gate on outlet end and new filter fabric underlay with 300 mm thick stone erosion protection (approximately 15 m <sup>2</sup> ).	\$6,500.00

Item	Description	Amount
	n) Station 5+578 (10 Sideroad east road ditch south side) - Supply and install 16 m of new 300 mm diameter solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints, c/w flap gate on outlet end and new filter fabric underlay with 300 mm thick stone erosion protection (approximately 15 m <sup>2</sup> ).	\$2,500.00
	o) Station 5+587 (10 Sideroad east road ditch north side) - Supply and place new flap gate on outlet end of existing 300 mm diameter corrugated steel pipe (CSP) road culvert crossing 3 <sup>rd</sup> Line.	\$1,000.00
	p) Station 6+513 (west side of drain) – Fill in existing swale and re-direct swale to 10 Sideroad road ditch (approximately 165m) and seed area to grass (approximately 500 m <sup>2</sup> ).	\$3,000.00
13.	Supply and place temporary construction access culverts as required to match upstream and downstream conditions (approximately 6).	\$50,000.00
14.	Re-vegetation - Supply and place seedling tree and shrub plantings as specified (approximately 1500 seedlings).	\$54,000.00
15.	Temporary Silt Control Measures During Construction	\$30,000.00
16.	Traffic control measures during construction	\$5,000.00
	<b>SUB-TOTAL</b>	<b>\$2,745,830.00</b>
17.	Allowances under Sections 29 and 30 (drain improvements).	\$301,248.00
18.	Site meeting, drain survey, preliminary report including expenses and incidentals.	\$86,000.00
19.	Environmental Reports (CEAA Screen, Butternut Survey, Bobolink Survey)	\$19,900.00
20.	Final report, assessment, including expenses and incidentals.	\$370,000.00
21.	Construction administration, periodic inspection and final inspection.	\$105,400.00
	<b>TOTAL ESTIMATE (South Innisfil Creek Main Drain)</b>	<b>\$3,628,378.00</b>

Item	Description	Amount
22.	<b>Construct Drain Overflow Area No. 3</b> south of 5 <sup>th</sup> Line (Property Roll 002-26300) as follows:	
	a) Brushing and clearing of site (84,400m <sup>2</sup> ).	\$2,000.00
	b) Stripping and stockpile of topsoil 200 mm thick (approximately 16,880m <sup>3</sup> ).	\$33,760.00
	c) Excavation, trucking & disposal of fill off site. (approximately 53,120 m <sup>3</sup> ).	\$637,500.00
	d) Grading and shaping of berms and access road (approximately 10,000 m <sup>3</sup> ).	\$15,000.00
	e) Placing and grading of stockpiled topsoil in the overflow flood plain area (65,700 m <sup>2</sup> ).	\$19,750.00
	f) Seeding of flood plain area (65,700 m <sup>2</sup> ).	\$65,700.00
	g) Placing and grading of topsoil on side slope area (3,876 m <sup>2</sup> ).	\$1,200.00
	h) Seeding of side slope area (3,876 m <sup>2</sup> ).	\$4,000.00
	i) Revegetation – Supply and place seedling tree and shrub plantings as specified.(approximately 150 seedlings).	\$3,000.00
	j) Supply and install 400 mm to 500 mm diameter (OPSS 1004) stone erosion protection 900 mm thick for lateral inflow weir (approximately 200 m <sup>2</sup> ) including grading and raised drain banks.	\$30,000.00
	k) Outfall pipe - Supply and install 26 m of new 450 mm diameter solid (non-perforated) corrugated high density polyethylene (HDPE) smooth wall 320 kPa pipe (Boss 2000 or approved equal) with split coupler joints and flap gate on outlet end.	\$4,200.00
	l) Supply and place a concrete headwall (OPSD 804.040 or approved equivalent) at the outfall pipe. Headwall installation is to include 5m bank stabilization and riffle stones as specified.	\$15,000.00
	<b>SUB-TOTAL</b>	<b>\$831,110.00</b>
23.	Allowances under Sections 29 (Overflow Area 3)	\$300,000.00
24.	Land cost appraisal	\$2,840.00
25.	Site meeting, drain survey, preliminary report including expenses and incidentals.	\$20,000.00

Item	Description	Amount
26.	Final report, assessment, including expenses and incidentals.	\$113,560.00
27.	Construction administration, periodic inspection and final inspection.	\$37,400.00
	<b>TOTAL ESTIMATE (Overflow Area 3)</b>	<b>\$1,304,910.00</b>
28.	<b>Construct Drain Overflow Area 1</b> at County Road 89 and the 5 Sideroad (Property Roll 001-01200) as follows:	
	a) Brushing and clearing of site (approximately 49,900m <sup>2</sup> ).	\$2,000.00
	b) Stripping and stockpile of topsoil 200 mm thick (approximately 10,000m <sup>3</sup> ).	\$20,000.00
	c) Excavation, trucking & disposal of fill off site. (approximately 45,680m <sup>3</sup> ).	\$548,150.00
	d) Placing of topsoil and grading of flood plain area (44,260 m <sup>2</sup> ).	\$13,300.00
	e) Seeding of flood plain area (44,260 m <sup>2</sup> ).	\$44,250.00
	f) Placing of topsoil and grading of side slope area (4,525 m <sup>2</sup> ).	\$1,360.00
	g) Seeding of side slope area (4,525 m <sup>2</sup> ).	\$4,525.00
	h) Brush Layering on side slopes - Supply and place live stakes inserted into the mesh holes of the coir mat as specified. (approximately 150 seedlings)	\$6,450.00
	<b>SUB-TOTAL</b>	<b>\$640,035.00</b>
29.	Allowances under Sections 29 (Overflow Area 1).	\$150,000.00
30.	Land cost appraisal	\$4,525.00
31.	Site meeting, drain survey, preliminary report including expenses and incidentals.	\$25,000.00
32.	Final report, assessment, including expenses and incidentals.	\$109,400.00
33.	Construction administration, periodic inspection and final inspection.	\$27,200.00
	<b>TOTAL ESTIMATE (Overflow Area 1)</b>	<b>\$956,160.00</b>

**b) Hnydczak Outlet Relief Drain**

The former outlet for the Branch 'A' Drain of the South Innisfil Creek Drain that was originally constructed in 1954 served to drain the lands in Lots 7 and 8 in the south half of Concession 1, Town of Innisfil and its outlet was into the main drain between 5 Sideroad and Highway 400. A subsequent drain report by W.G. McGeorge in 1958 on the Branch 'A' Drain portion had provided the Hnydczak Drain an outlet which brought in a larger drainage area (approximately 1,300 hectares) into the South Innisfil Creek Drain at the upstream side of Highway 400 that originates as far south of County Road 89 as the 14<sup>th</sup> Line within the Town of Innisfil.

Under a subsequent report in 1963 by P.W. Ainley, P. Eng., the Hnydczak Drain outlet was rerouted to provide a primary outlet into the South Innisfil Creek Drain to the north along the east side of Rieve Boulevard at the upstream side of Highway 400. Further improvements followed on the Hnydczak Drain under a report in 1978 by D. McNalty, P.Eng., to improve drainage flows for the area south of County Road 89 including the installation of a larger road culvert under County Road 89.

In our considered opinion, the configuration of the Hnydczak Drain outlet into the South Innisfil Drain at Highway 400 (a tee intersection) is hydraulically less efficient. We recommend the original Branch 'A' outlet drain portion located west of Highway 400 including the existing crossing at Highway 400 (located to the south of the Highway 400 crossing for the South Innisfil Creek Drain) be improved and deepened to its outlet. This improvement will provide additional drainage relief for the lands east of Highway 400. We hereby rename the outlet portion of the former Branch 'A' Drain in Lot 6, Concession 1 the "Hnydczak Outlet Relief Drain." No records were found indicating that the original outlet drain portion of the Branch 'A' Drain was previously abandoned. The Hnydczak Drain has two drain outlets to the South Innisfil Creek Drain with the primary one located at Station 1+699 and the "Hnydczak Outlet Relief Drain" located at Station 1+134.

Our recommended design profiles for the proposed drain improvements are attached to this report. Based on the information obtained from our survey and review of previous engineer's reports on the drain, we have included the following observations and recommendations.

- There is localized heavy build up of sediment within the drain (800 mm to 1000 mm) from the outlet into the South Innisfil Creek Drain upstream to Highway 400. This seems to indicate that there has been minimal maintenance work performed on this portion of drain. We recommend a cleanout of the drain to match the new design bottom profile.
- Based on a hydrological analysis of the watershed area, the existing drain channel section does not have a sufficient cross section width, depth or drain slope to convey a 1 in 2 year intensity storm peak flow. For a portion of the drain's length (approximately Station 0+000 to 0+500) the drain banks require elevating.

It appears that some berming has been constructed on the south side of the drain. We recommend that a berm be constructed along the north and east side of the drain in accordance with the drawings.

- A farm bridge crossing at Station 0+222 does not provide sufficient capacity for the drain to convey the 1 in 2 year peak flow. The bridge is to be replaced with a larger culvert to serve property Roll No. 001-01400.

- The existing culverts under the north and southbound lanes of Highway 400 are in good condition and have sufficient hydraulic capacity to convey the 2 year storm flow. The southbound crossing comprises a 4000 mm span concrete culvert abutting a perched 4700 mm x 2600 mm corrugated steel pipe arch culvert under the northbound lanes. We also suggest that when it becomes necessary to replace the culverts across the highway, that they be lowered to match the design gradeline specified in this report.
- The existing culverts under Rieve Boulevard and the Highway 400 off ramp west side (Service Centre) require cleaning only.
- The Hnydczak Drain itself, in our opinion, does not require a cleanout at this time, however it will benefit from the improvements to the “Hnydczak Outlet Relief Drain.”

We estimate the cost of the recommended work to be as follows:

### Hnydczak Outlet Relief Drain

Item	Description	Amount
1.	Brushing of the drain from Station 0+000 to Station 0+500 including the disposal by burning on-site or removal off-site with trimming and/or removal of existing trees as required to accommodate the drainage works	\$5,000.00
2.	Excavation and levelling of excavated materials works, as follows:	
	a) Drain bottom excavation and widening, as follows:	
	i) Station 0+000 to Station 0+500, totalling approximately 500 lineal metres of drain and approximately 2,000 m <sup>3</sup> of material.	\$7,000.00
	b) Levelling of excavated materials and raised banks, as follows:	
	i) Station 0+000 to Station 0+500, totalling approximately 500 lineal metres of drain and approximately 2,000 m <sup>3</sup> of material	\$6,000.00
3.	Hydraulic seeding of drain bank and raised bank on north and east sides, disturbed by drain widening from Station 0+000 to Station 0+500 (approximately 2,500 m <sup>2</sup> ).	\$1,875.00
4.	Seeding of grass buffer strips, as follows:	
	a) Seeding of 3.0 m wide grass buffer strip beyond the top of the banks on the south and west sides of the drain from Station 0+000 to Station 0+500 (approximately 3,000 m <sup>2</sup> ).	\$1,125.00



Item	Description	Amount
5.	Bridge works, as follows:	
<b>BRIDGE NO. 1 ON ROLL NO. 001-01400</b>		
	a) Bridge No. 1 - Station 0+222 (Roll No. 001-01400) – Remove existing 450 mm diameter CSP culvert and installation of a new 16.5 m long, 2440 mm x 1750 mm corrugated galvanized steel pipe (CSP) ellipse with 125 mm x 25 m corrugations and 2.8 mm thickness (see Specifications) complete with clear stone bedding 150 mm thick including under haunches (approximately 65 tonnes), full Granular 'B' backfill up to the underside of the Granular 'A' driveway materials, (approximately 175 tonnes), Granular 'A' (crushed limestone) driveway surface (approximately 35 tonnes), and sloping stone end walls (approximately 65 m <sup>2</sup> ).	\$20,600.00
6.	Highway culvert work, as follows:	
	a) (Highway 400) – Station 0+601 – clean existing 4700 mm x 2600 mm CSP ellipse.	\$3,500.00
	b) (Rieve Boulevard) – Station 0+633 - clean existing 4700 mm x 2600 mm CSP ellipse and concrete culvert.	\$3,500.00
	c) (Highway 400 off ramp) – Station 0+518 - clean existing concrete culvert.	\$3,500.00
7.	Stone Erosion Protection work, as follows::	
	a) Station 0+000 to 0+030 - Supply and install stone erosion protection (SEP) (approximately 75 m <sup>2</sup> ) including new filter fabric underlay beneath.	\$4,000.00
	b) Rock Check Dam (temporary) (OPSD 219.211) - Station 0+030 - Supply and install stone erosion protection (SEP) (approximately 30 m <sup>2</sup> ) including new filter fabric underlay beneath a small rock dam constructed across the ditch.	\$2,000.00
8.	Station 0+005 - Removal of existing 600 mm diameter CSP culvert.	\$600.00
9.	Temporary Silt Control Measures During Construction	\$2,500.00
<b>SUB-TOTAL</b>		<b>\$61,200.00</b>
10.	Allowances under Sections 29 and 30	\$2,730.00
11.	Site meeting, drain survey, preliminary report including expenses and incidentals.	\$10,400.00

Item	Description	Amount
12.	Final report, assessment, construction administration, periodic inspection and final inspection including expenses and incidentals.	\$8,000.00
	<b>TOTAL ESTIMATE (Hnydczak Outlet Relief Drain)</b>	<b>\$82,330.00</b>



**c) 3<sup>rd</sup> Line Branch Drain (Station 0+000 to Station 1+733)**

Our recommended design profiles for the proposed drain improvements are attached to this report. Based on the information obtained from our survey and review of previous Engineer's reports on the drain, we have included the following observations and recommendations:

- There is a minimal amount of sediment build up within the drain starting from the outlet into the South Innisfil Creek Drain to the upstream end of the drain. This may reflect recent drain maintenance work done on this portion of drain and a drain bottom slope of approximately 0.20% that permits sufficient flow velocities to transport sediment. A portion of the drain will require cleanout in the vicinity of where the 3<sup>rd</sup> Line Branch Drain Spur enters and spot cleaning both upstream and downstream of this point to provide the new design drain bottom profile.
- Based on a hydrological analysis of the watershed area, the existing drain channel section does have a sufficient cross section width, depth and drain slope to convey a 1 in 2 year intensity storm peak flow.
- There are numerous farm and residential access culverts within the drain that are undersized and do not convey a 1 in 2 year intensity storm peak flow. Some of these bridge culverts are also deteriorated, partially collapsed, have insufficient cover and/or provide narrow driveable top widths. We recommend the replacement of these culverts. The upper portion of the drain will require deepening (approximately 300 mm) to accommodate the larger replacement culverts.
- There are a couple of farm access culverts within the drain that are sufficient in capacity and at the proper depth to match the new drain bottom profile. These culverts however provide narrow driveable top widths. We recommend the extension of the culvert length to increase the top driveable top width to a minimum 6 m (20 feet).
- There are numerous locations along the course of the drain where erosion of the drain banks is moderately to severely eroding. Bottom sediment levels are higher in the drain at these locations and have reduced drain capacity. We recommend stone erosion protection in these locations.
- There are numerous tributary drain inlets along the course of the drain that have significant flows into the drain. Considering that a drain widening and reshaping of the drain banks is required along a significant portion of the drain, and time is required to re-establish a vegetative cover to protect the drain banks, we recommend stone erosion protection in these locations.

We estimate the cost of the recommended work to be as follows:

### 3<sup>rd</sup> Line Branch Drain

Item	Description	Amount
1.	Excavation and levelling of excavated materials works, as follows:	
	a) Excavation of the drain spoils, as follows:	
	Station 0+000 to Station 1+733, totalling approximately 1,733 lineal metres of drain and approximately 500 m <sup>3</sup> .	\$2,500.00
	b) Trucking of drain spoils off site:	
	Station 0+754 to Station 1+659, (Roll No. 002-11600 to 002-12400), approximately 350 m <sup>3</sup> .	\$2,500.00
	c) Levelling of excavated drain spoils, as follows:	
	Station 0+000 to Station 0+754, approximately 500 m <sup>3</sup> of excavated drain spoil, 6 m wide.(approximately 150 m <sup>3</sup> ).	\$1,500.00
2.	Seeding of grass buffer strips, as follows:	
	a) Seeding of 3.0 m wide grass buffer strip beyond the top of bank on the south side of the drain from Station 0+000 to Station 1+733 (approximately 5,200 m <sup>2</sup> ).	\$3,900.00
3.	Bridge works, as follows:	
<b><u>BRIDGE NO. 1 ON ROLL NO. 002-12900</u></b>		
	a) Station 0+034 – Remove existing 9.1 m long 1500 mm diameter CSP culvert and installation of a new 17.5 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) with 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 20 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 300 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 50 tonnes), and sloping stone end walls (approximately 100 m <sup>2</sup> ).	\$21,800.00
<b><u>BRIDGE NO. 2 ON ROLL NO. 002-12800</u></b>		
	b) Station 0+255 – Remove existing 9 m long 1500 mm diameter CSP culvert and installation of a new 17 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) with 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 20 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 230 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 50 tonnes), and sloping stone end walls (approximately 75 m <sup>2</sup> ).	\$19,200.00

Item	Description	Amount
<b><u>BRIDGE NO. 3 ON ROLL NO. 002-12700</u></b>		
	c) Station 0+379 – Remove existing 7.7 m long 1500 mm diameter CSP culvert and installation of a new 16.5 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) with 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 20 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 235 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 50 tonnes), and sloping stone end walls (approximately 65 m <sup>2</sup> ).	\$18,000.00
<b><u>BRIDGE NO. 4 ON ROLL NO. 002-12600</u></b>		
	d) Station 0+567 – Remove existing 25 m long 1650 mm x 1350 mm CSP ellipse and installation of a new 25.0 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) with 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 25 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 330 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 100 tonnes), and sloping stone end walls (approximately 75 m <sup>2</sup> ).	\$26,900.00
<b><u>BRIDGE NO. 5 ON ROLL NO. 002-12500</u></b>		
	e) Station 0+709 – Remove and lower existing 5 m long 2400 mm diameter CSP and extend with a new 13 m long, 2400 mm diameter corrugated galvanized steel pipe (CSP) with 125 mm x 25 mm corrugation and 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 25 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 260 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 45 tonnes), and sloping stone end walls (approximately 90 m <sup>2</sup> ).	\$19,000.00

Item	Description	Amount
<b><u>BRIDGE NO. 6 ON ROLL NO. 002-12400</u></b>		
	f) Station 0+760 – Remove existing 9.3 m long 1500 mm diameter CSP culvert and installation of a new 18 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) with 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 20 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 315 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 50 tonnes), and sloping stone end walls (approximately 80 m <sup>2</sup> ).	\$21,300.00
<b><u>BRIDGE NO. 7 ON ROLL NO. 002-12400</u></b>		
	g) Station 0+819 – Remove existing 8.6 m long 1300 mm x 1000 mm CSP ellipse and installation of a new 19 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) with 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 20 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 410 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 50 tonnes), and sloping stone end walls (approximately 80 m <sup>2</sup> ).	\$23,400.00
<b><u>BRIDGE NO. 8 ON ROLL NO. 002-12300</u></b>		
	h) Station 0+866 – Extend existing 5 m long 2400 mm diameter CSP with of a new 13 m long, 2400 mm diameter corrugated galvanized steel pipe (CSP) with 125 mm x 25 mm corrugation and 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 20 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 260 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 50 tonnes), and sloping stone end walls (approximately 65 m <sup>2</sup> ).	\$17,700.00

Item	Description	Amount
<b><u>BRIDGE NO. 9 ON ROLL NO. 002-12200</u></b>		
	i) Station 0+906 – Remove existing 6.6 m long 1200 mm CSP and installation of a new 16 m long, 1500 mm diameter spiral rib galvanized steel pipe (SRP) with 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 15 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 205 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 45 tonnes), and sloping stone end walls (approximately 60 m <sup>2</sup> ).	\$15,800.00
<b><u>BRIDGE NO. 10 ON ROLL NO. 002-12200</u></b>		
	j) Station 0+921 – Remove existing 7 m long 1200 mm CSP and restore the drain and banks including grading and seeding.	\$2,500.00
<b><u>BRIDGE NO. 11 ON ROLL NO. 002-12000</u></b>		
	k) Station 1+162 – Remove existing 6 m long 1800 mm x 1100 mm CSP arch and installation of a new 14 m long, 1500 mm diameter spiral rib galvanized steel pipe (SRP) with 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 15 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 150 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 40 tonnes), and sloping stone end walls (approximately 30 m <sup>2</sup> ).	\$12,400.00
<b><u>BRIDGE NO. 12 ON ROLL NO. 002-11900</u></b>		
	l) Station 1+351 – Remove existing 7.3 m long 1200 mm CSP and installation of a new 14.5 m long, 1500 mm diameter spiral rib galvanized steel pipe (SRP) with 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 15 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 225 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 40 tonnes), and sloping stone end walls (approximately 20 m <sup>2</sup> ).	\$13,500.00

Item	Description	Amount
<b><u>BRIDGE NO. 13 ON ROLL NO. 002-11800</u></b>		
	m) Station 1+448 – Remove existing 5.8 m long 1200 mm CSP and installation of a new 14.5 m long, 1500 mm diameter spiral rib galvanized steel pipe (SRP) with 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 15 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 245 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 40 tonnes), and sloping stone end walls (approximately 20 m <sup>2</sup> ).	\$13,700.00
<b><u>BRIDGE NO. 14 ON ROLL NO. 002-11700</u></b>		
	n) Station 1+531 – Remove two existing 6.2 m long 900 mm CSP and installation of a new 13 m long, 1520 mm x 1200 mm spiral rib galvanized steel pipe (SRP) arch with 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 35 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 65 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 40 tonnes), and sloping stone end walls (approximately 30 m <sup>2</sup> ).	\$13,000.00
<b><u>BRIDGE NO. 15 ON ROLL NO. 002-11600</u></b>		
	o) Station 1+647 – Remove existing timber bridge and installation of a new 13 m long, 1520 mm x 1200 mm spiral rib galvanized steel pipe (SRP) arch with 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 35 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 75 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 35 tonnes), and sloping stone end walls (approximately 25 m <sup>2</sup> ).	\$12,500.00
6.	Stone Erosion protection works as follows:	
	a) Rock Check Dam (temporary) (OPSD 219.211) – Station 0+010 & 0+960 – Supply and install stone erosion protection (SEP) (approximately 30 m <sup>2</sup> each) including new filter fabric underlay beneath a small rock dam constructed across the ditch.	\$4,500.00

Item	Description	Amount
	b) Stations 0+301, 0+671 to 0+681, 0+837, 0+958 & 1+506 – Supply and install 105 m <sup>2</sup> of stone erosion protection (SEP) including new filter fabric underlay at the location of existing washout and tributary drain inlets.	\$5,400.00
7.	Traffic control measures during construction.	\$7,500.00
8.	Temporary Silt Control Measures During Construction	\$2,500.00
	<b>SUB-TOTAL</b>	<b>\$281,000.00</b>
9.	Allowances under Sections 29 and 30	\$21,070.00
10.	Site meeting, drain survey, preliminary report including expenses and incidentals.	\$24,000.00
11.	Final report, assessment, construction administration, final inspection including expenses and incidentals.	\$37,270.00
	<b>TOTAL ESTIMATE (3<sup>rd</sup> Line Branch Drain)</b>	<b>\$363,340.00</b>

d) **3<sup>rd</sup> Line Branch Drain Spur (Station 0+000 to Station 0+775)**

Design profiles for the recommended drain improvements are attached to this report. Based on the information obtained from our survey and review of previous Engineer's reports on the drain, we have included the following observations and recommendations:

- There is a minimum amount of sediment within the drain from the outlet into the 3<sup>rd</sup> Line Branch Drain to the upstream end of the drain. This reflects recent drain maintenance work done on this portion of drain. No work is required at this time to clean the drain.
- Based on a hydrological analysis of the watershed area, the existing drain channel section does have a sufficient cross section width, depth and drain slope to convey a 1 in 2 year intensity storm peak flow. The existing drain banks are high enough along the entire length to convey the 1 in 2 year intensity storm peak flows.
- There is one (1) farm access culvert within the drain that is deteriorated, partially collapsed, has insufficient cover and provides a narrow driveable top width. We recommend the replacement of this access culvert.
- Based on the existing condition and location of the 3<sup>rd</sup> Line Drain Spur Outlet Culvert under 3<sup>rd</sup> Line, we recommend the replacement of this culvert.



We estimate the cost of the recommended work to be as follows:

**3<sup>rd</sup> Line Branch Drain Spur**

<b>Item</b>	<b>Description</b>	<b>Amount</b>
1.	Bridge works, as follows:	
<b><u>BRIDGE NO. 1 ON 3<sup>rd</sup> LINE (ROAD CROSSING)</u></b>		
	a) Station 0+012 – Remove existing 21.7 m long 1800 mm x 1100 mm CSPA culvert and installation of a new 25 m long, 2010 mm x 1530 mm corrugated steel pipe arch (CSPA) with 125 mm x 25 mm corrugation and 3.5 mm thickness (see Specifications) complete with clear stone bedding (approximately 30 tonnes), full Granular ‘A’ (crushed limestone) backfill and driveway surface, (approximately 465 tonnes) and sloping stone end walls (approximately 55 m <sup>2</sup> ).	\$28,600.00
<b><u>BRIDGE NO. 2 ON ROLL NO. 002-14400</u></b>		
	b) Station 0+598 – Remove existing 7.8m long 1500 mm diameter CSP culvert and installation of a new 14.5 m long, 1500 mm diameter spiral rib galvanized steel pipe (SRP) with 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 25 tonnes), full Granular ‘B’ backfill up to the underside of the Granular ‘A’ driveway materials, (approximately 65 tonnes), Granular ‘A’ (crushed limestone) driveway surface (approximately 55 tonnes) and sloping stone end walls (approximately 55 m <sup>2</sup> ).	\$14,200.00
	c) Station 0+172 – Remove existing footbridge.	\$500.00
2.	Stone Erosion protection works as follows:	
	a) Stations 0+022 & 0+604 – Supply and install 15 m <sup>2</sup> each of stone erosion protection (SEP) including new filter fabric underlay at the location of existing tributary drain inlets.	\$2,000.00
3.	Traffic control measures during construction.	\$1,000.00
4.	Temporary Silt Control Measures During Construction	\$1,000.00
	<b>SUB-TOTAL</b>	<b>\$47,300.00</b>
5.	Site meeting, drain survey, preliminary report including expenses and incidentals.	\$2,000.00
6.	Final report, assessment, construction administration, periodic inspection and final inspection including expenses and incidentals.	\$9,900.00
	<b>TOTAL ESTIMATE (3<sup>rd</sup> Line Branch Drain Spur)</b>	<b>\$59,200.00</b>

e) **10 Sideroad Branch Drain (Station 0+000 to Station 1+500)**

Design profiles for the recommended drain improvements are attached to this report. Based on the information obtained from our survey and review of previous Engineer's reports on the drain, we have included the following observations and recommendations:

- There is a build up of sediment within the drain from the outlet into the South Innisfil Creek Drain to the upstream end of the drain at 4<sup>th</sup> Line. This reflects a drain bottom slope of 0.20% that permits sufficient flow velocities to transport sediment.
- Based on a hydrological analysis of the watershed area, the existing drain channel section does not have a sufficient cross section width, depth or drain slope to convey a 1 in 2 year intensity storm peak flows. For a portion of the drain's length the drain banks require elevating. The surrounding lands and existing drain bank elevations on the tributary drains entering the 10 Sideroad Branch Drain are high enough and do not require elevating. The exception is the 3<sup>rd</sup> Line road drains (north and south sides) that both enter from the west. For these drains we recommend a backwater control structure consisting of a pipe culvert and flap gate on the outlet end be placed at the entrance to the 10 Sideroad Branch Drain.
- All of the farm and residential access culverts within the drain are undersized and do not convey a 1 in 2 year intensity storm peak flows. Some of these bridge culverts are also deteriorated, partially collapsed, have insufficient cover and/or provide narrow driveable top widths. We recommend the replacement of these culverts. The drain will require deepening (approximately 500 mm to 900 mm) to accommodate the larger replacement culverts.
- The road culverts are undersized and do not have sufficient capacity for the drain. We recommend the replacement of these road culverts with larger culverts.
- There are numerous tributary drain inlets along the course of the drain that have significant flows into the drain. Considering that a drain widening and reshaping of the drain banks is required along a significant portion of the drain, and time is required to re-establish a vegetative cover to protect the drain banks from severe erosion, we recommend stone erosion protection in these locations.
- During a recent storm event in June 2005, the floodwaters crossed over the 4<sup>th</sup> Line just east of 10 Sideroad. The existing 450 mm diameter culvert across 10 Sideroad accepts the road swale drainage on the north side of the 4<sup>th</sup> Line into the 10 Sideroad Drain. This road culvert was discovered plugged during our survey. Considering the condition and size of the culvert, we recommend it be replaced with a new 600 mm diameter corrugated polymer laminated steel pipe culvert.

We estimate the cost of the recommended work to be as follows:

**10 Sideroad Branch Drain**

Item	Description	Amount
1.	Excavation and levelling of excavated materials works, as follows:	
	a) Drain bottom excavation and widening, as follows:	
	i) Station 0+025 to Station 1+500, totalling approximately 1475 lineal metres of drain and approximately 3,500 m <sup>3</sup> of material.	\$12,250.00
	b) Levelling of excavated materials and raised banks, as follows:	
	i) Station 0+168 to Station 1+500, totalling approximately 1332 lineal metres of drain and approximately 3,200 m <sup>3</sup> of material.	\$9,600.00
2.	Trucking of additional materials, where specified (001-23800) – approximately 300 m <sup>3</sup> .	\$1,500.00
3.	Hydraulic seeding of drain banks disturbed by drain widening from Station 0+025 to Station 1+500 (approximately 7,000 m <sup>2</sup> ).	\$8,400.00
4.	Seeding of grass buffer strips, as follows:	
	a) Seeding of 3.0 m wide grass buffer strip beyond the top of the banks on the west side of the drain from Station 0+168 to Station 1+500 (approximately 4,000 m <sup>2</sup> ).	\$5,250.00
5.	Bridge works, as follows:	
<b><u>BRIDGE NO. 1 ON 3<sup>rd</sup> LINE</u></b>		
	a) Station 0+017 – Remove existing 12.5 m long 1800 mm x 1150 mm CSPA culvert and installation of a new 17.5 m long, 2000 mm diameter spiral rib galvanized steel pipe (SRP) with 125 mm x 25 m corrugations and 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 20 tonnes), full Granular 'A' (crushed limestone) backfill up to the underside of the road material (approximately 210 tonnes), asphalt paving 60 mm HL4 base asphalt (approximately 11 tonnes) and 40 mm HL3 surface asphalt (approximately 6 tonnes) match existing driveable top width), and sloping stone end walls (approximately 50 m <sup>2</sup> ).	\$22,450.00

Item	Description	Amount
<b><u>BRIDGE NO. 2 ON 001-23800</u></b>		
	b) Station 0+142 – Remove existing 10 m long 900 mm diameter CSP culvert and installation of a new 15.5 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) with 125 mm x 25 m corrugations and 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 20 tonnes), full Granular 'B' backfill up to the underside of driveway materials, (approximately 185 tonnes), Granular 'A' (crushed limestone) driveway subsurface (approximately 40 tonnes), asphalt paving 60 mm HL4 base asphalt (approximately 12 tonnes) and 40 mm HL3 surface asphalt (approximately 8 tonnes) match existing driveable top width), and sloping stone end walls (approximately 60 m <sup>2</sup> ).	\$19,700.00
<b><u>BRIDGE NO. 3 ON ROLL NO. 001-23900</u></b>		
	c) Station 0+267 – Remove existing 15 m long 900 mm diameter CSP culvert and installation of a new 19 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) with 125 mm x 25 m corrugations and 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 20 tonnes), full Granular 'B' backfill up to the underside of the Granular 'A' driveway materials, (approximately 220 tonnes), Granular 'A' (crushed limestone) driveway surface (approximately 65 tonnes), and sloping stone end walls (approximately 55 m <sup>2</sup> ).	\$19,400.00
<b><u>BRIDGE NO. 4 ON ROLL NO. 001-24200</u></b>		
	d) Station 0+411 – Remove existing 6.3 m long 900 mm diameter CSP culvert and installation of a new 16.5 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) with 125 mm x 25 m corrugations and 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 20 tonnes), full Granular 'B' backfill up to the underside of the Granular 'A' driveway materials, (approximately 245 tonnes), Granular 'A' (crushed limestone) driveway surface (approximately 50 tonnes), and sloping stone end walls (approximately 60 m <sup>2</sup> ).	\$18,400.00

Item	Description	Amount
<b><u>BRIDGE NO. 5 ON ROLL NO. 001-24200</u></b>		
	e) Station 0+658 – Remove existing 7.8 m long 1200 mm diameter steel boiler plate culvert and installation of a new 16.5 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) with 125 mm x 25 m corrugations and 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 20 tonnes), full Granular 'B' backfill up to the underside of the Granular 'A' driveway materials, (approximately 225 tonnes), Granular 'A' (crushed limestone) driveway surface (approximately 50 tonnes), and sloping stone end walls (approximately 65 m <sup>2</sup> ).	\$18,400.00
<b><u>BRIDGE NO. 6 ON ROLL NO. 001-24200</u></b>		
	f) Station 1+227 – Remove existing 6.1 m long 900 mm diameter CSP culvert and installation of a new 16.5 m long, 1500 mm diameter spiral rib galvanized steel pipe (SRP) with 125 mm x 25 m corrugations and 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 15 tonnes), full Granular 'B' backfill up to the underside of the Granular 'A' driveway materials, (approximately 200 tonnes), Granular 'A' (crushed limestone) driveway surface (approximately 50 tonnes), and sloping stone end walls (approximately 55 m <sup>2</sup> ).	\$15,900.00
<b><u>BRIDGE NO. 7 ON 4<sup>th</sup> Line</u></b>		
	g) Station 1+438 – Remove existing 17.6 m long 900 mm CSP culvert and installation of a new 18.0 m long, 1200 mm diameter galvanized corrugated steel pipe (CSP), with 125 mm x 25 mm corrugations and 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 20 tonnes), full Granular 'A' (crushed limestone) backfill up to the underside of the road material (approximately 140 tonnes), asphalt paving 60 mm HL4 base asphalt (approximately 6 tonnes) and 40 mm HL3 surface asphalt (approximately 4 tonnes) match existing driveable top width), and sloping stone end walls (approximately 30 m <sup>2</sup> ).	\$12,800.00
6.	Road culvert work, as follows:	

Item	Description	Amount
	a) (3 <sup>rd</sup> Line south road ditch west side) – Station 0+007 - Supply and install a new 16.0 m long, 900 mm diameter galvanized corrugated steel pipe (CSP), with 125 mm x 25 mm corrugations and 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 4 tonnes), a flap gate on outlet end and stone erosion protection (approximately 20 m <sup>2</sup> ).	\$8,100.00
	b) (3 <sup>rd</sup> Line north road ditch west side) – Station 0+028 - Supply and install a new 16.0 m long, 900 mm diameter galvanized corrugated steel pipe (CSP), with 125 mm x 25 mm corrugations and 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 4 tonnes), a flap gate on outlet end and stone erosion protection (approximately 20 m <sup>2</sup> ).	\$8,100.00
	c) (10 Sideroad) – Station 0+732 –Supply and install a new 17.0 m long, 900 mm diameter galvanized corrugated steel pipe (CSP) with 125 mm x 25 mm corrugations and 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 15 tonnes), full Granular 'A' (crushed limestone) backfill up to the underside of the road material (approximately 95 tonnes), asphalt paving 60 mm HL4 base asphalt (approximately 3.5 tonnes) and 40 mm HL3 surface asphalt (approximately 2.5 tonnes) match existing driveable top width), sloping stone end walls (approximately 20 m <sup>2</sup> ), and flap gate on outlet end.	\$13,700.00
	d) (10 Sideroad) – Station 1+455 – Remove existing 15.7 m long, 450 mm diameter CSP and installation of a new 16 m long, 600 mm diameter galvanized corrugated steel pipe (CSP) with 125 mm x 25 mm corrugations and 2.8 mm thickness (see Specifications) complete with clear stone bedding (approximately 10 tonnes), full Granular 'A' (crushed limestone) backfill up to the underside of the road material (approximately 95 tonnes), asphalt paving 60 mm HL4 base asphalt (approximately 3.5 tonnes) and 40 mm HL3 surface asphalt (approximately 2.5 tonnes) match existing driveable top width), and sloping stone end walls (approximately 20 m <sup>2</sup> ).	\$8,000.00
7.	Stone Erosion Protection work, as follows:	
	a) Rock Check Dam (OSPD 219.211) - Station 0+030 - Supply and install stone erosion protection (SEP) (approximately 30 m <sup>2</sup> ) including new filter fabric underlay beneath a small rock dam constructed across the ditch.	\$2,000.00

Item	Description	Amount
	b) Station 0+170, 0+252, 0+368, 0+581, 0+980, 1+245 - Supply and install stone erosion protection (SEP) (approximately 90 m <sup>2</sup> ) protection at tributary drain inlets.	\$4,500.00
8.	Temporary Silt Control Measures During Construction	\$5,000.00
	<b>SUB-TOTAL</b>	<b>\$213,450.00</b>
9.	Allowances under Sections 29 and 30.	\$36,848.00
10.	Site meeting, drain survey, preliminary report including expenses and incidentals.	\$19,500.00
11.	Final report, assessment, construction administration, periodic inspection and final inspection including expenses and incidentals.	\$35,550.00
	<b>TOTAL ESTIMATE (10 Sideroad Branch Drain)</b>	<b>\$305,348.00</b>

f)

<b>COST SUMMARY</b>	
South Innisfil Creek Drain (Main Drain) – <i>brought forward</i>	\$3,628,378.00
Overflow Area 1 – <i>brought forward</i>	\$956,160.00
Overflow Area 3 – <i>brought forward</i>	\$1,304,910.00
Hnydczak Outlet Relief Drain – <i>brought forward</i>	\$82,330.00
3 <sup>rd</sup> Line Branch Drain – <i>brought forward</i>	\$363,340.00
3 <sup>rd</sup> Line Branch Drain Spur – <i>brought forward</i>	\$59,200.00
10 Sideroad Branch Drain – <i>brought forward</i>	\$305,348.00
<b>OVERALL ESTIMATE</b>	<b>\$6,699,666.00</b>

All of the estimates provided in this report were prepared according to current materials and installation prices as of the date of this report. In the event of delays from the time of filing of the report by the Engineer to the time of tendering the work, it is understood that the estimate of cost is subject to inflation. The rate of inflation shall be calculated using the Consumer Price Index applied to the cost of construction from the date of the report to the date of tendering.

## **16. Assessment of Costs**

Individual assessments are normally comprised of three (3) assessment components:

- i. Benefit (*advantages relating to the betterment of lands, roads, buildings, or other structures resulting from the improvement to the drain*).
- ii. Outlet Liability (*part of cost required to provide outlet for lands and roads*).
- iii. Special Benefit (*additional work or feature that may not affect function of the drain*).

We have assessed the estimated costs against the affected lands and roads as listed in Schedule 'C' under "Value of Special Benefit," "Value of Benefit" and "Value of Outlet."

## **17. Assessment Rationale**

The total cost for each of the drainage works included in Option No. 1 and Option No. 3, are proportioned to the affected lands and roads within the watershed area. Separate schedules of assessment itemizing Special Benefit, Benefit and Outlet Liability costs allocated to each individual property and roadway. The assessment of costs for the drain improvements on the South Innisfil Creek Drain is listed as 'Schedule C' attached to this report. For simplification, separate assessment denoted as 'C-1', 'C-2', etc., schedules are provided for the Overflow Areas 1 and 3 and the branch drains respectively, We have included the residential properties within the Village of Churchill and have proportioned the costs over three (3) larger block areas. The Village of Churchill is located entirely within the watershed for the South Innisfil Creek Drain & Branches.

### Outlet Liability Assessment

In accordance with Section 23 of the Drainage Act, assessment for outlet liability is defined as "Lands and roads that use a drainage works as an outlet, or for which, when a drainage works is constructed or improved, an improved outlet is provided either directly or indirectly through the medium of any other drainage works or of a swale, ravine, creek or watercourse, may be assessed for outlet liability."

We have assessed outlet liability to the lands and roads within the entire watershed based on the volume of runoff and rate of drainage flow. Lands and roads were grouped into sub-catchment areas depending on their location and assessed outlet liability based on the location of the outlet connection of the sub-catchment area to the South Innisfil Creek Drain.

### Benefit Assessment

Lands and roads are assessed direct benefit for improvements to the drain where they have frontage on the drain. Direct benefit assessment is based on approximate drain frontage and drain area. These lands are assessed both direct benefit & outlet liability.

Lands and roads assessed indirect benefit for improvements to the drain, where there is benefit from an available outlet as a means of drainage for generally low lying lands and/or muck soils, but have no direct connection to the drain. These lands and roads are afforded outlet to the South Innisfil Creek Drain either through other tributary municipal drains, roadside ditches or private drainage schemes. In other words, these lands derive a greater benefit from the improvements on the drain to lessen the frequency of flooding. Indirect benefit assessments based on contributing land area.



### Option 1 & 3 Overflow Areas

The Option 3 overflow area south of 5<sup>th</sup> Line provides peak flow storage for the storm events which exceed the 2 year design storm.

The Option 1 overflow area between 5 Sideroad and County Road 89 after drain improvements are made ensures that the 1 in 2 year storm flows through the downstream water course of the Innisfil Creek compared to existing conditions has a negligible impact. It also provides reconnection of the flood plain with the downstream watercourse, and dispenses the energy of the flow regime to minimize erosion.

The overflow areas are an essential part of the design and recommended works in this report. We have assessed the costs of the Overflow Areas 1 & 2 against the lands and roads within the watershed depending on location and/or contributing area. The assessment distribution is listed in Schedule 'C' appended hereto.

### Private Access Bridges

We recommend that the cost of new and replacement private access bridges be assessed to the lands and roads listed in Schedule 'C'. For replacement of primary access bridges we have assessed 25% of the respective costs to the bridge owner listed under "Value of Special Benefit" and 75% to upstream lands and roads on an affected area basis in the same relative proportions listed under "Value of Outlet." . For replacement of secondary access bridges we have assessed 100% of the respective costs to the bridge owner listed under "Value of Special Benefit." The costs are to be assessed as a pro-rateable assessment. A separate schedule for details of Special Benefit (Schedule 'D') is included herein.

### South Innisfil Creek Golf Course

Four (4) private free span bridges currently serve the needs of Innisfil Creek Golf Club Lands and are recognized under this report. These bridges are considered private as they are not referenced in any previous report. We recommended the removal of these bridges from the drain as part of the improvement costs of the South Innisfil Creek Drain since the existing free span structures cannot accommodate the widened drain without modifications.

If the owner elects to replace or install new private free span bridges to suit only pedestrian and golf cart traffic over the widened channel, all costs for this work shall be at the expense of the landowner. In addition, the soffit elevation of these bridges, including any waterlines or decking, shall not be installed at an elevation lower than the top of the earthen berms on either side of the drain. No part of these structures shall be installed within the drain banks as defined on the attached cross sections. The landowner shall be responsible for all future maintenance of these bridges.

Should the landowner request a new access bridges over the drain, a new Engineer's Report shall be required in accordance with Section 78 of the Drainage Act. A report under Section 78 is not required for new or replacement private free span bridges for pedestrian & golf cart traffic.

### Municipal Road Bridges

We recommend that the cost of replacement of the road bridges be assessed 100% to the operating Road Authority listed under "Special Benefit". The costs are to be assessed as a non pro-rateable assessment. This report also includes recommendations for sizing of

future replacement of Municipal Road bridges which when constructed shall be assessed 100% to the Town of Innisfil as a special benefit. Engineering costs associated with hydraulic analysis, sizing and incorporation of these structures as future replacement items in this report have been apportioned to "Roads". We note that our analysis and structure size recommendation is based on providing a similar level of service to what exists currently. Our recommendations are based on historical performance of the existing road crossings and maintaining existing flow rates downstream.

## **18. Utilities**

It may become necessary to temporarily or permanently relocate utilities that may conflict with the construction recommended under this report. In accordance with Section 26 of the Drainage Act, we assess any relocation cost against the public utility having jurisdiction. Under Section 69 of the Drainage Act, the public utility is at liberty to do the work with its own forces, but if it should not exercise this option within a reasonable time, the Municipality will arrange to have this work completed and the costs will be charged to the appropriate public utility.

## **19. Future Maintenance**

### South Innisfil Creek Drain (Main Drain)

We recommend that future work of repair and maintenance on South Innisfil Creek Drain be carried out by the Town of Innisfil and assessed against the affected lands and roads in the same relative proportions as the amounts listed in Schedule 'C'.

1. Private access bridges at Stations 3+071, 3+477, 3+656 and 3+747: 25% against the property on which the culvert is located and the remaining 75% against the upstream lands, listed in Schedule 'C' in the same relative proportions as the amounts listed under "Value of Outlet."
2. Private access bridge at Station 3+835: 25% against the property on which the culvert is located and the remaining 75% against the upstream lands and roads in this report listed in Schedule 'C' in the same relative proportion as listed under "Value of Outlet".
3. The replacement of road crossing bridges on the 2<sup>nd</sup> Line, 10 Sideroad and 3<sup>rd</sup> Line at such time as the structures are no longer repairable shall be replaced with the size and specifications attached hereto and the cost shall be assessed 100% to the operating Road Authority.
4. Tile inlet repairs: 100% against the property on which the tile inlet is located.
5. For the 4<sup>th</sup> Line Bridge, we recommend that all future work for repair and/or maintenance be carried out by the Town of Innisfil and assessed 100% against the operating Road Authority.
6. Future maintenance of the Option 1 Overflow Area shall be carried out by the Town of Innisfil and assessed to the lands and roads in the same relative proportions as listed under "Overflow Area 1" in Schedule 'C-1'.
7. Future maintenance of The Option 3 Overflow area shall be carried out by the Town of Innisfil and assessed to the lands and roads in the same relative proportions as listed under "Overflow Area 3" in Schedule 'C-2'.

8. Other work: 100% against the lands listed in Schedule 'C' in the same relative proportions as the amounts listed under "Value of Benefit" and "Value of Outlet."
9. There is a large beaver dam located at Station 8+900. If in the future this dam poses a problem, we recommend that it be removed by the Town and the cost be assessed to the upstream lands and roads listed in Schedule 'C' in the same relative proportions as the amounts listed under "Value of Benefit" and "Value of Outlet."

A working corridor of 9 m is provided in this report for the placement and levelling of spoils for the excavated materials as part of this improvement work and for future access to the drain for maintenance. The working corridor extents are measured from the toe of the permanent earth berms constructed under this report. For sections of the drain where no work is proposed under this report, a working corridor of 9 m is also recommended measured from the nearest top of drain bank. A 3 m wide grass buffer strip shall also be maintained along the entire length of the drain. The grass buffer strip is defined as extending beyond the established top of drain bank.

These provisions for maintenance are subject, of course, to any variations that may be made under the authority of the Drainage Act, Schedule 'E,' which represents an Assessment Schedule for Future Maintenance, will not be included in this report for any future assessments shall be levied in the same relative proportions as Schedule 'C' and as described above.

#### Hnydczak Outlet Relief Drain

We recommend that future work of repair and maintenance on Hnydczak Outet Relief Drain be carried out by the Town of Innisfil and assessed against the affected lands and roads in the same relative proportions as the amounts listed in Schedule 'C3.'

1. Private access bridges at Stations 0+222: 50% against the property on which the culvert is located and the remaining 50% against the upstream lands, listed in Schedule 'C3,' in the same relative proportions as the amounts listed under "Value of Outlet."
2. Tile inlet repairs: 100% against the property on which the tile inlet is located.
3. Other work: 100% against the lands listed in Schedule 'C3' in the same relative proportions as the amounts listed under "Value of Benefit" and "Value of Outlet."

#### 3<sup>rd</sup> Line Branch Drain

We recommend that future work of repair and maintenance on 3<sup>rd</sup> Line Branch Drain be carried out by the Town of Innisfil and assessed against the affected lands and roads in the same relative proportions as the amounts listed in Schedule 'C4.'

1. Private access bridges (primary) at Stations 0+034, 0+255, 0+379, 0+567, 0+709, 0+760, 0+866, 0+906, 1+162, 1+351, 1+448, 1+531 and 1+647: 50% against the property on which the culvert is located and the remaining 50% against the upstream lands, listed in Schedule 'C4,' in the same relative proportions as the amounts listed under "Value of Outlet."
2. Private Access bridges (secondary) at Stations: 0+819 and 0+921: 100% against the property on which the culvert is located.
3. Tile inlet repairs: 100% against the property on which the tile inlet is located.
4. Other work: 100% against the lands listed in Schedule 'C4' in the same relative proportions as the amounts listed under "Value of Benefit" and "Value of Outlet."

### 3<sup>rd</sup> Line Spur Drain

We recommend that future work of repair and maintenance on 3<sup>rd</sup> Line Spur Drain be carried out by the Town of Innisfil and assessed against the affected lands and roads in the same relative proportions as the amounts listed in Schedule 'C5.'

1. Private access bridge at Station 0+598: 50% against the property on which the culvert is located and the remaining 50% against the upstream lands, listed in Schedule 'C5,' in the same relative proportions as the amounts listed under "Value of Outlet."
2. Road crossing bridge at Station 0+012: assessed 100% against the operating Road Authority.
3. Tile inlet repairs: 100% against the property on which the tile inlet is located.
4. Other work: 100% against the lands listed in Schedule 'C5' in the same relative proportions as the amounts listed under "Value of Benefit" and "Value of Outlet."

### 10 Sideroad Branch Drain

We recommend that future work of repair and maintenance on 10 Sideroad Branch Drain be carried out by the Town of Innisfil and assessed against the affected lands and roads in the same relative proportions as the amounts listed in Schedule 'C6.'

1. Private access bridges at Station 0+142, 0+267, 0+411, 0+658 and 1+227: 50% against the property on which the culvert is located and the remaining 50% against the upstream lands, listed in Schedule 'C6,' in the same relative proportions as the amounts listed under "Value of Outlet."
2. Road crossing bridges at Stations 0+017, 0+732, 1+438, 1+455: assessed 100% against the operating Road Authority.
3. Tile inlet repairs: 100% against the property on which the tile inlet is located.
4. Other work: 100% against the lands listed in Schedule 'C6' in the same relative proportions as the amounts listed under "Value of Benefit" and "Value of Outlet."

## **20. Drawings and Specifications**

Attached to this report is "Schedule F", which contain specifications setting out the details of the recommended works, and "Schedule G" which represents the following drawings that are also attached to this report:

<b>Page 1 of 63:</b>	Drawing List
<b>Page 2 of 63:</b>	Overall Plan
<b>Page 3 of 63:</b>	Plan 1-1 - South Innisfil Creek Drain
<b>Page 4 of 63:</b>	Plan 1-2 - South Innisfil Creek Drain
<b>Page 5 of 63:</b>	Plan 1-3 - South Innisfil Creek Drain
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<b>Page 7 of 63:</b>	Plan 1-5 - South Innisfil Creek Drain
<b>Page 8 of 63:</b>	Plan 1-6 - South Innisfil Creek Drain
<b>Page 9 of 63:</b>	Plan 1- 7- South Innisfil Creek Drain
<b>Page 10 of 63:</b>	Hnydczak Outlet Relief Drain
<b>Page 11 of 63:</b>	10 Sideroad Branch Drain

<b>Page 12 of 63:</b>	3 <sup>rd</sup> Line Branch Drain
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<b>Page 14 of 63:</b>	Sections 2-1 - South Innisfil Creek
<b>Page 15 of 63:</b>	Sections 2-2 - South Innisfil Creek
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<b>Page 18 of 63:</b>	Sections 2-5 - South Innisfil Creek
<b>Page 19 of 63:</b>	Sections 2-6 - South Innisfil Creek
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<b>Page 23 of 63:</b>	Sections 2-10 - South Innisfil Creek
<b>Page 24 of 63:</b>	Sections 2-11 - South Innisfil Creek
<b>Page 25 of 63:</b>	Sections 2-12 - South Innisfil Creek
<b>Page 26 of 63:</b>	Profiles 3-1 - South Innisfil Creek STA. -0+650 to 0+000
<b>Page 27 of 63:</b>	Profiles 3-2 - South Innisfil Creek STA. 0+000 to 0+700
<b>Page 28 of 63:</b>	Profiles 3-3 - South Innisfil Creek STA. 0+700 to 1+400
<b>Page 29 of 63:</b>	Profiles 3-4 - South Innisfil Creek STA. 1+400 to 2+100
<b>Page 30 of 63:</b>	Profiles 3-5 - South Innisfil Creek STA. 2+100 to 2+800
<b>Page 31 of 63:</b>	Profiles 3-6 - South Innisfil Creek STA. 2+800 to 3+500
<b>Page 32 of 63:</b>	Profiles 3-7 - South Innisfil Creek STA. 3+500 to 4+200
<b>Page 33 of 63:</b>	Profiles 3-8 - South Innisfil Creek STA. 4+200 to 4+900
<b>Page 34 of 63:</b>	Profiles 3-1 - South Innisfil Creek STA. 4+900 to 5+600
<b>Page 35 of 63:</b>	Profiles 3-2 - South Innisfil Creek STA. 5+600 to 6+300
<b>Page 36 of 63:</b>	Profiles 3-3 - South Innisfil Creek STA. 6+300 to 7+000
<b>Page 37 of 63:</b>	Profiles 3-4 - South Innisfil Creek STA. 7+000 to 7+700
<b>Page 38 of 63:</b>	Profiles 3-5 - South Innisfil Creek STA. 7+700 to 8+400
<b>Page 39 of 63:</b>	Profiles 3-6 - South Innisfil Creek STA. 8+400 to 9+100
<b>Page 40 of 63:</b>	Profiles 3-7 - South Innisfil Creek STA. 9+100 to 9+325
<b>Page 41 of 63:</b>	Profiles 4-1 - Hnydczak Outlet Relief SA. 0+000 to 0+700
<b>Page 42 of 63:</b>	Profiles 5-1 - 10 Sideroad Branch STA. 0+000 to 0+675
<b>Page 43 of 63:</b>	Profiles 5-2 - 10 Sideroad Branch STA. 0+675 to 1+375
<b>Page 44 of 63:</b>	Profiles 5-3- 10 Sideroad Branch STA. 1+375 to 1+525
<b>Page 45 of 63:</b>	Profiles 6-1 - 3 <sup>rd</sup> Line Branch Drain STA. 0+000 to 0+675
<b>Page 46 of 63:</b>	Profiles 6-2 - 3 <sup>rd</sup> Line Branch Drain STA. 0+675 to 1+375
<b>Page 47 of 63:</b>	Profiles 6-3 - 3 <sup>rd</sup> Line Branch Drain STA. 1+375 to 1+750
<b>Page 48 of 63:</b>	Profiles 7-1 - 3 <sup>rd</sup> Line Spur Drain STA. 0+000 to 0+675
<b>Page 49 of 63:</b>	Profiles 7-2 - 3 <sup>rd</sup> Line Spur Drain STA. 0+675 to 0+800
<b>Page 50 of 63:</b>	Plan 8-1 - Overflow Area 1
<b>Page 51 of 63:</b>	Details 8-2 - Overflow Area 1
<b>Page 52 of 63:</b>	Plan 8-3 - Overflow Area 3
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<b>Page 54 of 63:</b>	Details 8-5 - Overflow Area 3
<b>Page 55 of 63:</b>	Details 9-1A - Farm Access Culverts
<b>Page 56 of 63:</b>	Details 9-1B - Farm Access Culverts
<b>Page 57 of 63:</b>	Details 9-1C - Farm Access Culverts Pile Information
<b>Page 58 of 63:</b>	Details 9-1D - Farm Access Culverts Notes
<b>Page 59 of 63:</b>	Details 9-2 - 4 <sup>th</sup> Line Bridge
<b>Page 60 of 63:</b>	Details 9-3 - Branch Drains Access Culverts
<b>Page 61 of 63:</b>	Culvert Tables 9-4 - Branch Drains
<b>Page 62 of 63:</b>	Standard Details 10-1
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## **21. Environmental and Fisheries Concerns**

A number of erosion and sediment controls are recommended as a temporary application and are to be implemented prior to any disturbance of the drains under the direction of the Nottawasaga Valley Conservation Authority (NVCA). These controls will also require maintenance and monitoring throughout drain improvements and after construction activities until full vegetative cover is established. Some examples included in our preliminary report include rock check dams, stone erosion protection, grass buffer strips, bio-engineered erosion control (shrub willows) and hydraulic seeding.

Fish Timing Window - Warm Water: April 1 – June 30  
Cold Water: October 1 – June 15

We have also recommended the drain be widened in sections and the existing meandering preserved for the most part. The drain overflow areas will assist to reduce sediment transport and encourage nutrient uptake in these areas by planting water tolerant trees or shrubs. The NVCA has reported that a significant portion of the drain is denoted as an impaired stream. There are opportunities to utilize the drain overflow areas (one or more) if selected, to revitalize parts of the drain's ecology while at the same time flood reducing benefits are derived by the landowners.

In a letter received September 26, 2011, Mr. Graham Findlay of MNR Midhurst District confirmed that this project would not require review under the Provincial Lakes and Rivers Improvement Act, given that this project is covered by the Drainage Act and will be subject to engineering review by NVCA.

We acknowledge that the South Innisfil Creek Drain has a coldwater stream and permanent flow component particularly at the upper end of the drain and therefore has been classified a Type D drain by the NVCA. This type of drain typically requires a Project Specific Authorization and review by Conservation Authority staff and the Department of Fisheries and Oceans (DFO). If DFO determines the works recommended to improve the South Innisfil Creek Drain & Branches will require a permit, an Environmental Assessment (EA) will be required under federal legislation invoking the Canadian Environmental Assessment Act (CEA).

## 22. Grants

In accordance with the provisions of Sections 85, 86 and 87 of the Drainage Act, a grant in the amount of 33-1/3 percent of the assessment eligible for a grant may be made in respect to the assessment made under this report upon privately owned lands used for agricultural purposes. The assessments levied against privately owned agricultural land must also satisfy all other eligibility criteria set out in the Agricultural Drainage Infrastructure Program policies. Most of the privately owned lands are used for agricultural purposes and are eligible under the A.D.I.P. policies. We recommend that application be made to the Ministry of Agriculture, Food and Rural Affairs in accordance with Section 88 of the Drainage Act, for this grant, as well as for all other grants for which this work may be eligible.

## 23. Approvals and Construction

Once approvals have been received from other agencies (NVCA & DFO) and affected utilities and following a ten (10) day period after the passing of the By-law (third and final reading), in accordance with Section 58 of the Drainage Act, construction of the recommended drainage works may commence.

Respectfully submitted,



Tom H. Marentette, P. Eng.  
DILLON CONSULTING LTD.

THM:dh:lld:ges



24. On-Site Meeting

SCHEDULE 'A'

ON-SITE MEETING

**SOUTH INNISFIL CREEK DRAIN  
MINUTES**

**Date: August 3, 2005**

**Time: 1:00 p.m.**

**Place: Stroud Innisfil Community Centre (Banquet Hall), 7883 Yonge Street**

**Present were: See attendance sheet attached**

	NOTES
Tim Oliver	<p>Started meeting and stated that South Innisfil Creek Drain was the reason we are meeting today. He apologized for having an afternoon meeting which may have caused problems with getting people to attend. It was felt that an evening meeting may run well into the late evening in expectation that a meeting involving a large number of people will take several hours. He also apologized for the late notice that some people may have received for the meeting. In preparation for this meeting, we discovered that some additional properties within the watershed boundary (Community of Churchill - east side of Yonge Street) were not previously included in the list of notices sent out. We provided a list of the additional properties to the Town of Innisfil and requested that they send out these notices despite the short notice. In our considered opinion, we felt it was better to send them out rather than not at all.</p> <p>The reason that all of you have been invited to this meeting was to address the possible future improvements to the South Innisfil Creek Drain. This meeting is typically called an on-site meeting, a requirement under the Drainage Act process, and would normally be held along the road side close to the drain, however due to the large number invited, it was felt that it would be better to hold it at the Community Centre.</p> <p>Stated that he has been appointed by the Town of Innisfil to complete a preliminary Drainage Report. This was brought about by a Court Order by the Ontario Drainage Referee. The Court Order stated that a preliminary report was to be presented before him to address flooding in the watershed boundary (all of the specific orders will be mentioned later). The order stated that an independent engineer be appointed by the Town of Innisfil to examine the drain, address issues stated within the Court Order and prepare the above mentioned preliminary report.</p> <p>He explained the large map of the affected area for the South Innisfil Creek Drain that Dillon Consulting has provided on display at the front of the room and on the "handouts". Explained that the engineer acts under the current legislation of the Ontario Drainage Act which dictates the process to be followed in drainage matters. When a ditch or creek is made into a municipal drain, it gives properties within the watershed the ability to maintain the drain as a communal system to provide a positive drainage outlet that can be maintained in the future. It dates back over 100 years and is based on old</p>



English Common law. When settlers originally settled and started farming the land, it created disputes related to flooding and poor drainage. The Drainage Act was created to outline how these problems would be dealt with in a legal way. A landowner doesn't have the right to drain surface water across someone else's property unless it is as natural watercourse. The South Innisfil Creek Drain receives many smaller drains and is maintained for the best use of every property affected.

Mr. Oliver stated that a portion of the Innisfil Creek is a Municipal Drain, starting from the 5<sup>th</sup> line draining down to Highway 89 denoted the South Innisfil Creek Drain. South of Highway 89, the drain is a natural watercourse and presently cannot be maintained by the Municipality because of its riparian status (natural watercourse).

The latest bylaw on this drain is from 1956. This bylaw gives the Town the right and the responsibility to maintain this drain based of the design laid out in the 1956 report.

Under the 1956 report several other branch drains were included as part of the South Innisfil Creek Drain, other than the main drain. The branch drains being the 3<sup>rd</sup> Line Drain Branch and Spur, the 10 Sideroad Branch Drain and the South Innisfil Creek Drain Branches 'A' and 'B' (part of Branch 'A' now called the Hnydczak Drain). Some of these branch drains have had work done on them since 1956. The Court Order states that I'm to examine these branch drains, in addition to the main drain.

Mr. Oliver explained that everyone in the watershed boundary will be affected by this work and will be required to pay a portion of the costs to improve and maintain the drain.

Mr. Oliver stated that we would like to hear any drainage concerns from the affected owners and would like to know what areas are flood prone. This on-site meeting is the start of the drain improvement process.

Mr. Oliver explained that we have started the process of surveying the drain and have completed a thorough survey of the main drain. The affected branch drains still require survey.

Mr. Oliver stated that he is not privy to the court proceeding details or to what has occurred in the past in order to be without bias in recommending the work and charging costs proportionately to the lands and roads affected.

Mr. Oliver explained that Dillon Consulting has been selected to prepare a preliminary report to be complete by January 2006. Explained that the preliminary report will consist of drain improvement options with associated cost vs. benefit impact analysis, cost estimates and preliminary assessment schedules. The Drainage Referee asked for a timeline for when the preliminary report would be completed and we have done that. Once the preliminary report is submitted to the Drainage Referee, he will review it and there will be opportunities for the property owners to provide comments.

Mr. Oliver stated that the drain is not just required by the land being farmed but is also required by everyone within the drainage area. Everyone within the drainage area has an outlet liability because the water gets to the drain some how and they all use the drain to some extent. The other part of the assessment is related to a benefit assessment. This assessment is adjusted based on how much benefit you derive from the drain (for example, people along the drain have a higher benefit rate).

Mr. Oliver explained that a drainage engineer is typically not required to prepare a report for simply maintaining a municipal drain. A new report is required however when a drain needs to be improved. The municipality can do the routine drain maintenance and

	<p>drain cleanout work based on the current by-law (in this case 1956). A lot of changes have occurred in the last 50 years, such as land use, land severances, added bridge crossings, etc. The new report will address these changes. We have no choice but to improve the drain because the court (Drainage Referee) has ordered it be done.</p> <p>Mr. Oliver stated that bridges are now considered to be part of the drain. Some of the bridges on this drain have been classed as obstructions (under the Court Order) and have been ordered by the Drainage Referee to be removed, and/or raised. As of two (2) weeks ago (when we surveyed) they had not been removed. If the bridges ordered are not removed by the owner the Town will hire a contractor to do this and the cost will be charged to the owner. If you haven't received a letter about your bridge, it has not been deemed an obstruction at this time and can remain the way it is for now.</p> <p>We have a copy of the Court Order and anyone can have a look at it afterwards to see what the court has ordered.</p> <p>Options that may be considered for the drain improvements are:</p> <ul style="list-style-type: none"> <li>- Cleaning sediment out of the areas of the drain that have filled in over the years.</li> <li>- Widening and deepening of the drain in some areas as required.</li> <li>- Construction of one or more storm water retention ponds along the drain to lessen the impact of large rains and the frequency of flooding.</li> <li>- Construction of new berms along the drain and improvements to existing berms.</li> </ul> <p>These ponds have to go in a location that is best suited based on the topography of the land and the hydraulics of the drain channel. Explained that under the Drainage Act, an allowance in money is given to the affected landowner for that land which is taken by a drain widening or pond construction. The taking of land is not always forced on landowners and ones that do not want to lose land for a pond may object. We cannot say how large these ponds would be at this time or whether more than one pond would make sense.</p>
Unknown Woman	<p>Said that we had no right to take somebody's land for construction of a pond. They have paid for their land. Who are you that you think you can come in here and take peoples land and do what you want? She also noted that Tim did not properly introduce himself to the crowd.</p>
Tim Oliver	<p>Apologized, and stated that his name was Tim Oliver and he is a drainage engineer for Dillon Consulting. His name and contact information are on the handout given to the crowd.</p>
Crowd Yelling	<p>Many people talking all at the same time and nobody speaking at the microphone.</p>
Tim Oliver	<p>Asked that the meeting not get out of hand. If people have something to say they need to come forward to the microphone and state their name and address. We are recording everything people say and also writing minutes for the meeting.</p> <p>He stated that the land taken for the pond would not be forced on people. When we find possible land from a pond, we will be contacting these owners to see if they would be agreeable to it. Some people may be willing to give up land for compensation and the prevention of future flooding.</p> <p>He stated that these improvements would not likely prevent flooding from very large intense storms like that of June 9, 2005 where over six inches of rain fell in less than 3 hours. Most drains are built to handle a 1 in 2 year storm frequency and intensity. This drain may not be up to that standard, and even if it was, it may require a higher flow rate</p>

	<p>because of the high value vegetable production and topography of the land. Designing a drain to handle very large rain events is not feasible.</p> <p>Everyone needs to recognize that no previous requests have been followed through to improve this drain in approximately 50 years.</p> <p>He called for any other concerns from the crowd. Instructed people to speak into the microphone and state their name and address.</p>
Jack Ross	<p>Lives on 5<sup>th</sup> Line. Everyone that lives in the South Innisfil Creek Drain watershed, assuming that everyone at the meeting does, he doubts that any of these people have access to any municipal sewers or waterlines. Asked why they are paying for sewer and waterlines for other people, yet these other people are not helping to pay for this drainage. He believes that the whole Town of Innisfil should pay for this project.</p>
Wayne Young	<p>Said that sewers and waterlines are not the issue here, and we are not here to talk about this. We are here today to talk about the South Innisfil Creek Drain. If you have a problem outside of this topic you need to talk to the Town at another time.</p>
Woman in Crowd	<p>Stated that people are not asking to be serviced with sewers and waterlines, but we feel that we pitch in to pay for these projects through our taxes. Why can't everyone pitch in to help pay for this drain.</p>
Wayne Young	<p>Explained that sewer and waterline projects are a "user-pay" system. If you use the sewer or a waterline then you will be paying for this, but most of the people in this crowd are not paying for sewers or water lines. If you are not on a sewer or water system, than you are not paying for this service. Other things such as police and fire protection are charged against the general tax fund.</p>
Tim Oliver	<p>Stated that Municipal Drains also have a "user-pay" system. Everyone that drains water to a drain, including the municipality for their roads, pay for the project. Costs for just the Construction and Engineering are part of what you pay. This system has been in place for over 100 years and has worked very well for maintaining drains in the province. Administration costs are not charged to the owners in the drain. The costs will be shown in the report and will show up on the tax bill after the construction has been completed. Most Municipalities will give several different payment options. The preliminary report will give you an idea of what the cost will be. At this time, we cannot give you an estimate of what the costs will be.</p>
Michael Gelfand	<p>6112 5 SideRoad. Asked if we wanted to know where flooding has occurred.</p> <p>Stated that the area at the 4<sup>th</sup> Line, where it crosses Highway 400, on the south – west corner, has been frequently flooded.</p>
Bill Homecko	<p>His property is in Con. 1, Pt Lot 9. Wishes to have Drain "A" stub of the Hyndzcak drain abandoned as Municipal drain as it serves no purpose. Asked how far down the South Innisfil Creek Drain the work will be. Also gave Dave Neely a written page of concerns at the end of meeting.</p>
Tim Oliver	<p>Said that the work will extend at least down to Highway 89, and maybe further if necessary. The Court Order says to take the work down as far as necessary to get a proper outlet.</p>

Bill Homecko	Said that when the drain floods that water backs up into the 2 <sup>nd</sup> line drains and floods from these drain as well. He floods from water coming up the 2 <sup>nd</sup> line drains and the Branch 'B', and the water doesn't flow down properly. Wanted Tim to consider relieving pressure at these points so the water doesn't back up. Wanted the use of silt traps to stop because cause several problems. Why do we need the silt traps because the work is done when the water level is low and any silt that does go downstream will settle out quickly. When they have a large rain, the drain is a river or mud that comes downstream and nobody cares about that silt hurting the fish. Also he did not like that crushed stone from the silt traps always end up in his fields and contaminates the topsoil with stones and gravel.
Tim Oliver	Stated that the local conservation authorities and the Department of Fisheries and Oceans, require silt traps be installed to lesson the impact to fish habitat.
Unknown man	Asked if the crowd could see the Court Order.
Tim Oliver	Read the Court Order to the crowd (5 - 10 minutes).
Crowd	Said they should have been sent a copy of the Court Order but they were not. Asked if the Court Order was on the internet somewhere.
Tim Oliver	Said that he did not know if the Town had posted it on their website.
Oscar Bordon	His property is on 2 <sup>nd</sup> Line and he has the truck frame bridge that has been ordered to be removed.
Tim Oliver	Said some of the bridges have not been incorporated as part of the drain and therefore have never been engineered. All the bridges on the drain need be sized and engineered for the flow in the drain and structural stability. Everyone has a right to cross to the other side of the drain to access their own property with a bridge.
Oscar Bordon	Asked why he can't raise his bridge so the bottom of the beam is above the top of the drain banks. Why does he need to remove it? He owns all of the land in the property but he won't be able to use it on the other side of the drain.
Tim Oliver	Stated that the Court Order said that it had to be removed and this is not for him to decide. The wording of the Court Order say "to remove" not to raise.
Oscar Bordon	Said that he should have received a copy of the Court Order. Wayne has sent him letters but never the Court Order. Stated that it was his land and he should have a right to cross the drain to use all of his land. Said that he will raise the bridge 3 or 4 feet but all of the contractors he has called have not shown up. He even tried to do the work himself but he can't do it and do not have the proper equipment.
Tim Oliver	Said the bridge needs to be removed now and if he wants a new bridge in it's place he needs to request one before we do our report.
Oscar Bordon	Asked what is he to do in the meantime to cross the drain. Stated that he has poured 6 inches of concrete on top of it and feels that it is a safe bridge. He asked Tim to consider the option of raising the bridge. He wants a solution.
Woman in crowd	Asked Tim what Oscar can do for now in the meantime? We are leaving him with little options.

Tim Oliver	If he wants a bridge immediately he needs to get an engineer to design a bridge and submit those drawings and specifications to him (Tim) to review. If he approves the design then it can be built before the drainage report for the drain improvements is completed and incorporated under a new separate report. Otherwise the bridge replacement will be addressed with our new report for the drain.
Woman in Crowd	Asked how long it would take for designing a new bridge and approving to happen. We are taking away his bridge now but will not likely have a solution for months or years. Telling Tim that he needs to work with Oscar to come up with a solution. Tim is not helping Oscar.
Tim Oliver	If a bridge is required and the owner cannot do without it then he needs to make the request for a new bridge. People need to realize that the drainage report is for the whole drain and can't be done in a short order of time and therefore will hold up getting him a new bridge.
Woman in Crowd	Said that we short ordered the people. Only two (2) weeks notice was given for this meeting. Asked how long we have known about this problem.
Tim Oliver	Stated that he is only required to give two (2) weeks notice for an on-site meeting.
Oscar Bordon	Said that he understands the Court Order but this is his land and he needs a better solution than just removing the bridge. I have given a solution of raising it but you (Tim) will not accept.
Tim Oliver	Stated that he must understand that the bridge is not legal and it is an obstruction according to the court order. Asked Oscar if he knew when the bridge was installed and by whom.
Oscar Bordon	Said that the bridge was there when he bought the property and he just made sure the bridge was safe. I poured concrete on top. It is capable of passing machinery over. It is a least 7 years old. What are we going to do now. I'm giving you a solution. I can raise the bridge up. Asked if he can do that.
Tim Oliver	Stated that he is asking the wrong person. He is not going to tell him that he can raise it up. Because if he does that he is not only going against the Drainage Referee's decision, but when he goes to do the report on the drain he finds that the drain needs to be widened, than all that work is for nothing because the whole thing needs to be removed.
Woman in Crowd	Said that we are going to remove his bridge now and wait until the report is completed, leaving Oscar without an access to his land for maybe a years time?
Tim Oliver	Stated that he has other options.
Woman in crowd	Said that Oscar is willing to work with us, but we are not willing to give anything on his bridge.
Tim Oliver	Asked that if people do not come to the microphone please do not speak.
Antonio Filice	Owns property on Con. 2, Lot 8. He has the wooden bridge in the pasture land that has also been ordered to be removed. Stated that his bridge has been removed. Said that he needs a new bridge and asked what he is to use until a new one is installed. Said that they have a permit for a new bridge but they are not going to install a new bridge because we could just order it out again.

Graciela Bordon	Wife of Oscar and also owner of property on 2 <sup>nd</sup> line with truck frame bridge. She asked who will pay for all of the bridge work. This is costing us thousands of dollars and who is going to pay for all of the costs.
Tim Oliver	Explained that the costs of a new bridge replacement, under a typical drainage report is shared 50/50. This meaning that the owner of the land pays 50% of the cost and the other 50% is shared among all the upstream owners on the drain. The cost of removing the current bridge is the responsibility of the Bordons.
Graciela Bordon	Asked why Tim cannot allow Oscar to raise the bridge.
Oscar Bordon	Said that he felt his bridge was built better than some of his neighbours.
Tim Oliver	Stated that as the engineer on the drain he has a responsibility to make sure that the bridges are designed properly and are safe. Some of the other bridges are not proper and they will be dealt with as well. Said that he will see what he can do and will meet with him after the meeting. The Court Order says to remove, he can't change that.
Oscar Bordon	Stated that he can't afford to build another bridge but also needs to be able to cross the drain. He asked Tim to consider his situation.
Tim Oliver	Said that he will need to address the new bridge under his preliminary drainage report and he can see what it will cost when the preliminary report comes out. He can then decide what he wants to do then.
Woman in Crowd	Said that Tim is just ordering that the bridge be removed and that is a mismanagement of power.
Tim Oliver	Said that he was not a part of the earlier court proceeding and it was not him that ordered the bridge be removed.
Woman in Crowd	Stated that Tim is here now and he is supposed to answer his questions and provide solutions. Tim is not making sense and mismanaging his power.
Tim Oliver	Said that all he knows is what is in the Court Order and what his responsibility is to do under that order. If he allows the bridge to remain in place and there is a flood than Oscar could be sued, the Town could be sued and Tim could be sued.
Oscar Bordon	What is he supposed to do now and who is going to pay for this?
Tim Oliver	Stated that he is following the current legislation and this is how it works. At this time he is stating what is in the Court Order.
Oscar Bordon	Asked if Tim would come to his house to try and solve the problem.
Tim Oliver	Tim agreed that he would meet with him to discuss the matter later. He has already seen the bridge and has already surveyed it. But he can't give answers right away because it will take time to examine the whole drain and related problems.
Woman is crowd	Asked Tim about a section at the end of the Court Order, which says people have a right to appeal the decisions in the Court Order.
Oscar Bordon	Said that he received a letter from Wayne and a photocopy of the Court Order. He never got an original document.

Wayne Young	Stated that Oscar was given time by two (2) notices to have the bridge removed. Court has ordered it done. Explained that the Drainage Referee reviewed this bridge several months ago and he should have appealed this at that time. But now that the Court Order has been made, the Town needs to have it removed or they could be liable for ignoring the order. He has been given more than enough time to have it removed. As of tomorrow he needs to hire a contractor to remove it because it has been too long past the due date. The bridge has been witnessed to cause obstructions in high water levels. Oscar could also hire another engineer to look at the bridge and sign off that it's okay. If he wants to put another structure back it could be a waste of money and time if the drain ends up being widened, the bridge will sit in the middle.
Oscar Bordon	Said that he didn't have enough time. Nobody is giving him a solution.
Wayne Young	Said that he had plenty of time and he needed to appeal the referee decision months ago. He received a letter on May 11 about removing the bridge then, and he had 30 days. They extended that time because of the rules about not working in the days during fish season. We are past the extension date. This is a Court Order and cannot be negotiated now.
Woman from crowd	Woman from crowd came forward to ask if they could move on to other people's issues because it is taking everyone's time.
Tim Oliver	Said that we would try to wrap this issue up now.
Tim Oliver	Said that he will talk to Oscar after the meeting. There are other options of having another engineer to look at getting a new bridge installed but it may be premature to do that because we don't know what could happen with future changes to the drain yet. We can't assume the drain will stay the way it is and design for it that way.
Oscar Bordon	Asked if Tim would meet him to find a solution after the meeting.
Tim Oliver	Agreed that he would meet to discuss the options he has.
Unknown person	Owner of property on 5 <sup>th</sup> line & Hwy 11. Asked will improvements increase flow? Also asked if this will have an affect on the water table and their water wells.
Tim Oliver	Responded that it would increase the flow within the drain. Improvements will not lower the water table enough to affect their water wells. The improvements will be contained within the channel area.
Unknown person	Asked how all this work will affect the environment. Also asked if it would increase the flow in the branch drains and how else would it affect the smaller drains, in respect to the wildlife in the drain and the water table.
Tim Oliver	Responded that it could improve the branch drains flows and we are required to look at the other drains and see what is required. The work will be confined to the municipal drains and the other private drains will be not be touched because we have no right to touch them without a valid petition from landowners requiring drainage to incorporate as a municipal drain.
Mathew Anthony	Owner of property in Churchill. Asked how long has flooding been a problem. Is it is a recent problem?

Tim Oliver	Stated that from talking to owners and Town staff he knows there have been 3 - 4 significant rains in the last 5 years. We are unaware to what extent or severity flooding has occurred. Noted that the majority of municipal drains are typically designed to a 2 year design storm level. This drain may not even be at this level. We can't design a drain that would stop the flooding entirely. You couldn't spend enough to achieve this. We also can't improve the drain too much or the water will move too fast downstream and flood people downstream. There has been a history of flooding back 20 or 30 years and the Nottawasaga Valley Conservation Authority had conducted several studies but nothing was ever adopted or progressed to a drainage report to recommend drain improvements. Just performing regular maintenance of the drain is not sufficient and improvements need to be made.
Mathew Anthony	Asked what changes have occurred to change the flow and how has the drain been working in the past several years. He stated that a lot of farmland north of Highway 89 has been clearcut and he feels that this could be part of the increased runoff.
Boris Horodynsky	Said the water table depth on cleared land, after tiling the land, is three (3) feet lower. By cutting the trees it has created a three (3) foot sponge in muck soils. Bush land never dries out. It holds all the water, so when it rains the water floods out of bush land almost immediately but when he clears the land the rain water doesn't even hit the drain until the three (3) foot sponge is filled.
Crowd	Said that the Town of Innisfil has done nothing to fix and maintain the drain. Feel that everyone across the Municipality should pay.
Tim Oliver	In most areas in Ontario bush land drains away less water than farmland. He would need to examine the difference in muck soils.
Boris Horodynsky	Organic muck soils need to be viewed differently because of their water holding capacity. Said that last time it rained alot, he couldn't figure out were all the water was coming from because the farm pumps were not putting out much water, then he saw huge amounts of water pouring out of the bush land, and flooding resulted. The spring melt had not even drained out of the bush and the water had no where to be stored. His tile drains slowly discharge the water into the drain, where surface water flows at a higher rate. If anything we have helped this problem, not made it worse. The problem is that the creek hasn't been cleaned in 50 years!
Mathew Anthony	He said that the Town should be paying for the work with all the money they have collected in building permits over the years. It doesn't make sense that a few people should have to shoulder the burden because the Town has ignored the problem with this drain for so long.
Tim Oliver	He stated that is not his responsibility to tell farmers that they can or cannot clear land. It is his job to deal with the drain and only the drain. He can look at the land use and determine what water may be coming off that land to the drain.
Mr. Cestarc	Asked who was responsible to maintain the side drains running along the sides and front of his father's farm on 2 <sup>nd</sup> line. Said he has called the Town on several occasions and got the "run-around" and no real answers. His father has been maintaining the drains to a minimal degree now. This year he had major flooding.



David Neely	Said that the drains running north and south along the sides of his farm are private drains and they can do what they want with these drains. The drains on both sides of 2 <sup>nd</sup> line are Municipal drains and the town is responsible to maintain these drains.
Mr. Cestarcic	Asked if we had a name of someone to contact at the town to have the 2 <sup>nd</sup> line drains looked at. He said they have come out before and do nothing.
Tim Oliver	He said that he should talk to Wayne Young at the Town, to request work be done of the drains. The Town would have to notify the other people on the 2 <sup>nd</sup> Line Drain that someone has requested work and they would have a meeting for that before something is done.
Patrick McMillan	2082 Beach Road. Said that there is a drainage problem that needs to be addressed. Is concerned that they have to pay a large amount now even though the problem has been around for a long time. Complained that he just got his notice for the meeting yesterday. Was upset with the afternoon meeting and that many people probably couldn't make it to the meeting. In a sense we have prohibited people from having their say on the drainage matter. Asked who will pay for the work and asked if this is common practice in drainage.
Tim Oliver	Said that he was concerned that an evening meeting would run too long, well into the night. If the group invited was smaller and the discussion shorter in time than an evening meeting would have been selected. Some notices were sent out late because it was discovered late that people had been left out.
Tim Oliver	There were about 75 out of the 700 properties approximately that were not given a notice earlier. It was felt that it was better to send them out late rather than not at all. People could contact him using the contact info on the map handout. They can call, fax, or e-mail him with their concerns. Said that the minutes of the meeting are being recorded and they will be made available to everyone in the drainage boundary.  Stated that everyone within the drainage boundary pays their share. The money amounts vary depending on the benefit they receive and the amount of land they own.
Patrick McMillan	Asked why the people at the top end should pay the most?
Tim Oliver	Explained that people pay according to how much of the drain they use. The people at the top end will pay a higher outlet rate because they use the entire length of the drain, but they will pay a lower benefit rate than the people at the low end of the drain or those properties directly located next to the drain. For example, the lots in Churchill will likely have a very small assessment. It is his duty to determine what is fair. Even if some properties don't derive much benefit from the work, they are still assessed for an outlet assessment.
Unknown man	Owner of land at the lower end of the drain. Said that every time it rains his land floods from water that is coming from upstream. So he stated that he doesn't agree that the upstream work would have little effect to his drainage.
Patrick McMillan	Stated that he doesn't feel he uses the drain. And if he does it would be very, very little. The small branch drain that is near his property is more of a nuisance than a benefit. Asked how Tim evaluates how much a property owner uses a drain.

Tim Oliver	Explained that even water that soaks into the ground and becomes subsurface water partially makes its way to the drain. The surface water especially during frozen ground and spring runoff conditions will go downhill and you need to pay to drain this water so that it brings little or no harm to the properties on the low lands. The people outside of the boundary are not responsible to pay for this work because they are likely part of another municipal drain draining somewhere else. A person could have a property that drains its water to one drain and part to another drain. This person would pay into two (2) different drains. This process has been in place for over 100 years.
Patrick McMillan	Doesn't agree how the cost is shared with people in the boundary. Also asked how a pond is going to help with flooding unless they are empty when it starts raining.
Tim Oliver	Said that we need to look at different options for ponds. The ponds will be there to catch the water when the water is high. One option could be a pumped pond after a large storm has filled it up. This would leave the pond empty for the next rain. The other pond option, could be a shallower pond that only holds water when the level gets high even and spills over into it, holds it temporary until it has time to outlet into the drain. As the water recedes that water flows out of the pond and leaves the pond empty until the next large rain event. The pond would be dry most of the time.
Mathew Anthony	He has an overflow swale at the back of his property that rarely has water in it. The ponds in Churchill never have water in them. Asked if Tim would look at it.
Crowd	Said there are two (2) ponds in Churchill that never have water in them and are filled with trees and weeds.
Tim Oliver	He said he will look at these ponds to see if they have a restricted outlet already in place. He said that it is unlikely that anything will be done with ponds because they are not closely involved with the drainage work for the South Innisfil Creek Drain. He would take this into consideration when determining the assessment for the Village of Churchill.
Mathew Anthony	He said that this work will create a bigger flow to move downstream. Asked if the drain downstream can handle this increase. Are we just transferring our problem to other persons downstream?
Tim Oliver	He said it's a potential problem if the flow rate is improved too much. He has not examined the capacity of the drain yet. There are limitations (road and farm bridges) that control the drain flow. This is also the reason we are looking at the idea of ponds to slow the water down that hits downstream.
Mathew Anthony	Asked who decides the cost allocations, and what is it based on.
Tim Oliver	He said that he comes up with an assessment schedule that breaks the cost down for everyone. This schedule would be part of his preliminary report. He will estimate the cost of the work and then it is divided up amongst the properties within the watershed. The assessed amount on people's tax bill is based on the actual cost of the work. The amount shown in the report is based on his estimate.
Mathew Anthony	Asked what the next step in the process is. Will there be another meeting?

Tim Oliver	Stated that he needs to finish the survey and collection of information. Then he will work on his report. Replied that there will likely be other meetings. There will be meeting to consider the new preliminary report. There also will be another meeting similar to this one for the affected owners on the Hyndczak Drain involving the properties affected in the Town of Bradford -West Gwillimbury.
Mathew Anthony	Asked if there was a possibility that this job could be assessed to everyone in the Town of Innisfil.
Tim Oliver	No, only the people within the drainage boundary will be assessed.
John Harris	Corner of 10 Sideroad & 7 <sup>th</sup> Line. Said he is not in watershed as far as he knows. Everything that has ever been sent to him states that his water goes into the Lover Creek watershed to the north east.
Tim Oliver and Dave Neely	Noted John Harris' concern and will investigate to see if the old 1956 report could have had the drainage boundary wrong in this area. We will look into taking some or all of his property out of the boundary. There is large knoll running in the middle of his property which separates the drain watersheds.
Peter Kubas	Has a farm near Hwy 400. Asked if only people in the Town of Innisfil are affected.
Tim Oliver	No. A large portion of the watershed boundary is in Bradford West - Gwillimbury.
Peter Kubas	Will this speed up the flow and flood people downstream?
Tim Oliver	Explained that water detention ponds may be created to slow the flow of water down into the downstream area. If this is not enough, we may need to extend the drain improvements downstream. The creek that is south of Highway 89 is not a municipal drain and would need to be made into one, if we find it necessary to improve that section.
Peter Kubas	Asked that an additional map that shows the properties south of Highway 89 is needed. Stated that this problem will never end, if we keep moving downstream.
Tim Oliver	Yes, there will be another map prepared that includes more properties.
Antonio Filice	Owner of wooden bridge to be removed. Stated that it was not fair that he needs to remove his bridge.
Tim Oliver	He said that he would need to request a new bridge.
Antonio Filice	You are supposed to help me, not destroy my bridge.
Marisa Demarco	6449 Yonge Street, Churchill. Asked what was done in 1956? And why is being part of a drainage watershed not attached to land deeds, so when you buy land you know what to expect. They did not know they were even a part of this drain.
Tim Oliver	Stated that in 1956 a regular drainage report was completed to deepen and improve the drain. Regardless of the Court Order, if the same landowners had requested improvements to the drain, we would still be having this meeting to discuss improvements and an engineer's report would be prepared. He said that the people that owned the land within the boundary in 1956 paid towards the work. The people within the boundary had paid for some maintenance work after 1956 as well.
Marisa Demarco	Asked what started all of this. Asked if we (Dillon) were hired by the Town of Innisfil. Asked why the residences were not informed that the Town was hiring an engineer.

Tim Oliver	The Court Order instructed the Town to hire a drainage engineer. Explained the process of the Drainage Act. The property owner would normally first be informed when they are invited to the on-site meeting. Today is that meeting. He said that he was appointed by the Town following a proposal and interviewing process with several other consulting firms. Explained that the Town hires an engineer then a site meeting occurs and the property owners can bring their concerns forward to the engineer.
Crowd	Said that people are not getting all the information they require from the Town. Communication with the Town is very bad. It leaves the people with no rights and opinions. Many people complained that they had not received a copy of the Court Order. Complained that the Court Order is making it seem that the work and cost is being shoved down their throats.
Marisa Demarco	Asked if they would be liable to anyone outside of the drainage boundary if they were to flood as a result of the work done on the South Innisfil Creek Drain.
Tim Oliver	He said they are just responsible to help pay for the work. If they are not doing anything to create a problem they are not liable to other watersheds. The word "liability" when referring to the "outlet liability assessment" is somewhat misleading.
Jerry Kucharczuk	From Churchill - Stated that he didn't feel that the ponds in Churchill were working properly, and in his opinion do nothing. He has lived there 17 years and never seen any water in the ponds. Asked if one (1) of the opinions in the report would be to not do anything.
Tim Oliver	We will need to prepare a cost benefit analysis to see if using additional ponds would be worth the money spent. All the options would involve some work to some degree. Doing nothing is not an option that Tim would recommend because it would be an incorrect option.
Jerry Kucharczuk	Is worried about the water table dropping and wells drying up. Asked if flooding would occur at the south end of the drain after it is improved.
Tim Oliver	Stated that the drain improvements will only help the drain's capacity to convey a larger storm flow. It will not dry up the area and drop the water table. Right now, this drain is not capable of handling larger storms to any degree. Also, we are not digging or constructing channels anywhere near Churchill.
Wayne Young	Said that he operates the wells for Churchill and they are 350 feet deep and will not affect the water table.
Man in Crowd	Complained that there are too many golf courses in Innisfil pumping water out of the ground to irrigate and will mess with the ground water aquifer.
Debbie Mayerhofer	Concerned that the meeting was held in the afternoon and was also upset regarding the poor communication. Said that she just received a notice this morning. She was angry that they were given short notice. Asked if all the affected owners would be getting a report. Asked how many people are involved in this drain. Asked how the people will plan for the burden of cost, if Tim is not willing to give a ball park estimate of costs.
Tim Oliver	A copy of the Drainage Act can be printed from the Ontario Government website (ordered through Publications Ontario). A copy of the preliminary report will be sent out to everyone when it is completed. A preliminary report of this size of drainage project would typically require a minimum of 6 months to complete. Stated that there is around 600 or 700 properties involved north of Highway 89. There will be more south of

	Highway 89. Said that he cannot give a cost estimate now, and they will have to wait until the preliminary report is completed and even then, the cost may change when it is finalized and actually constructed.
Debbie Mayerhofer	Asked if people have complained about this drainage problem before now. Also asked if the problem was because there are more people living in the Municipality now. Has the drainage area changed?
Tim Oliver	Stated that the boundary on the plan has not changed since 1956. When we made the plan for the meeting we used the same boundary that was established by the engineer 50 years ago. We may change the drainage boundary in our report if there are corrections, or changes made to other surrounding drains that impact the drainage boundary. It is part of our job to ensure that the boundary line is correct to the best of our knowledge. Some properties may have been added or removed within the last 50 years.
Debbie Mayerhofer	Who allowed developers to build on a flood plain?
Tim Oliver	Said that if a developer is given a permit to build then his assessment would be more because he has increased his runoff. If the developer has created ways to restrict his outlet rate to a pre-development runoff rate then he may pay the same amount as undeveloped land.
Debbie Mayerhofer	Asked where she can get all this information. Do they contact Tim's office?
Tim Oliver	The minutes of the meeting will be put on the Town's website or they may be mailed out. If people don't have access to internet, they could pick up a copy at the Town of Innisfil office.
Marisa Demarco	What costs have been spent so far? What has been spent in engineering?
Woman in Crowd	Is the Town of Innisfil paying for the engineering costs?
Tim Oliver	The Town pays the engineering costs right now to complete the report, but it is later assessed back to all the affected owners, and assessed out as part of the project costs once the project work is completed under a new Town By-law. It is normal to have engineering costs as part of the cost of the drainage work.
Eric Rainey	3562 3 <sup>rd</sup> Line. Said that this work is driven by a few people who bought swamp land. His family has lived in the area for a long time and has observed the problem to be farther south than Highway 89. Also felt that the loss of trees in the farms has created some of the problem. Said that the trees help suck up the water and when they are gone it runs off the land more.
Andrew Norrie	Lives at 6163 10 Sideroad. Said that there is a serious problem at the 4 <sup>th</sup> line and he felt that a pond in this area would be a good idea. Stated that the line ditch north of 6163 (running east to west) is not working properly.

Tim Oliver	Stated that he will attempt to be fair based on the benefit the drain offers each property. Our report is not final and must go before the Drainage Referee in court. The Drainage Referee who is equivalent to a Superior Court Judge will decide to pass it or not or order changes as necessary. The assessments could change between the preliminary report and the final report. The engineer has the duty to proportion the costs amongst the lands and roads to outline within an assessment schedule.
Marisa Demarco	Said she is willing to create a committee to represent the property owners within Churchill.
Tracy Bruce	2327 Meadowlane Churchill. Said that an afternoon meeting comes across as a bad thing, and selfish on Tim's part. It makes it seem as if the Town is trying to sneak something by the people, in hopes that nobody shows up. She had to take time off of work to be here today. Stated that she received a notice from the municipality and she called the Town and was given the run around. She was told by the Town that she needs to talk to a lawyer. Also stated that she had never received a copy of the Court Order. Said that it was the Town's fault because they approve building permits and then neglect the drain for 49 years. She asked if we (Dillon) went through a proposal and gave a set price for the engineering.
Tim Oliver	Yes, several other companies and engineers were interviewed, and we had to submit a proposal with our hourly rates for company staff who may work on the project. No, we did not give a set price for the engineering because we have no idea what the scope of the project is until we have had the opportunity to examine, survey and analyze the drain's capacity. Stated that he has previously completed approximately one hundred drainage reports in the Province of Ontario and has never once been required to provide a set price complete for engineering. The Province of Ontario keeps records of all the engineering fees on drainage in any given year. If my engineering experience indicated a history of much higher than average engineering costs for this type of project, I don't think we would have been selected.
Tracey Bruce	Asked if they could have an approximately price so they can know what to expect. Asked why people upstream should pay for bridges downstream. Feels that it is not fair to pay for other people's bridges. Asked what the end billing will include (loss of access, ponds, engineering, improvements, etc.). The Town approves the building and developing that has happened in the last 50 years so they have been negligent in maintaining the drainage. The end result is that the Town should pay for this problem.
H. Minns	Lives at 5479 5 Sideroad. Said that there has been too many mistakes with the communication between the owners and the Town. She received too many (seven) notices for the meeting. Asked if this work will cause more erosion problems. Also asked how the Contractors will get to the drain. Will they need to remove trees?
Tim Oliver	Stated that if you own more than one (1) property in the watershed boundary you will get a notice for each property because it cost too much in administration to sort out duplicate owners and only send one (1) notice.  Explained that allowances are given to the owners along the drain for any damages or loss of land as a result of the drain improvements. A working corridor is outlined in the drainage report instructing the contractor which side of the drain to work from.
Unknown Person	Owner on 5 Sideroad. Said that they have not been flooded since 1953. Will these improvements cause them to get flooded in the future?

Tim Oliver	Said that we will look at the area. Stated we are only trying to make the drain better and cannot improve the drain beyond the capacity of the lower lands.
<b><u>DISCUSSION FOLLOWING THE MEETING</u></b>	
Roll No. 002-13700	Owner of property on the corner of the 3 <sup>rd</sup> Line and 10 Sideroad. Said that they cannot have there land rented for farming because it floods too often. They gave up trying to rent it. She wanted to be notified of what will be done.
Unknown Person	Lives along Highway 400. Stated that they plan to widen the highway, and said we should contact them to avoid conflicts.
Louis Tasca	Owns several farms on the Concession 2. Grows vegetables. He really wants something done to improve the drain because he floods often and he can't afford to lose his crop every year.  Said that he thinks the 2 <sup>nd</sup> Line drain stops flowing and water starts backing up in the South Innisfil Creek Drain.  Said he has bermed, sandbagged, and pumped to try to stop the water from spilling out onto his land.  Asked if his bridge was "O.K." capacity-wise, he would prefer it be left the way it is.
Dave Neely	Told him that it was not part of the Court Order and is fine the way it is, for now. It will depend on what work is recommended to the drain in terms of widening or hydraulic capacity that may require future changes to the bridge.
Louis Tasca	Said that he needs an excavator on his property at all times for insurance purposes. Stated that the drain is the widest through their section, because they have widened it themselves and made the berms. Feels that the drain bottle necks downstream of the 2 <sup>nd</sup> line.

*Minutes prepared by Dave Neely, Drainage Technician, Dillon Consulting Limited*

25. Attendance Sheet

**ATTENDANCE SHEET  
ON-SITE MEETING  
August 3, 2005 @ 1:00pm  
South Innisfil Creek Drain  
Town of Innisfil**

<u>NAME</u>	<u>ADDRESS</u>
Tim Oliver, Project Engineer	Dillon Consulting
Dave Neely, Drainage Technician	Dillon Consulting
Wayne Young	Town of Innisfil
Mary Vallee	Graham, Wilson & Green Law Firm
Franco Tarantino	2 <sup>nd</sup> Line Concession 2
Franco Audreacerti	2 <sup>nd</sup> Line Concession 2
Joe Garito	2 <sup>nd</sup> Line Concession 2
Adolfo & Ida Marchese	2 <sup>nd</sup> Line Concession 2
Michael Eschli	3305 5 <sup>th</sup> Line
Rick Young	3086 # 89
Tracy Bruce	2327 Meadowland Street, Churchill
Bill Stonkus	2563 5 <sup>th</sup> Line
Grace & Oscar Bordon	3160 2 <sup>nd</sup> Line
Lois Sutton	3326 6 <sup>th</sup> Line
Paul Wardlaw	3217 City Road 27, R.R. # 1, Cookstown
Nicki Kucharczuk	2336 Meadowland Street, Churchill
Jerry Kucharczuk	2336 Meadowland Street, Churchill
Joe Cestatic	Innisfil Gardens
Imre Mora	Innisfil Gardens
Eugenio Carbone	6117 10 Sideroad
Norm Tasca	L & L Gardens Inc.
Angela & Chris Webb	6767 10 Sideroad
Mike Gelfand	6112 5 Sideroad
Jack & Dorothy Ross	2820 5 <sup>th</sup> Line
John & Patricia Harris	7140 10 Sideroad
Marisa DeMarco	6439 & 6449 Yonge Street, Churchill
Peter Kubas	2242 Meadowland Street, Churchill
Tony Spataro	40 Donisi Avenue, Thornhill
Art Janse	Town of Bradford, West Gwillbury
Ted Sturgess	6 <sup>th</sup> Line
Matthew Anthony	2310 Meadowland Street, Churchill
Rebecca Cooper	2253 Meadowland Street, Churchill
Catherine Hall	7061 10 Sideroad, Innisfil



**NAME****ADDRESS**

Donald Sawyer	2505 2 <sup>nd</sup> Line, Churchill
Julie VanNispen	2307 Meadowland Street, Churchill
Mike & Lucy Valente	1302 Gilford Road, Box 112
Barb Baguley	3654 6 <sup>th</sup> Line, Innisfil L9S 3M1
Barb Rutledge	Sloan Circle Drive, Churchill
Gina Norrie	6163 10 Sideroad
Andy Norrie	6163 10 Sideroad
H. Minns	5479 5 Sideroad
Diana Efstathiadis	10 Sideroad & 3 <sup>rd</sup> Line
Hannah Schaefer	Lot 13 & 14, Concession 5
Linda Winslow	3209 5 <sup>th</sup> Line
Arpad Szabo	R.R. # 2, Bradford
H. Minns & D.Rayton	5665 5 <sup>th</sup> Sideroad
H. Minns & D.Rayton	5665 5 <sup>th</sup> Sideroad
H. Minns & D.Rayton	3584 Hwy 89
John DeFilippis	Part Lot 7, Concession 6, Innisfil
Don Wilson	N-1/2, Concession 2, Innisfil
Anna Zlender	230 Valleyview
Mark Anthony	2317 Meadowland Street
Antonio Sinagoga	3190 6 <sup>th</sup> Line, Innisfil
Pam Glenny	2233 Gimby Crescent
Karen French	6552 Hwy 11
Eric Rainey	3562 3 <sup>rd</sup> Line
Chad Wolfond	27755 4 <sup>th</sup>
Patrick McMillan	2082 Killarney Beach Road
Shanin Kachooie	6448 Yonge Street
Sina Kachooie	6448 Yonge Street
Alireza Kachooie	6448 Yonge Street
Karen Carliin	2237 Gimby Crescent
A.S. Meneguzzi	3831 3 <sup>rd</sup> Line
G. Ospreay	231 Valleyview Drive
Debbie & Wolf Mayerhofer	1027 Sloan Circle Drive
Vic & Doris Posius	1346 Bellaire Beach Road
Judith Varga	1009 Sloan Circle Drive, Churchill
Keith Coutts	3288 Concession 4
Kelly & Peter Kenny	6791 10 <sup>th</sup> Sideroad
John Kerr	2233 Gimby
Grace & Oscar Bordon	3160 2 <sup>nd</sup> Line
Boris Horodinsky	2710 3 <sup>rd</sup> Line

**"SCHEDULE B"**  
**SCHEDULE OF ALLOWANCES**  
**SOUTH INNISFIL CREEK DRAIN (MAIN DRAIN)**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

Roll No.	Description	Owner	Section 29 Land	Section 30 Damages	Total Allowances
00226300	CON 4 N PT LOT 12	1665328 Ontario Ltd,	\$4,978.00	\$220.00	\$5,198.00
00226400	CON 4 N PT LOT 11 N PT LOT	1665328 Ontario Ltd,	\$201.00	\$60.00	\$261.00
00220700	CON 4 S PT LOT 11	Kell Farms Limited,	\$0.00	\$1,060.00	\$1,060.00
00220910	CON 4 PT S 1/2 LOT 11 INSTR	Rodrigues Jose Luis, Rodrigues Grace,	\$10,911.00	\$720.00	\$11,631.00
00220908	CON 4 PT S 1/2 LOT 11 INSTR	Alves Manuela, Alves Manuel Pinto,	\$0.00	\$40.00	\$40.00
00220912	CON 4 PT S 1/2 LOT 11 INSTR	Tuzi Geraldo,	\$1,783.00	\$620.00	\$2,403.00
00220914	CON 4 PT S 1/2 LOT 11 INSTR	Rodrigues Grace, Rodrigues Jose Luis,	\$1,135.00	\$120.00	\$1,255.00
00220916	CON 4 PT S 1/2 LOT 11 INSTR	Fernandes Jose, Fernandes Elvira,	\$814.00	\$120.00	\$934.00
00212900	CON 2 N PT LOT 11	1281597 Ontario Inc,	\$6,328.00	\$1,170.00	\$7,498.00
00120900	CON 2 N PT LOT 10	Horodynsky Farms Inc,	\$27,556.00	\$4,095.00	\$31,651.00
00120500	CON 2 S PT LOT 10	Tasca Louis Joseph, Tasca Norma,	\$6,690.00	\$1,820.00	\$8,510.00
00120600	INNISFIL CON 2 W 1/2 PT LOT 10	Marques Gardens Ltd, Marques Peter Antonio,	\$11,711.00	\$2,405.00	\$14,116.00
00120800	CON 2 SE PT LOT 10	Marques Gardens Ltd,	\$21,602.00	\$3,705.00	\$25,307.00
00120300	CON 2 S PT LOT 9	Tarantino C & Marchese Ida, Andreacchi A & Garito Lina, Tarantino Francesco & Carmela, Andreacchi Franco & Marchese A,	\$6,176.00	\$0.00	\$6,176.00
00120400	CON 2 S PT LOT 9	Tasca Norma, Tasca Louis Joseph,	\$32,430.00	\$4,484.00	\$36,914.00
00120100	CON 2 S PT LOT 9	Mora Imre, Cestarc Joseph,	\$15,659.00	\$182.00	\$15,841.00
00120200	CON 2 S PT LOT 9	Bordon Mario Oscar, Bordon Graciela,	\$5,039.00	\$0.00	\$5,039.00
00120000	CON 2 S PT LOT 9	Mora Imre, Cestarc Joseph,	\$6,100.00	\$195.00	\$6,295.00
00119700	CON 2 S PT LOT 8 RP 51R3193	Chiodo Peter,	\$41,855.00	\$700.00	\$42,555.00
00119800	CON 2 S PT LOT 8	Filice Antonio, Filice Marina Rosa,	\$17,897.00	\$1,180.00	\$19,077.00
00119200	CON 1 N PT LOT 8	1523566 Ontario Limited,	\$21,747.00	\$514.00	\$22,261.00
00119400	CON 1 N PT LOT 7	Sucession Financial Group Inc,	\$5,644.00	\$25,000.00	\$30,644.00

Roll No.	Description	Owner	Section 29 Land	Section 30 Damages	Total Allowances
00102800	CON 1 N PT LOT 6 RP 51R5927	Minns Heather, Rayton Aldora,	\$3,730.00	\$460.00	\$4,190.00
00101400	CON 1 S PT LOT 6	Rayton Aldora, Minns Heather,	\$1,152.00	\$1,240.00	\$2,392.00
<b>TOTAL ALLOWANCES</b> .....			<b>\$251,138.00</b>	<b>\$50,110.00</b>	<b>\$301,248.00</b>

**"SCHEDULE C"**  
**SCHEDULE OF ASSESSMENT**  
**SOUTH INNISFIL CREEK DRAIN (MAIN DRAIN)**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

**ONTARIO LANDS:**

Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
Highway 400	215.23	87.10	Ministry of Transportation	\$0.00	\$92,130.00	\$148,003.00	\$240,133.00
County Road 89	101.68	41.15	Ministry of Transportation	\$0.00	\$122,467.00	\$13,534.00	\$136,001.00
00101100 INNISFIL CON 1 S PT LOT 5 RP	15.03	6.08	Government Services, Director	\$0.00	\$3,612.00	\$382.00	\$3,994.00
00102100 CON 1 PT LOT 6 PT LOT 7	8.15	3.30	Transportation Ministry,	\$0.00	\$0.00	\$217.00	\$217.00
00102400 CON 1 PT LOT 7 RP 51R8414	3.45	1.40	Transportation Ministry	\$0.00	\$0.00	\$92.00	\$92.00
02105100 CON 6 S PT LOT 15	2.00	0.81	Director Municipal Subsidies, Ministry Of Transportation,	\$0.00	\$0.00	\$374.00	\$374.00
Total on Ontario Lands.....				\$0.00	\$218,209.00	\$162,602.00	\$380,811.00

**MUNICIPAL LANDS:**

Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
7th Line	6.62	2.68	Town of Innisfil	\$0.00	\$0.00	\$4,948.00	\$4,948.00
6th Line	37.39	15.13	Town of Innisfil	\$0.00	\$0.00	\$27,933.00	\$27,933.00
5th Line	38.57	15.61	Town of Innisfil	\$0.00	\$11,978.00	\$23,794.00	\$35,772.00
4th Line	40.23	16.28	Town of Innisfil	\$0.00	\$48,492.00	\$19,259.00	\$67,751.00
3rd Line	40.13	16.24	Town of Innisfil	\$0.00	\$34,594.00	\$21,116.00	\$55,710.00
5 Sideroad	40.13	16.24	Simcoe County	\$0.00	\$7,933.00	\$13,369.00	\$21,302.00
10 Sideroad	48.51	19.63	Simcoe County	\$0.00	\$81,907.00	\$22,872.00	\$104,779.00
2nd Line	48.63	19.68	Town of Innisfil	\$0.00	\$58,637.00	\$11,885.00	\$70,502.00
14th Line	12.28	4.97	Town of Innisfil	\$0.00	\$0.00	\$1,722.00	\$1,722.00
15th Line	26.86	10.87	Town of Innisfil	\$0.00	\$0.00	\$3,767.00	\$3,767.00
County Road 89	260.70	105.50	Simcoe County	\$0.00	\$313,400.00	\$36,558.00	\$349,958.00
County Road 4 (Young Street)	66.32	26.84	Simcoe County	\$0.00	\$0.00	\$41,649.00	\$41,649.00
Village of Churchill Block Assessment No. 1 Roads	6.67	2.70	Town of Innisfil	\$0.00	\$0.00	\$4,850.00	\$4,850.00
Village of Churchill Block Assessment No. 2 Roads North of 4th Line	14.41	5.83	Town of Innisfil	\$0.00	\$0.00	\$10,472.00	\$10,472.00
Village of Churchill Block Assessment No. 2 Roads South of 4th Line	14.41	5.83	Town of Innisfil	\$0.00	\$0.00	\$10,113.00	\$10,113.00
Village of Churchill Block Assessment No. 3 Roads	3.39	1.37	Town of Innisfil	\$0.00	\$0.00	\$2,377.00	\$2,377.00
00220320 CON 3 N PT LOT 13 RP	1.24	0.50	Town Of Innisfil,	\$0.00	\$0.00	\$318.00	\$318.00
07417700 CON 15 PT LOT 15 RP 51R32484	2.73	1.10	Town Of Innisfil,	\$0.00	\$0.00	\$81.00	\$81.00
07417800 CON 15 PT LOT 15	2.00	0.81	Town Of Innisfil,	\$0.00	\$0.00	\$70.00	\$70.00
Total on Municipal Lands.....				\$0.00	\$556,941.00	\$257,133.00	\$814,074.00

**PRIVATELY-OWNED - NON-AGRICULTURAL LANDS:**

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
01801500	CON 6 S PT LOT 5 N PT LOT 5	149.00	60.30	Van Der Mast Maria Hendrika,	\$0.00	\$0.00	\$19,609.00	\$19,609.00
01801600	CON 6 S PT LOT 5	0.50	0.20	Baguley Warren Keith, Baguley Barbara Mari,	\$0.00	\$0.00	\$195.00	\$195.00
00325724	PLAN M448 BLK 59	2.05	0.83	Town Of Innisfil,	\$0.00	\$0.00	\$334.00	\$334.00
00325712	PLAN M448 LOT 53	0.50	0.20	Magri David Raymond, Magri Eleanor Ann,	\$0.00	\$0.00	\$195.00	\$195.00
00325714	PLAN M448 LOT 54	0.52	0.21	Hamilton Kimberly Anne, Hamilton Moore Deborah, Moore Peter,	\$0.00	\$0.00	\$201.00	\$201.00
02000201	CON 6 S PT LOT 8 RP 51R17257	0.81	0.33	Moore Deborah, Moore Peter,	\$0.00	\$0.00	\$252.00	\$252.00
02104400	CON 6 S PT LOT 11	50.00	20.23	Winter Ruthann Iris, Winter Kenneth	\$0.00	\$0.00	\$4,953.00	\$4,953.00
02104500	CON 6 S PT LOT 12	24.46	9.90	Awrey Orville Frankl,	\$0.00	\$0.00	\$3,219.00	\$3,219.00
02104600	CON 6 S PT LOT 12	26.32	10.65	Bernt Kurt Anthony,	\$0.00	\$0.00	\$3,464.00	\$3,464.00
02104700	CON 6 S PT LOT 12	39.66	16.05	Kent Grace Irene, Kent Gordon Joseph,	\$0.00	\$0.00	\$5,220.00	\$5,220.00
02104800	CON 6 S PT LOT 13	50.00	20.23	Zlender Anna Josephine,	\$0.00	\$0.00	\$6,579.00	\$6,579.00
02104900	CON 6 S PT LOT 13	50.00	20.23	Slaby Michael H Wm,	\$0.00	\$0.00	\$6,579.00	\$6,579.00
02105300	CON 6 S PT LOT 15	0.64	0.26	Huisman Donna Marie,	\$0.00	\$0.00	\$228.00	\$228.00
00231500	CON 6 N PT LOT 15	7.38	2.99	Sixth Line Cemetery,	\$0.00	\$0.00	\$973.00	\$973.00
02105400	CON 6 S PT LOT 15 PLAN 1120	25.75	10.42	Shakell Pamela, Shakell Glen Alexander,	\$0.00	\$0.00	\$3,389.00	\$3,389.00
02105500	CON 6 S PT LOT 15 PLAN 1120	6.94	2.81	1796463 Ontario Inc,	\$0.00	\$0.00	\$913.00	\$913.00
00114802	CON 5 PT S 1/2 LOT 5 RP	0.46	0.19	Martin Kenneth Leslie, Martin Yvette Melissa,	\$0.00	\$0.00	\$186.00	\$186.00
00115300	CON 5 N PT LOT 5	1.25	0.51	Eyers Stella T, Eyers Robert A,	\$0.00	\$0.00	\$290.00	\$290.00
00115100	CON 5 N PT LOT 6 51R-3091	1.01	0.41	Sturgess Helen P Estate Of,	\$0.00	\$0.00	\$267.00	\$267.00
00126900	CON 5 S PT LOT 8 S PT LOT 9	50.88	20.59	Dean Jacqueline,	\$0.00	\$0.00	\$3,703.00	\$3,703.00
00127500	CON 5 N PT LOT 9	99.66	40.33	Guido Lecce Holdings (1994) Inc, Domenic B Lecce Holdings (1994)	\$0.00	\$0.00	\$13,114.00	\$13,114.00

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
00127600	CON 5 N PT LOT 9 RP 51R1970	0.35	0.14	Bowman Selby,	\$0.00	\$0.00	\$137.00	\$137.00
00226700	INNISFIL CON 5 S PT LOT 11	19.16	7.75	Kumph Jennifer,	\$0.00	\$0.00	\$2,123.00	\$2,123.00
00226725	INNISFIL CON 5 S PT LOT 11	2.03	0.82	Graham Brian Joseph	\$0.00	\$0.00	\$331.00	\$331.00
00226800	CON 5 S PT LOT 11	21.34	8.64	Zhang Hui, Li Min,	\$0.00	\$0.00	\$2,810.00	\$2,810.00
00227000	CON 5 S PT LOT 11	12.54	5.07	Street Dalton Paul, Street Loxi	\$0.00	\$0.00	\$1,648.00	\$1,648.00
00227100	CON 5 S PT LOT 11	9.87	3.99	Treloar Jennifer Jean, Treloar Timothy John,	\$0.00	\$0.00	\$1,297.00	\$1,297.00
00227200	CON 5 S PT LOT 11	10.78	4.36	Adams Kelly Leigh, Adams Donald Joseph,	\$0.00	\$0.00	\$1,418.00	\$1,418.00
00227300	CON 5 S PT LOT 11	10.20	4.13	Smith Lisa Marie,	\$0.00	\$0.00	\$1,343.00	\$1,343.00
00227500	CON 5 S PT LOT 12	25.00	10.12	Wasyluk Steve,	\$0.00	\$0.00	\$3,291.00	\$3,291.00
00227600	CON 5 S PT LOT 12 RP	13.00	5.26	Nguyen Ngoc Phi,	\$0.00	\$0.00	\$1,371.00	\$1,371.00
00227700	CON 5 S PT LOT 12	12.00	4.86	Dinh Hanh Thi,	\$0.00	\$0.00	\$1,580.00	\$1,580.00
00232001	CON 5 N PT LOT 12 RP	0.72	0.29	Wheeler Elmo John, Wheeler Rosie Stirling,	\$0.00	\$0.00	\$241.00	\$241.00
00232201	CON 5 PT LOT 11 RP 51R14687	0.50	0.20	Prosser Teresa,	\$0.00	\$0.00	\$195.00	\$195.00
00227900	CON 5 PT LOT 13 LESS RP	99.09	40.10	Innisfil Properties Inc,	\$0.00	\$0.00	\$13,041.00	\$13,041.00
00227910	CON 5 PT LOT 13 RP 51R28666	0.91	0.37	Kniazeff Richard Teddy, Kniazeff Corinne,	\$0.00	\$0.00	\$258.00	\$258.00
00228200	CON 5 S PT LOT 15 RP	0.24	0.10	Scythes Darryl Edmund,	\$0.00	\$0.00	\$98.00	\$98.00
00228300	CON 5 S PT LOT 15 RP	0.53	0.21	Browne Colin,	\$0.00	\$0.00	\$201.00	\$201.00
00228400	CON 5 S PT LOT 15	0.36	0.15	Diceman Douglas Clar, Diceman Margaret Ann,	\$0.00	\$0.00	\$145.00	\$145.00
00228500	CON 5 S PT LOT 15	0.44	0.18	Coulter David A, Coulter Mary L,	\$0.00	\$0.00	\$176.00	\$176.00
00228600	CON 5 S PT LOT 15 RP	0.54	0.22	Laurin Timothy,	\$0.00	\$0.00	\$207.00	\$207.00
00228700	CON 5 S PT LOT 15	0.32	0.13	Chornenki Victoria Lynn, Chornenki Peter Paul,	\$0.00	\$0.00	\$128.00	\$128.00
00111400	CON 4 S PT LOT 2 RP 51R11548	1.00	0.40	Latanville June, Oscar, Robyn, Howlett Donna & Robert,	\$0.00	\$0.00	\$57.00	\$57.00
00111600	CON 4 PT LOT 3 RP 51R3904	4.35	1.76	Merrall Gregory William, Kippers Elisabeth,	\$0.00	\$0.00	\$125.00	\$125.00
00112000	CON 4 S PT LOT 5	100.00	40.47	Persico Angelo, Persico Augusto,	\$0.00	\$0.00	\$2,995.00	\$2,995.00
00112501	CON 4 N PT LOT 5 RP 51R29944	1.61	0.65	Jones Linda Carole, Jones Warren Oliver,	\$0.00	\$0.00	\$73.00	\$73.00
00112300	CON 4 S PT LOT 6 RP 51R10442	1.90	0.77	Metcalfe John Joseph,	\$0.00	\$0.00	\$78.00	\$78.00
00125801	CON 4 PT LOT 8 RP 51R16304	0.57	0.23	Coutts Reta M,	\$0.00	\$0.00	\$226.00	\$226.00
00126200	CON 4 N PT LOT 9	99.50	40.27	Lucas William G, Lucas Ruth	\$0.00	\$0.00	\$3,784.00	\$3,784.00
00126201	CON 4 N PT LOT 9 RP 51R12167	0.46	0.19	Winslow Daryl, Winslow Linda,	\$0.00	\$0.00	\$198.00	\$198.00
00125910	CON 4 S PT LOT 9 RP 51R25573	1.00	0.40	Thew James, Thew Doris,	\$0.00	\$0.00	\$277.00	\$277.00
00126000	CON 4 S PT LOT 10 RP	99.56	40.29	Pillitteri Pasquale,	\$0.00	\$9,611.00	\$13,931.00	\$23,542.00
00126100	CON 4 N PT LOT 10 RP	97.57	39.49	Pillitteri Pasquale,	\$0.00	\$0.00	\$13,653.00	\$13,653.00
00126110	CON 4 N PT LOT 10 RP	0.59	0.24	Hillock Jean C,	\$0.00	\$0.00	\$231.00	\$231.00
00226400	CON 4 N PT LOT 11 N PT LOT	100.00	40.47	1665328 Ontario Ltd,	\$0.00	\$0.00	\$14,669.00	\$14,669.00
00220900	CON 4 PT S 1/2 LOT 11 INSTR	5.38	2.18	Tuzi Geraldo, Tuzi Angelo,	\$0.00	\$0.00	\$783.00	\$783.00
00226001	CON 4 PT LOT 14 51R-15146	1.03	0.42	Favret Chiara Maria, Favret	\$0.00	\$0.00	\$297.00	\$297.00
00221300	CON 4 S PT LOT 14	1.37	0.55	Doner Darrell, Jambor Joseph, Toth Lorraine,	\$0.00	\$0.00	\$326.00	\$326.00
00221400	CON 4 S PT LOT 14	1.37	0.55	Mann Susan Marie, Mann David	\$0.00	\$0.00	\$326.00	\$326.00
00225800	CON 4 N PT LOT 15 RP 51R4544	0.57	0.23	Brauti Kevin Jeffrey, Toole Amber Delynn,	\$0.00	\$0.00	\$234.00	\$234.00
00225300	CON 4 N PT LOT 15	0.51	0.21	2765870 Canada Inc,	\$0.00	\$0.00	\$223.00	\$223.00
00225500	CON 4 N PT LOT 15 RP 51R2647	0.69	0.28	Keil Kenneth,	\$0.00	\$0.00	\$261.00	\$261.00
00225200	CON 4 N PT LOT 15 RP	5.91	2.39	Lanka Elmar Estate Of,	\$0.00	\$0.00	\$858.00	\$858.00
00225210	CON 4 N PT LOT 15 RP	5.45	2.21	Gialedakis Louie,	\$0.00	\$0.00	\$795.00	\$795.00
00225000	CON 4 N PT LOT 16	43.24	17.50	Demarco Michele, Demarco Maria,	\$0.00	\$0.00	\$6,071.00	\$6,071.00
00224200	CON 4 N PT LOT 16	10.07	4.08	The Simcoe County District School Board,	\$0.00	\$0.00	\$1,467.00	\$1,467.00
00224300	CON 4 N PT LOT 16 RP 51R1954	0.94	0.38	Hill Gregory Norman,	\$0.00	\$0.00	\$286.00	\$286.00
00224700	CON 4 N PT LOT 16 RP	1.04	0.42	Smith Douglas James, Smith Bonnie	\$0.00	\$0.00	\$297.00	\$297.00
00224800	CON 4 N PT LOT 16 RP 51R9911	0.40	0.16	Dunn Amanda Jayne, Ruegg David John,	\$0.00	\$0.00	\$172.00	\$172.00
00224801	CON 4 N PT LOT 16 RP	1.85	0.75	Austin Kenneth George, Austin Trudy Leah-Anne,	\$0.00	\$0.00	\$358.00	\$358.00
00224802	CON 4 N PT LOT 16 RP	1.83	0.74	Eeles Holly Lillian Muriel, Eeles Robert Wade,	\$0.00	\$0.00	\$356.00	\$356.00
00224900	CON 4 N PT LOT 16	1.28	0.52	Demarco Maria, Demarco Michele,	\$0.00	\$0.00	\$322.00	\$322.00
00109901	CON 3 N PT LOT 4 RP 51R13234	1.00	0.41	Short Joy, Dougherty Gary,	\$0.00	\$0.00	\$58.00	\$58.00
00108110	CON 3 S PT LOT 5 RP 51R24103	3.49	1.41	Henry Robert Eric	\$0.00	\$0.00	\$103.00	\$103.00
00109400	CON 3 N PT LOT 5 RP 51R2958	0.80	0.33	Gelfand Michael John L, Kull Ellen,	\$0.00	\$0.00	\$60.00	\$60.00
00109500	CON 3 N PT LOT 5	1.00	0.40	United Bethesda Ceme,	\$0.00	\$0.00	\$62.00	\$62.00
00109700	CON 3 N PT LOT 5 RP 51R5443	0.58	0.24	Hill Lorna E L, Hill Steven Wm,	\$0.00	\$0.00	\$48.00	\$48.00
00109705	CON 3 N PT LOT 5 RP 51R16455	0.53	0.21	Hill Lorna E.L.,	\$0.00	\$0.00	\$44.00	\$44.00
00108700	CON 3 N PT LOT 6	10.05	4.07	Sebastiano Stephanie Anne, Dougherty Leroy Eric,	\$0.00	\$0.00	\$316.00	\$316.00
00108800	CON 3 N PT LOT 6	1.00	0.40	Franner Robert, Lozinski Melanie,	\$0.00	\$0.00	\$62.00	\$62.00
00108900	CON 3 PT LOT 6	10.57	4.28	Brankston Craig, Brankston Gail,	\$0.00	\$0.00	\$332.00	\$332.00

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
00109000	CON 3 PT LOT 6	15.00	6.07	Ioannou Margaret, Ioannou George,	\$0.00	\$0.00	\$471.00	\$471.00
00109100	CON 3 PT LOT 6	15.16	6.14	Rampodarat J, Tirbeni Taramattie,	\$0.00	\$0.00	\$476.00	\$476.00
00123000	CON 3 S PT LOT 8	2.00	0.81	Petropoulos Peter, Petropoulos	\$0.00	\$0.00	\$350.00	\$350.00
00123001	CON 3 W PT LOT 8 RP 51R17195	0.93	0.38	Allen Robert James,	\$0.00	\$0.00	\$275.00	\$275.00
00123200	CON 3 S PT LOT 8 RP 51R8351	0.46	0.19	Dermott Gwen Ellen,	\$0.00	\$0.00	\$198.00	\$198.00
00124801	CON 3 PT LOT 8 RP 51R27991	2.47	1.00	Reynolds Glenn Thomas, Reynolds Michealle Edith,	\$0.00	\$0.00	\$391.00	\$391.00
00124810	CON 3 PT LOT 8 RP 51R21206	0.72	0.29	Cestarc Brandon, Cestarc Vesna,	\$0.00	\$0.00	\$256.00	\$256.00
00124500	CON 3 N PT LOT 9	24.78	10.03	1765448 Ontario Inc,	\$0.00	\$0.00	\$3,468.00	\$3,468.00
00123400	CON 3 PT LOT 9	52.58	21.28	Petrolo Elizabeth,	\$0.00	\$0.00	\$7,358.00	\$7,358.00
00124300	CON 3 N PT LOT 10 51R18321	2.97	1.20	Perkins Donna Sue, Perkins Harry James,	\$0.00	\$0.00	\$416.00	\$416.00
00124301	CON 3 PT LOT 10 51R 18321	20.76	8.40	Squibb Harry G,	\$0.00	\$0.00	\$2,905.00	\$2,905.00
00123700	CON 3 S PT LOT 10	10.00	4.05	Levy Kevin Arnold,	\$0.00	\$966.00	\$1,401.00	\$2,367.00
00123800	CON 3 PT LOT 10	11.00	4.45	Bryan Adam,	\$0.00	\$1,061.00	\$1,538.00	\$2,599.00
00123900	CON 3 S PT LOT 10	14.94	6.05	Leal Fernanda Maria,	\$0.00	\$1,443.00	\$2,092.00	\$3,535.00
00124100	CON 3 S PT LOT 10	14.94	6.05	Nelson Michael Andrew, Nelson Melissa Ellen,	\$0.00	\$1,443.00	\$2,092.00	\$3,535.00
00213300	CON 3 S PT LOT 11 RP 51R3731	9.62	3.89	Liberatore Susan, Bova Christina,	\$0.00	\$0.00	\$1,350.00	\$1,350.00
00213400	CON 3 S PT LOT 11 RP 51R3731	10.05	4.07	Norrie Gina,	\$0.00	\$0.00	\$1,411.00	\$1,411.00
00213500	CON 3 S PT LOT 11 RP 51R3731	10.05	4.07	Mccarthy Michael J, Mccarthy	\$0.00	\$0.00	\$1,411.00	\$1,411.00
00213600	CON 3 S PT LOT 11 RP 51R3731	10.05	4.07	Curtis Iris, Carbone Eugenio,	\$0.00	\$0.00	\$1,411.00	\$1,411.00
00213800	CON 3 S PT LOT 11 RP 51R6188	13.42	5.43	Yoon Hyunchul, Yoon Mi-Hyang,	\$0.00	\$1,295.00	\$1,884.00	\$3,179.00
00213900	CON 3 S PT LOT 11 RP 51R6188	13.43	5.43	R Three Limited,	\$0.00	\$1,295.00	\$1,884.00	\$3,179.00
00220500	CON 3 N PT LOT 12	50.00	20.23	Craig Darcy Truman, Wolfond Chad,	\$0.00	\$2,413.00	\$7,114.00	\$9,527.00
00214300	CON 3 S PT LOT 12	10.01	4.05	Xenophontos Theodoro, Xenophontos Christin,	\$0.00	\$966.00	\$1,405.00	\$2,371.00
00300600	CON 3 N PT LOT 15	9.81	3.97	Johnson & Ghodiwalla & Modi, Patel & Ferreora & Tamakuwala,	\$0.00	\$0.00	\$1,378.00	\$1,378.00
00215200	CON 3 S PT LOT 16	0.30	0.12	Kerr Vanessa, Ledlie Mark Stephen,	\$0.00	\$0.00	\$125.00	\$125.00
00104400	CON 2 S PT LOT 3 RP 51R19342	0.69	0.28	Ley Brenda, Ley Lloyd James,	\$0.00	\$0.00	\$52.00	\$52.00
00104600	CON 2 S PT LOT 4	59.08	23.91	Miles Eleanor Elizabeth, Miles William Francis,	\$0.00	\$0.00	\$1,699.00	\$1,699.00
00104620	CON 2 PT LOT 4 RP 51R19528	0.92	0.37	Day Roy Laverne,	\$0.00	\$0.00	\$57.00	\$57.00
00105800	CON 2 N PT LOT 5	9.89	4.00	Yoon Mi-Hyang, Yoon Hyunchul,	\$0.00	\$0.00	\$284.00	\$284.00
00105900	CON 2 N PT LOT 5	9.90	4.01	Barber Bart Steven,	\$0.00	\$0.00	\$285.00	\$285.00
00106000	CON 2 N PT LOT 5	9.93	4.02	Krebs-Wickens Iris, Wickens J, Wirz Raymond & Betty,	\$0.00	\$0.00	\$286.00	\$286.00
00106100	CON 2 N PT LOT 5	10.01	4.05	Grigoroff Alexander & Angelo, Grigoroff Gordon & Zoi,	\$0.00	\$0.00	\$288.00	\$288.00
00106200	CON 2 N PT LOT 5	9.72	3.93	Sieber Helga,	\$0.00	\$0.00	\$279.00	\$279.00
00106300	CON 2 N PT LOT 5	9.74	3.94	Nothrop Carol,	\$0.00	\$0.00	\$280.00	\$280.00
00106500	CON 2 N PT LOT 5	10.03	4.06	Scorzello Antonio,	\$0.00	\$0.00	\$289.00	\$289.00
00106700	CON 2 N PT LOT 5	10.02	4.05	Watt Allan Wayne, Watt Deborah	\$0.00	\$0.00	\$288.00	\$288.00
00104900	CON 2 S PT LOT 5 RP 51R7862	0.52	0.21	Ley Ronald Garry, Ley Sharon Irene,	\$0.00	\$0.00	\$44.00	\$44.00
00105400	CON 2 N PT LOT 6	18.83	7.62	Menzel Loni, Morwick Edward	\$0.00	\$0.00	\$542.00	\$542.00
00105500	CON 2 N/W PT LOT 6	10.87	4.40	Mislaszek Wesley, Brooks Brenda,	\$0.00	\$0.00	\$313.00	\$313.00
00105600	CON 2 N PT LOT 6	10.89	4.41	Barbosa Maria, Barbosa Lino,	\$0.00	\$0.00	\$313.00	\$313.00
00105700	CON 2 N PT LOT 6 RP 51R22843	21.11	8.54	Carpino Avril Anne, Carpino	\$0.00	\$0.00	\$607.00	\$607.00
00105300	CON 2 N PT LOT 6	33.47	13.54	Hussain Irene, Hussain Sarfraz,	\$0.00	\$0.00	\$962.00	\$962.00
00122600	CON 2 N PT LOT 7	90.00	36.42	Ellen'S Investment Holdings Lt,	\$0.00	\$0.00	\$2,824.00	\$2,824.00
00122300	CON 2 PT LOT 7 RP 51R6047	0.60	0.24	Jolie Bonnie Jean, Jolie Francis F,	\$0.00	\$0.00	\$52.00	\$52.00
00122400	CON 2 N PT LOT 7 RP 51R2208	0.60	0.24	Lacroix Denise A, Lacroix John P,	\$0.00	\$0.00	\$52.00	\$52.00
00119510	CON 2 S PT LOT 7 RP 51R33480	1.50	0.61	Armstrong Troy	\$0.00	\$0.00	\$65.00	\$65.00
00119700	CON 2 S PT LOT 8 RP 51R3193	25.04	10.13	Chiodo Peter,	\$0.00	\$7,951.00	\$1,260.00	\$9,211.00
00119800	CON 2 S PT LOT 8	50.00	20.23	Filice Antonio, Filice Marina Rosa,	\$94,252.00	\$14,701.00	\$2,489.00	\$111,442.00
00121800	CON 2 N PT LOT 8	25.00	10.12	Mora Heidi, Mora Imre,	\$0.00	\$0.00	\$3,416.00	\$3,416.00
00121900	CON 2 N PT LOT 8	12.50	5.06	Reynolds Jean E, Reynolds	\$0.00	\$0.00	\$1,709.00	\$1,709.00
00122000	CON 2 N PT LOT 8 RP 51R28222	12.50	5.06	Zylstra Charles Klaas, Zylstra Corrie,	\$0.00	\$0.00	\$392.00	\$392.00
00120000	CON 2 S PT LOT 9	25.15	10.18	Mora Imre, Cestarc Joseph,	\$94,252.00	\$5,552.00	\$1,765.00	\$101,569.00
00120100	CON 2 S PT LOT 9	25.20	10.20	Mora Imre, Cestarc Joseph,	\$0.00	\$7,453.00	\$1,754.00	\$9,207.00
00120200	CON 2 S PT LOT 9	12.64	5.12	Bordon Mario Oscar, Bordon	\$94,252.00	\$3,738.00	\$1,106.00	\$99,096.00
00120300	CON 2 S PT LOT 9	12.64	5.12	Tarantino C & Marchese Ida, Andreacchi A & Garito Lina,	\$94,252.00	\$3,738.00	\$1,308.00	\$99,298.00
00120900	CON 2 N PT LOT 10	25.22	10.21	Horodinsky Farms Inc,	\$0.00	\$12,030.00	\$3,447.00	\$15,477.00
00206700	CON 2 S PT LOT 12	25.00	10.12	Galloro Maria J,	\$0.00	\$2,414.00	\$773.00	\$3,187.00
00206800	CON 2 S PT LOT 12	12.47	5.05	Galloro Frank Joseph,	\$0.00	\$1,205.00	\$386.00	\$1,591.00
00206900	CON 2 S PT LOT 12	12.46	5.04	Tesic Milos,	\$0.00	\$1,202.00	\$385.00	\$1,587.00
00211600	CON 2 N PT LOT 13	15.00	6.07	Evers Darlene Jane,	\$0.00	\$1,090.00	\$1,586.00	\$2,676.00
00211700	CON 2 N PT LOT 13	10.00	4.05	Risi Tulo,	\$0.00	\$966.00	\$1,405.00	\$2,371.00
00211800	CON 2 N PT LOT 13	17.50	7.08	Grydsuk James Darryl,	\$0.00	\$1,689.00	\$2,457.00	\$4,146.00
00211900	CON 2 N PT LOT 13	20.00	8.09	Goncalves Olinda, Goncalves Michael,	\$0.00	\$1,930.00	\$2,806.00	\$4,736.00

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
00212000	CON 2 N PT LOT 13	37.69	15.25	Yamamoto Kerry,	\$0.00	\$2,266.00	\$3,296.00	\$5,562.00
00207000	CON 2 S PT LOT 13	25.00	10.12	Jones Clifton & Debbie, Wiltshire Milton & Lorna,	\$0.00	\$2,414.00	\$773.00	\$3,187.00
00207100	CON 2 S PT LOT 13	12.30	4.98	Kril John, Kril Anna,	\$0.00	\$1,188.00	\$380.00	\$1,568.00
00207200	CON 2 S PT LOT 13	12.30	4.98	Badstober Barbara An, Badstober Rudolf Joh,	\$0.00	\$1,188.00	\$380.00	\$1,568.00
00212100	CON 2 N PT LOT 12	15.06	6.09	Boston Mills Investment Holdin,	\$0.00	\$1,453.00	\$2,084.00	\$3,537.00
00212200	CON 2 N PT LOT 12	10.06	4.07	Sharma Sanjeev,	\$0.00	\$971.00	\$1,411.00	\$2,382.00
00211100	CON 2 PT LOT 15	0.12	0.05	Director Municipal Subsidies, Ministry Of Transportation,	\$0.00	\$0.00	\$50.00	\$50.00
00206000	CON 2 S PT LOT 15	0.58	0.23	Esau Linda Gail, Kalcic Gregory Doug,	\$0.00	\$0.00	\$226.00	\$226.00
00210901	CON 2 PT LOT 15 RP 51R15380	0.84	0.34	Kent Kevin,	\$0.00	\$0.00	\$270.00	\$270.00
00211000	CON 2 N PT LOT 15 RP 51R740	0.48	0.20	Budd Patricia Gail, Budd Alan	\$0.00	\$0.00	\$208.00	\$208.00
00210200	CON 2 PT LOT 16 RP51R8537	0.46	0.19	Campbell Martina P A, Campbell Ian Todd,	\$0.00	\$0.00	\$198.00	\$198.00
00210500	CON 2 N PT LOT 16	0.52	0.21	Cuneen Daniel,	\$0.00	\$0.00	\$215.00	\$215.00
00210600	CON 2 N PT LOT 16	14.25	5.77	Zendelek Boguslaw, Zendelek Roberta,	\$0.00	\$0.00	\$2,001.00	\$2,001.00
00208200	CON 2 S PT LOT 16	1.53	0.62	Wood Larry James, Wood Constance Ruth,	\$0.00	\$0.00	\$320.00	\$320.00
00208300	CON 2 S PT LOT 16	1.57	0.64	Bygnes Thorleif, Bygnes Evelyn,	\$0.00	\$0.00	\$324.00	\$324.00
00208520	CON 2 PT LOT 16 RP 51R18491	0.57	0.23	Groves Linda,	\$0.00	\$0.00	\$226.00	\$226.00
00100900	CON 1 S PT LOT 4	1.09	0.44	Wigle Tonya, Ferguson Brian,	\$0.00	\$0.00	\$56.00	\$56.00
00103110	CON 1 PT LOT 4 RP 51R33535	1.19	0.48	Lang Margaret Iris	\$0.00	\$0.00	\$60.00	\$60.00
00103010	CON 1 N PT LOT 5 RP 51R32751	1.33	0.54	Beattie Aaron	\$0.00	\$0.00	\$62.00	\$62.00
00101200	CON 1 S PT LOT 5	84.62	34.24	1665328 Ontario Ltd,	\$0.00	\$20,648.00	\$2,152.00	\$22,800.00
00102600	CON 1 N PT LOT 6 RP 51R9251	0.69	0.28	Little Joseph David, Lemoine Cassidy Julee,	\$0.00	\$0.00	\$48.00	\$48.00
00101300	CON 1 PT LOT 6 RP 51R19649	0.57	0.23	Minns Heather Grace,	\$0.00	\$0.00	\$43.00	\$43.00
00101500	CON 1 S PT LOT 6	1.00	0.40	Wallace Helen Jean,	\$0.00	\$0.00	\$53.00	\$53.00
00101700	CON 1 S PT LOT 6	0.63	0.26	Palmer Randall,	\$0.00	\$0.00	\$46.00	\$46.00
00101800	CON 1 S PT LOT 6	0.34	0.14	Beattie Cecilia May, Beattie George David,	\$0.00	\$0.00	\$28.00	\$28.00
00101900	CON 1 S PT LOT 6	0.23	0.09	Bell Canada,	\$0.00	\$0.00	\$18.00	\$18.00
00119400	CON 1 N PT LOT 7	84.00	33.99	Sucession Financial Group Inc,	\$0.00	\$25,767.00	\$2,416.00	\$28,183.00
00116600	CON 1 S PT LOT 7 RP 51R24159	62.43	25.26	Aqua-Gem Investments Limited,	\$0.00	\$0.00	\$1,751.00	\$1,751.00
00116700	CON 1 S PT LOT 7 RP 51R29670	2.28	0.92	1045901 Ontario Ltd,	\$0.00	\$0.00	\$75.00	\$75.00
00119200	CON 1 N PT LOT 8	49.00	19.83	1523566 Ontario Limited,	\$0.00	\$15,264.00	\$1,479.00	\$16,743.00
00116900	CON 1 S PT LOT 8	102.67	41.55	Flammini Maria, Dicarilo Stefano, Vincenzo Carmen,	\$0.00	\$0.00	\$2,989.00	\$2,989.00
00117500	CON 1 S PT LOT 10	13.00	5.26	Rudnisky Wally,	\$0.00	\$1,255.00	\$392.00	\$1,647.00
00117700	CON 1 S PT LOT 10	13.00	5.26	Fabiano Caterina, Fabiano Luigi,	\$0.00	\$1,255.00	\$392.00	\$1,647.00
00117900	INNISFIL CON 1 S PT LOT 10	9.87	3.99	Mark Dover Franklin, Mark Yasuko,	\$0.00	\$952.00	\$298.00	\$1,250.00
00118000	INNISFIL CON 1 S PT LOT 10	9.83	3.98	Mark Yasuko, Maehara Masumi,	\$0.00	\$949.00	\$297.00	\$1,246.00
00118100	INNISFIL CON 1 PT LOTS 10	23.08	9.34	Riley Margaret,	\$0.00	\$2,228.00	\$697.00	\$2,925.00
00118600	CON 1 N PT LOT 10	5.00	2.02	Rudnisky Wally,	\$0.00	\$482.00	\$152.00	\$634.00
00118700	CON 1 N PT LOT 10	5.00	2.02	Santos Maria De Lurdes A, Santos Filipe,	\$0.00	\$482.00	\$152.00	\$634.00
00200100	INNISFIL CON 1 PT LOTS 10	11.82	4.78	Malik Sohaib, Awan Basim,	\$0.00	\$1,140.00	\$357.00	\$1,497.00
00200200	CON 1 S PT LOT 11	21.62	8.75	Elfassy Suzanne,	\$0.00	\$2,087.00	\$653.00	\$2,740.00
00200300	CON 1 C PT LOT 11	14.48	5.86	Burrows Ralph Joel, Burrows Marie,	\$0.00	\$1,398.00	\$437.00	\$1,835.00
00200400	CON 1 PART C PT LOT 11	14.00	5.67	Kosinec Melody,Paul,John, Kosinec Michael & Darlene,	\$0.00	\$1,352.00	\$423.00	\$1,775.00
00200700	CON 1 S PT LOT 11	1.01	0.41	Zielke Kari Andrea, Zielke Marilyn Ethel,	\$0.00	\$196.00	\$61.00	\$257.00
00200800	CON 1 S PT LOT 12	0.48	0.19	Matchett Edward William	\$0.00	\$136.00	\$43.00	\$179.00
00200900	CON 1 S PT LOT 12	0.40	0.16	Matchett Edward William	\$0.00	\$114.00	\$36.00	\$150.00
00201300	CON 1 S PT LOT 13 RP 51R4112	0.55	0.22	Brillinger Stephen, Brillinger	\$0.00	\$0.00	\$48.00	\$48.00
00201500	CON 1 S PT LOT 14 RP 51R5147	0.46	0.19	Long Roy, Long Diane,	\$0.00	\$0.00	\$43.00	\$43.00
00201801	CON 1 S PT LOT 15 RP	0.59	0.24	Kell-Rose Barbara L, Rose David S,	\$0.00	\$0.00	\$50.00	\$50.00
00204900	CON 1 N PT LOT 16	0.75	0.30	Clements Cemetery,	\$0.00	\$0.00	\$71.00	\$71.00
07216401	CON 15 N PT LOT 3 RP 51R2687	3.09	1.25	Vernon Mary Lorna, Vernon Paul Douglas,	\$0.00	\$0.00	\$82.00	\$82.00
07216402	CON 15 E PT LOT 4 RP	2.00	0.81	Cruz Gil Da Silva, Cruz Maria Rosa,	\$0.00	\$0.00	\$67.00	\$67.00
07216300	CON 15 W PT LOT 4	11.61	4.70	Lemoine Joanne Marie,	\$0.00	\$0.00	\$309.00	\$309.00
07216301	CON 15 W PT LOT 4 RP 51R2445	1.60	0.65	Reis Armando,	\$0.00	\$0.00	\$62.00	\$62.00
07216302	CON 15 PT LOT 4 RP 51R13298	1.19	0.48	Pedneault Marc	\$0.00	\$0.00	\$58.00	\$58.00
07216200	CON 15 W PT LOT 4 RP 51R2445	0.57	0.23	Lotton Kenneth Roy, Lotton Shirley Gail,	\$0.00	\$0.00	\$43.00	\$43.00
07216000	CON 15 W PT LOT 5	3.21	1.30	Adf Investments Ltd,	\$0.00	\$0.00	\$86.00	\$86.00
07215900	CON 15 PT LOT 5	14.01	5.67	1833044 Ontario Limited,	\$0.00	\$0.00	\$373.00	\$373.00
07215901	CON 15 W PT LOT 6 RP	14.21	5.75	Carra Carlos A, Carra Mary,	\$0.00	\$0.00	\$378.00	\$378.00
07215902	CON 15 PT LOT 5 RP 51R3667	3.39	1.37	1606148 Ontario Limited,	\$0.00	\$0.00	\$90.00	\$90.00
07215903	CON 15 PT LOT 5 RP 51R3667	5.91	2.39	Tenax Limited,	\$0.00	\$0.00	\$157.00	\$157.00
07215910	CON 15 PT LOT 6 RP 51R24049	2.20	0.89	Carra Mary, Carra Carlos A,	\$0.00	\$0.00	\$70.00	\$70.00
07215602	CON 15 PT LOT 6 RP RP	0.99	0.40	Fellman Brent Lorne, Fellman Nicole Lydon,	\$0.00	\$0.00	\$53.00	\$53.00

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
07215700	CON 15 PT LOT 6	0.47	0.19	Bucko John,	\$0.00	\$0.00	\$37.00	\$37.00
07215600	CON 15 E PT LOT 6 RP 51R9368	14.48	5.86	442023 Ontario Limited,	\$0.00	\$0.00	\$385.00	\$385.00
07414900	CON 14 PT LOT 7 CON 15 PT	8.20	3.32	Taurus Cookstown Partners Ltd,	\$0.00	\$0.00	\$230.00	\$230.00
07415000	CON 15 PT LOT 8	19.48	7.88	De Sao Jose Isidro, De Sao Jose Marie,	\$0.00	\$0.00	\$546.00	\$546.00
07415100	CON 15 PT LOT 8 RP 51R1259	2.76	1.12	Carmel (Canada), Sisters Of Our Lady Of Mount,	\$0.00	\$282.00	\$82.00	\$364.00
07415101	CON 15 PT LOT 8	1.76	0.71	Town Of Innisfil,	\$0.00	\$233.00	\$68.00	\$301.00
07415200	CON 15 PT LOT 8 RP 51R1259	5.25	2.12	Carmel (Canada), Sisters Of Our Lady Of Mount,	\$0.00	\$506.00	\$147.00	\$653.00
07415201	CON 15 PT LOT 8 RP 51R1259	5.25	2.12	Giorno Fabio,	\$0.00	\$506.00	\$147.00	\$653.00
07415300	CON 15 E PT LOT 9	11.50	4.65	Groombridge Helen E,	\$0.00	\$1,109.00	\$322.00	\$1,431.00
07415400	CON 15 W PT LOT 9	25.20	10.20	Brash Alan, Mitchell James David, Brash Donna,	\$0.00	\$2,433.00	\$707.00	\$3,140.00
07415700	CON 15 PT LOT 10	2.99	1.21	Kingsly Thomas,	\$0.00	\$0.00	\$84.00	\$84.00
07415800	CON 15 PT LOT 10 RP 51R14343	4.00	1.62	Le Coche Franco, Le Coche Teresa,	\$0.00	\$386.00	\$112.00	\$498.00
07415900	CON 15 PT LOT 10 RP 51R14343	4.70	1.90	Esposito Raffaele & Le Coche Francesca Lucia, Le Coche Flora	\$0.00	\$0.00	\$132.00	\$132.00
07416000	WEST GWILLIMBURY CON 15 PT	4.67	1.89	Esposito Raffaele,	\$0.00	\$451.00	\$131.00	\$582.00
07416100	CON 15 PT LOT 11 RP 51R19888	21.61	8.75	Alam Quazi N, Alam Akhtari B,	\$0.00	\$1,550.00	\$450.00	\$2,000.00
07416101	CON 15 PT LOT 11 RP 51R1889	0.58	0.24	Fenech Mary Grace,	\$0.00	\$160.00	\$47.00	\$207.00
07416102	CON 15 PT LOT 11 RP 51R19888	0.66	0.27	Bell Gale Ann,	\$0.00	\$171.00	\$50.00	\$221.00
07416110	CON 15 PT LOT 11 RP 51R19888	0.61	0.25	Kuzmyk Sharon, Kuzmyk Robert	\$0.00	\$164.00	\$48.00	\$212.00
07416200	CON 15 PT LOT 11 RP 51R22346	4.56	1.85	Lombardi Diana, Fava Vince,	\$0.00	\$441.00	\$128.00	\$569.00
07416210	CON 15 PT LOT 11 RP 51R22346	0.64	0.26	Hajdukiewicz Phyllis,	\$0.00	\$167.00	\$49.00	\$216.00
07416300	CON 15 PT LOT 11	5.00	2.02	Nemeth Bill,	\$0.00	\$482.00	\$140.00	\$622.00
07416400	CON 15 PT LOTS 11 & 12	3.61	1.46	Haythorne Owen A,	\$0.00	\$348.00	\$101.00	\$449.00
07416401	CON 15 PT LOTS 11 & 12 RP	2.09	0.85	Bondi Barry,	\$0.00	\$248.00	\$72.00	\$320.00
07416500	CON 15 PT LOT 12 RP 51R13335	9.78	3.96	Rautiainen Jorma, Rautiainen Trudy,	\$0.00	\$0.00	\$274.00	\$274.00
07416501	CON 15 PT LOT 12 RP	5.25	2.12	Pereira Fernando, Pereira Helena,	\$0.00	\$0.00	\$147.00	\$147.00
07416520	CON 15 PT LOT 12 RP 51R19937	0.85	0.34	Palazzo Joann, Palazzo Nicola,	\$0.00	\$0.00	\$54.00	\$54.00
07416710	CON 15 PT LOT 13 RP 51R29485	0.68	0.28	Pais Carlos M,	\$0.00	\$0.00	\$50.00	\$50.00
07416720	CON 15 PT LOT 13 RP 51R29485	0.68	0.28	Pagnan-Venroy Donna, Venroy Anthony,	\$0.00	\$0.00	\$50.00	\$50.00
07416701	CON 15 W PT LOT 13 RP	0.96	0.39	Miller Kerri Lee, Miller Aaron William,	\$0.00	\$0.00	\$55.00	\$55.00
07416702	CON 15 PT LOT 13 RP 51R17736	1.94	0.79	Downs Susan,	\$0.00	\$0.00	\$70.00	\$70.00
07416900	CON 15 PT LOTS 13 & 14	0.45	0.18	Ontario Hydro, Assessment And Taxation,	\$0.00	\$0.00	\$37.00	\$37.00
07416801	CON 15 PT LOT 14	0.54	0.22	Harris William, Harris Nadia,	\$0.00	\$0.00	\$44.00	\$44.00
07417001	CON 15 PT LOT 15 51R-2200	0.46	0.19	Goodwin David Earl, Costain	\$0.00	\$0.00	\$40.00	\$40.00
07417040	CON 15 PT LOTS 14 & 15 RP	0.69	0.28	Zielke Lynda Margaret,	\$0.00	\$0.00	\$50.00	\$50.00
07417100	CON 15 PT LOT 15	0.46	0.19	Mccullough Joanne D,	\$0.00	\$0.00	\$40.00	\$40.00
07417300	CON 15 PT LOT 15	0.27	0.11	Innisfil Hydro Distribution Systems Limited, Innisfil Ds - 2255 Highway	\$0.00	\$0.00	\$23.00	\$23.00
07417400	5460 YONGE STREET CON 15 PT	1.28	0.52	Kim Sang-Soon,	\$0.00	\$0.00	\$62.00	\$62.00
07417500	CON 15 PT LOT 15	0.89	0.36	Kim Myung-Hoan, Kim Sang-Soon,	\$0.00	\$0.00	\$55.00	\$55.00
07417600	CON 15 PT LOT 15	0.98	0.40	Ciotti Bernardo, Ciotti Elvira,	\$0.00	\$0.00	\$55.00	\$55.00
07417901	CON 15 PT LOT 15	0.46	0.19	Hughes Anne Matilda,	\$0.00	\$0.00	\$40.00	\$40.00
07414400	CON 14 N PT LOT 8	11.61	4.70	De Sao Jose Martin, De Sao Jose Isidro,	\$0.00	\$0.00	\$326.00	\$326.00
07414500	CON 14 N PT LOT 8	14.33	5.80	Cesta Alberico, Cesta Maria Adua,	\$0.00	\$0.00	\$402.00	\$402.00
07414600	CON 14 N PT LOT 8 RP	7.41	3.00	Taurus Cookstown Partners Ltd,	\$0.00	\$0.00	\$208.00	\$208.00
07414700	CON 14 N PT LOT 8 RP	9.88	4.00	Taurus Cookstown Partners Ltd,	\$0.00	\$0.00	\$277.00	\$277.00
07414100	CON 14 N PT LOT 9	25.00	10.12	Gatti Roberto, Gatti Giovanni, Gatti Giorgio,	\$0.00	\$2,414.00	\$701.00	\$3,115.00
07414200	CON 14 N PT LOT 9	21.99	8.90	Waz Janina Emilia, Waz Janusz,	\$0.00	\$2,123.00	\$617.00	\$2,740.00
07414300	CON 14 N PT LOT 9	16.31	6.60	Galati Lisa & Tony, Granato Anna R & Galati D,	\$0.00	\$1,574.00	\$457.00	\$2,031.00
07414000	CON 14 N PT LOT 9 ROW CON 15	25.00	10.12	Schiafone Maria, Schiafone Biagio,	\$0.00	\$2,414.00	\$701.00	\$3,115.00
07336200	CON 14 S PT LOT 9 RP	15.07	6.10	Marques Jorge,	\$0.00	\$0.00	\$423.00	\$423.00
07336300	CON 14 S PT LOT 9 RP	4.20	1.70	2031430 Ontario Ltd,	\$0.00	\$0.00	\$118.00	\$118.00
07413701	CON 14 PT LOT 10 RP 51R16346	1.00	0.40	Leithwood Debra, Wright Lisa, Fenz Paul Eric,	\$0.00	\$0.00	\$55.00	\$55.00
07413700	CON 14 N PT LOT 10	24.01	9.72	Skuljicak Marko, Skuljicak Mirjana, Skuljicak Mijo,	\$0.00	\$2,319.00	\$674.00	\$2,993.00
07413800	CON 14 N PT LOT 10	52.00	21.04	Corbo Vincenzo, Colonna Rocco, Corbo Filomena, Colonna Carmela,	\$0.00	\$0.00	\$1,458.00	\$1,458.00
07336101	CON 14 S PT LOT 10 RP	1.09	0.44	Cole Andrew James, Cole Petra Deanne,	\$0.00	\$0.00	\$59.00	\$59.00
07335901	CON 14 PT LOT 11 RP 51R15161	1.82	0.74	Garvey Timothy John, Garvey Patricia Lynn,	\$0.00	\$0.00	\$69.00	\$69.00
07335700	CON 14 W PT LOT 11	6.12	2.48	Forget Nicole, Forget Dean,	\$0.00	\$0.00	\$172.00	\$172.00
07335601	CON 14 W PT LOT 11 RP	9.56	3.87	Kennedy Gertrude E A,	\$0.00	\$0.00	\$268.00	\$268.00
07413300	CON 14 E PT LOT 11	50.00	20.23	Ostojic Anastazija Nada, Ostojic Dragan,	\$0.00	\$0.00	\$1,402.00	\$1,402.00



Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
07413301	CON 14 N PT LOT 11	20.92	8.47	Lind Nelly A, Lind Tonis,	\$0.00	\$0.00	\$587.00	\$587.00
07413400	CON 14 W PT LOT 11	10.49	4.25	Heinemann Steven Atilla, Kim Chung-Im,	\$0.00	\$0.00	\$295.00	\$295.00
07413500	CON 14 W PT LOT 11	10.55	4.27	Evans Cynthia Anne, Evans John David,	\$0.00	\$0.00	\$296.00	\$296.00
07413600	CON 14 W PT LOT 11	10.57	4.28	Petryna Peter J,	\$0.00	\$0.00	\$297.00	\$297.00
07336000	CON 14 W PT LOT 11	10.49	4.25	Tesic Vlado & Helen, Tesic Zarko & Mary,	\$0.00	\$0.00	\$295.00	\$295.00
07335900	CON 14 W PT LOT 11 LESS	8.59	3.48	Collins Fiona Joy,	\$0.00	\$0.00	\$241.00	\$241.00
07335800	CON 14 W PT LOT 11	10.48	4.24	Markowitz Bette Marlene, Markowitz Myron Joseph,	\$0.00	\$0.00	\$294.00	\$294.00
07335500	CON 14 S PT LOT 11	44.11	17.85	Ibrajev Vladimir, Ibrajev Renate,	\$0.00	\$0.00	\$813.00	\$813.00
07335600	CON 14 W PT LOT 11	4.67	1.89	Batsch Sherri-Lynn, Batsch Ronald,	\$0.00	\$0.00	\$131.00	\$131.00
07413200	CON 14 N PT LOT 12 RP	1.53	0.62	Wrzala Elzbieta, Wrzala Artur,	\$0.00	\$0.00	\$64.00	\$64.00
07413101	CON 14 N PT LOT 13	0.57	0.23	Kneeshaw Connie Leanne,	\$0.00	\$0.00	\$45.00	\$45.00
07412901	CON 14 N PT LOT 15 RP	0.51	0.20	Parsons Mary Lynn, Parsons Levi Ward,	\$0.00	\$0.00	\$42.00	\$42.00
07412902	CON 14 PT N 1/2 LOT 15 RP	0.53	0.21	Zielke Frederick David Jr, Zielke Kimberly Anne,	\$0.00	\$0.00	\$43.00	\$43.00
07412700	CON 14 N PT LOT 16 RP	3.38	1.37	Kell Roger, Kell John Albert, Kell Stovold Louise, Stovold Christopher,	\$0.00	\$0.00	\$95.00	\$95.00
07412710	CON 14 N PT LOT 16 RP	2.44	0.99	Gariffe Nancy, Paige Kenneth	\$0.00	\$0.00	\$78.00	\$78.00
07412400	CON 14 N PT LOT 16	0.35	0.14	Webster Linda Ann, Becic John	\$0.00	\$0.00	\$29.00	\$29.00
07412500	CON 14 N PT LOT 16 51R6341	0.30	0.12	Kneeshaw Bonnie G,	\$0.00	\$0.00	\$25.00	\$25.00
07412600	CON 14 N PT LOT 16	0.47	0.19	Kneeshaw Bonnie G, Kneeshaw James F,	\$0.00	\$0.00	\$40.00	\$40.00
07412601	CON 14 N PT LOT 16 51R-6341	0.46	0.19	Sturgeon Doris, Sturgeon William Robert,	\$0.00	\$0.00	\$40.00	\$40.00
07333401	CON 13 N PT LOT 12	2.47	1.00	Mattingley Douglas G, Mattingley Ruth Anne,	\$0.00	\$0.00	\$78.00	\$78.00
07333501	CON 13 N 1/2 LOT 13 51R 13385	2.44	0.99	Village of Churchill Block Assessment No.1 lands	\$0.00	\$0.00	\$78.00	\$78.00
	CON 4 LOT 15	59.02	23.88	Village of Churchill Block Assessment No.2 lands north of 4th Line	\$0.00	\$0.00	\$6,816.00	\$6,816.00
	CON 4 LOT 15	16.21	6.56	Village of Churchill Block Assessment No.2 lands south of 4th Line	\$0.00	\$0.00	\$1,872.00	\$1,872.00
	CON 3 LOT 15	62.97	25.48	Village of Churchill Block Assessment No.2 lands south of 4th Line	\$0.00	\$0.00	\$7,273.00	\$7,273.00
	CON 4 LOT 16	14.96	6.05	Village of Churchill Block Assessment No.3 lands	\$0.00	\$10,783.00	\$1,727.00	\$12,510.00
Total on Privately-Owned - Non-Agricultural Lands.....					\$377,008.00	\$202,601.00	\$317,491.00	\$897,100.00

**PRIVATELY-OWNED - AGRICULTURAL LANDS**

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Assessment
01801400	CON 6 S PT LOT 4	51.26	20.74	Robson Julia E,	\$0.00	\$0.00	\$6,745.00	\$6,745.00
01802010	CON 6 N PT LOT 6 RP 51R9053	0.46	0.19	Henry John Frederick, Henry Angus	\$0.00	\$0.00	\$186.00	\$186.00
01801800	CON 6 S PT LOT 6 PL51R-18366	0.57	0.23	Hilverda John, Hilverda Pamela,	\$0.00	\$0.00	\$212.00	\$212.00
01801900	CON 6 S PT LOT 6	89.37	36.17	Hilverda Pamela, Hilverda John,	\$0.00	\$0.00	\$11,762.00	\$11,762.00
01802000	CON 6 N PT LOT 6	32.62	13.20	1665328 Ontario Ltd,	\$0.00	\$0.00	\$4,292.00	\$4,292.00
01801300	CON 6 S PT LOT 4	39.17	15.85	Ruch Ruth Ann, Ruch Terry Ward,	\$0.00	\$0.00	\$5,155.00	\$5,155.00
01800900	CON 6 S PT LOT 3	7.49	3.03	1045990 Ontario Inc,	\$0.00	\$0.00	\$985.00	\$985.00
00325722	PLAN M448 LOT 58	0.49	0.20	Dykie Stephen William, Reta Erica	\$0.00	\$0.00	\$195.00	\$195.00
00325710	PLAN M448 LOT 52	0.42	0.17	Stopyra Agata, Stopyra Dariusz,	\$0.00	\$0.00	\$165.00	\$165.00
00325706	PLAN M448 LOT 50	0.37	0.15	Gogos George,	\$0.00	\$0.00	\$145.00	\$145.00
00325708	PLAN M448 LOT 51	0.44	0.18	Reindl Johanna,	\$0.00	\$0.00	\$176.00	\$176.00
00325704	PLAN M448 LOT 49	0.00	0.00	Savard Huguette,	\$0.00	\$0.00	\$0.00	\$0.00
00325718	PLAN M448 LOT 56	0.51	0.21	Weeks Ronald Stanley,	\$0.00	\$0.00	\$201.00	\$201.00
00325720	PLAN M448 LOT 57	0.50	0.20	Baynham Rosemary Elizabeth,	\$0.00	\$0.00	\$195.00	\$195.00
00325716	PLAN M448 LOT 55	0.52	0.21	Mcinnis Steven Larry, Doyle Marion	\$0.00	\$0.00	\$201.00	\$201.00
02000100	CON 6 LOT 7	105.04	42.51	751518 Ontario Limited,	\$0.00	\$0.00	\$13,823.00	\$13,823.00
02000200	CON 6 S PT LOT 8	19.50	7.89	Sutton Raymond B, Sutton Lois Ann,	\$0.00	\$0.00	\$2,566.00	\$2,566.00
02000300	CON 6 S PT LOT 9	27.40	11.09	Sinagoga Anthony, Sinagoga Maria,	\$0.00	\$0.00	\$3,605.00	\$3,605.00
02000400	CON 6 S PT LOT 10	42.70	17.28	Gemstone Property Ltd,	\$0.00	\$0.00	\$5,619.00	\$5,619.00
02104300	CON 6 S PT LOT 11	10.92	4.42	Hall Catherine Rita,	\$0.00	\$0.00	\$1,436.00	\$1,436.00
02105000	CON 6 S PT LOT 14	100.00	40.47	Pratt Winston Ivan,	\$0.00	\$0.00	\$13,160.00	\$13,160.00
02105200	CON 6 S PT LOT 15	45.83	18.55	Cole Elayne, Cole James Guy,	\$0.00	\$0.00	\$6,033.00	\$6,033.00
00115500	CON 5 N PT LOT 5 N PT LOT 4	79.77	32.28	1715573 Ontario Limited,	\$0.00	\$0.00	\$10,498.00	\$10,498.00
00114600	CON 5 PT LOTS 3 AND 4 RP	5.96	2.41	1715573 Ontario Limited,	\$0.00	\$0.00	\$783.00	\$783.00
00114800	CON 5 S PT LOT 5 RP 51R35273	47.44	19.20	1715573 Ontario Limited,	\$0.00	\$0.00	\$6,245.00	\$6,245.00

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
00114900	CON 5 S PT LOT 6	50.00	20.23	Pearson Evelyn Irene,	\$0.00	\$0.00	\$6,579.00	\$6,579.00
00115000	CON 5 S PT LOT 6 N PT LOT 6	124.00	50.18	1715573 Ontario Limited,	\$0.00	\$0.00	\$16,318.00	\$16,318.00
00127900	CON 5 N PT LOT 7	99.00	40.06	1720121 Ontario Limited,	\$0.00	\$0.00	\$13,026.00	\$13,026.00
00126700	CON 5 S PT LOT 7	98.00	39.66	Vandermast Cornelius, Vandermast Maria,	\$0.00	\$0.00	\$12,898.00	\$12,898.00
00127700	CON 5 N PT LOT 8 S PT LOT 8	180.00	72.84	Vandermast Maria Hendrikaa,	\$0.00	\$0.00	\$23,688.00	\$23,688.00
00127000	CON 5 S PT LOT 9	70.00	28.33	Trombley Virginia Ga,	\$0.00	\$0.00	\$9,213.00	\$9,213.00
00127100	CON 5 S PT LOT 10 RP 51R1802	25.12	10.17	Taylor Gary Michael, Wagner	\$0.00	\$0.00	\$3,307.00	\$3,307.00
00127200	CON 5 S PT LOT 10 RP 51R1802	25.12	10.17	Troiano Guseppe, Troiano	\$0.00	\$0.00	\$3,307.00	\$3,307.00
00127300	CON 5 S PT LOT 10 RP 51R5438	50.41	20.40	Henniger Paul David,	\$0.00	\$0.00	\$6,635.00	\$6,635.00
00127400	CON 5 N PT LOT 10	100.00	40.47	Sawyer Garry Stanley, Sawyer Sharon Jean,	\$0.00	\$0.00	\$13,160.00	\$13,160.00
00232000	CON 5 N PT LOT 12 S PT LOT	149.28	60.41	Farr James H, Farr Thomas L,	\$0.00	\$0.00	\$19,645.00	\$19,645.00
00232200	CON 5 N PT LOT 11	99.45	40.25	Leonienco Mathilda Ann, Leonienco	\$0.00	\$0.00	\$13,088.00	\$13,088.00
00226900	CON 5 S PT LOT 11	14.31	5.79	Van Kuik Theodore,	\$0.00	\$0.00	\$1,884.00	\$1,884.00
00231900	CON 5 N PT LOTS 13 AND 14 RP	170.00	68.80	1665328 Ontario Ltd,	\$0.00	\$0.00	\$22,374.00	\$22,374.00
00228000	CON 5 PT LOT 14 RP 51R34693	130.00	52.61	1665328 Ontario Ltd,	\$0.00	\$0.00	\$17,108.00	\$17,108.00
00229000	CON 5 PT LOT 15 RP 51R6609	185.84	75.21	Kell Farms Limited,	\$0.00	\$0.00	\$24,458.00	\$24,458.00
00231300	CON 5 N PT LOT 16	98.16	39.72	1589114 Ontario Ltd,	\$0.00	\$0.00	\$12,917.00	\$12,917.00
00229100	CON 5 S PT LOT 16	97.95	39.64	882022 Ontario Limited,	\$0.00	\$0.00	\$12,891.00	\$12,891.00
00229200	CON 5 S PT LOT 17	14.26	5.77	Tse Keith, Hunt Karen,	\$0.00	\$0.00	\$1,876.00	\$1,876.00
00113000	CON 4 N PT LOT 2 RP 51R7189	27.35	11.07	4090 4Th Line Inc,	\$0.00	\$0.00	\$787.00	\$787.00
00111100	CON 4 S PT LOT 2 RP 51R5549	21.72	8.79	Spataro Lina, Pontieri Joanne, Spataro Manuel, Spataro Joseph,	\$0.00	\$0.00	\$625.00	\$625.00
00111200	CON 4 S PT LOT 2 RP 51R11548	73.24	29.64	4090 4Th Line Inc,	\$0.00	\$0.00	\$2,106.00	\$2,106.00
00111700	CON 4 PT LOT 3 RP 51R7189	156.74	63.43	4090 4Th Line Inc,	\$0.00	\$0.00	\$4,508.00	\$4,508.00
00112600	CON 4 N PT LOT 4	98.99	40.06	Baker Brian, Baker Margaret Rose,	\$0.00	\$0.00	\$2,847.00	\$2,847.00
00111900	CON 4 S PT LOT 4	100.00	40.47	Marling Barbara Elizabeth, Marling David John Albert,	\$0.00	\$0.00	\$2,876.00	\$2,876.00
00112500	CON 4 N PT LOT 5	98.39	39.82	Jones Sidney Orville, Jones Sandra Louise,	\$0.00	\$0.00	\$3,087.00	\$3,087.00
00112400	CON 4 N PT LOT 6	90.00	36.42	Pearson Evelyn Irene,	\$0.00	\$0.00	\$2,824.00	\$2,824.00
00112100	CON 4 S PT LOT 6	92.45	37.41	1665328 Ontario Ltd,	\$0.00	\$0.00	\$2,900.00	\$2,900.00
00126400	CON 4 N PT LOT 7	92.63	37.49	1665328 Ontario Ltd,	\$0.00	\$0.00	\$12,962.00	\$12,962.00
00125400	CON 4 S PT LOT 7 51R-5140	29.99	12.14	Gdm Terraco Inc,	\$0.00	\$0.00	\$4,197.00	\$4,197.00
00125500	CON 4 S PT LOT 7 RP 51R18261	34.97	14.15	Franline Investments Limited,	\$0.00	\$0.00	\$4,893.00	\$4,893.00
00125600	CON 4 S PT LOT 7 RP 51R2122	25.00	10.12	Del Bel Belluz N & C, Grillo Frank & Nina,	\$0.00	\$0.00	\$3,499.00	\$3,499.00
00126300	CON 4 N PT LOT 8	100.00	40.47	Eschli Jamie, Eschli Michael,	\$0.00	\$0.00	\$13,992.00	\$13,992.00
00125800	CON 4 PT LOTS 8 AND 9 RP	149.26	60.40	Posius Vytautas, Posius Doris May,	\$0.00	\$0.00	\$20,884.00	\$20,884.00
00125900	CON 4 S PT LOT 9 RP 51R21455	48.77	19.74	S I L Developments Inc, Zaretsky Ruth, Soudack Sigmund,	\$0.00	\$0.00	\$6,826.00	\$6,826.00
00220700	CON 4 S PT LOT 11	50.00	20.23	Kell Farms Limited,	\$0.00	\$16,677.00	\$7,268.00	\$23,945.00
00220902	CON 4 PT S 1/2 LOT 11 INSTR	5.38	2.18	Tuzi Angelo,	\$0.00	\$0.00	\$783.00	\$783.00
00220904	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Gargaro Antonio,	\$0.00	\$0.00	\$783.00	\$783.00
00220906	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Tuzi Geraldo,	\$0.00	\$0.00	\$783.00	\$783.00
00220908	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Alves Manuela, Alves Manuel Pinto,	\$0.00	\$0.00	\$783.00	\$783.00
00220910	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Rodrigues Jose Luis, Rodrigues Grace,	\$0.00	\$4,560.00	\$783.00	\$5,343.00
00220912	CON 4 PT S 1/2 LOT 11 INSTR	5.40	2.19	Tuzi Geraldo,	\$0.00	\$4,348.00	\$786.00	\$5,134.00
00220914	CON 4 PT S 1/2 LOT 11 INSTR	5.40	2.19	Rodrigues Grace, Rodrigues Jose Luis,	\$0.00	\$1,893.00	\$786.00	\$2,679.00
00220916	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Fernandes Jose, Fernandes Elvira,	\$0.00	\$1,887.00	\$783.00	\$2,670.00
00226300	CON 4 N PT LOT 12	100.00	40.47	1665328 Ontario Ltd,	\$0.00	\$0.00	\$14,669.00	\$14,669.00
00220918	CON 4 PT S 1/2 LOT 12 INSTR	10.08	4.08	Valente Lucy Mkary M, Valente Michael Paul,	\$0.00	\$0.00	\$1,467.00	\$1,467.00
00220920	CON 4 PT S 1/2 LOT 12 INSTR	10.09	4.08	Tersigni Maria,	\$0.00	\$0.00	\$1,467.00	\$1,467.00
00220922	CON 4 PT S 1/2 LOT 12 INSTR	10.09	4.08	Tuzi Angelo,	\$0.00	\$0.00	\$1,467.00	\$1,467.00
00220924	CON 4 PT S 1/2 LOT 12 INSTR	10.09	4.08	De Santis Lisa,	\$0.00	\$0.00	\$1,467.00	\$1,467.00
00220926	CON 4 PT S 1/2 LOT 12 INSTR	10.09	4.08	Tuzi Geraldo,	\$0.00	\$0.00	\$1,467.00	\$1,467.00
00220928	CON 4 PT S 1/2 LOT 12 INSTR	10.10	4.09	Tersigni Maria,	\$0.00	\$0.00	\$1,470.00	\$1,470.00
00220930	CON 4 S PT LOT 12	26.30	10.64	Kerkhof Aubrey,	\$0.00	\$0.00	\$3,823.00	\$3,823.00
00220932	CON 4 PT S 1/2 LOT 12 INSTR	10.23	4.14	Tuzi Angelo, Tuzi Geraldo,	\$0.00	\$0.00	\$1,488.00	\$1,488.00
00226100	CON 4 N PT LOT 13 UFFI	100.00	40.47	1665328 Ontario Ltd,	\$0.00	\$0.00	\$14,539.00	\$14,539.00
00221000	CON 4 S PT LOT 13	100.00	40.47	Suite 212, Amaron Investments L,	\$0.00	\$0.00	\$14,539.00	\$14,539.00
00226000	CON 4 N PT LOT 14 PL	103.67	41.95	Favret Chiara Maria, Favret	\$0.00	\$0.00	\$15,071.00	\$15,071.00
00221100	CON 4 S PT LOT 14	94.30	38.16	Amaron Investments L, Suite 212,	\$0.00	\$0.00	\$13,709.00	\$13,709.00
00225700	CON 4 PT LOT 15 RP 51R28045	87.33	35.34	1636574 Ontario Inc,	\$0.00	\$0.00	\$12,696.00	\$12,696.00
00224400	CON 4 N PT LOT 16 RP	60.12	24.33	Barnstable Park Realty Corp,	\$0.00	\$0.00	\$8,741.00	\$8,741.00
00311400	CON 4 S PT LOT 16 PLUS PLAN	41.00	16.59	Sinclair Keith D, Sinclair Ruth E,	\$0.00	\$0.00	\$5,756.00	\$5,756.00
00221600	CON 4 S PT LOT 17	9.88	4.00	Kell Susan Frances, Kell John	\$0.00	\$0.00	\$1,389.00	\$1,389.00
00110100	CON 3 N PT LOT 2	99.90	40.43	848670 Ontario Limited,	\$0.00	\$0.00	\$2,873.00	\$2,873.00
00107600	CON 3 S PT LOT 2 RP 51R7496	13.05	5.28	Wardlaw Paul Wilbert,	\$0.00	\$0.00	\$375.00	\$375.00
00110000	CON 3 N PT LOT 3	100.00	40.47	Klymiuk Maria, Klymiuk William,	\$0.00	\$0.00	\$2,947.00	\$2,947.00
00107700	CON 3 S PT LOT 3	76.36	30.90	Lukovits Joseph, Radoccai Anna,	\$0.00	\$0.00	\$2,196.00	\$2,196.00

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
00109900	CON 3 N PT LOT 4 S PT LOT 4	148.67	60.16	Wardlaw Paul Wilbert,	\$0.00	\$0.00	\$4,275.00	\$4,275.00
00107900	CON 3 S PT LOT 4 RP 51R4606	26.33	10.66	Evans Charlot Andrea,	\$0.00	\$0.00	\$758.00	\$758.00
00108000	CON 3 S PT LOT 4 RP 51R4606	26.40	10.68	Chapter Homes Inc,	\$0.00	\$0.00	\$759.00	\$759.00
00109800	INNISFIL CON 3 N PT LOT 5	102.05	41.30	1665328 Ontario Ltd,	\$0.00	\$0.00	\$3,129.00	\$3,129.00
00108100	CON 3 S PT LOT 5	96.50	39.05	Henry Angus Franklin, Henry David John,	\$0.00	\$0.00	\$2,844.00	\$2,844.00
00108400	CON 3 S PT LOT 6 LESS	90.23	36.51	Rainey Eleanor A, Rainey Eric H & Janine M,	\$0.00	\$0.00	\$2,713.00	\$2,713.00
00108500	CON 3 N PT LOT 6	31.29	12.66	Ferrazzo Salvatore/Pasquale, Ferrazzo Michele/Maria,	\$0.00	\$0.00	\$981.00	\$981.00
00109200	CON 3 PT LOT 6 15.24 AC	15.24	6.17	Frasca Maria,	\$0.00	\$0.00	\$478.00	\$478.00
00125100	CON 3 N PT LOT 7	38.78	15.69	Mauti Maria Luisa, Mauti Umberto,	\$0.00	\$0.00	\$1,216.00	\$1,216.00
00125000	CON 3 N PT LOT 7	50.65	20.50	Albanese John D, Albanese Maria,	\$0.00	\$0.00	\$6,836.00	\$6,836.00
00122900	CON 3 S PT LOT 7	82.86	33.53	1665328 Ontario Ltd,	\$0.00	\$0.00	\$11,377.00	\$11,377.00
00124900	CON 3 W PT LOT 8 RP 51R19347	96.35	38.99	1665328 Ontario Ltd,	\$0.00	\$0.00	\$13,482.00	\$13,482.00
00124600	CON 3 E PT LOT 8 RP 51R4914	24.89	10.07	Woods Cheryl Lee, Woods Philip Daniel,	\$0.00	\$0.00	\$3,482.00	\$3,482.00
00124800	CON 3 E PT LOT 8 RP 51R4962	79.27	32.08	1665328 Ontario Ltd,	\$0.00	\$0.00	\$11,092.00	\$11,092.00
00124400	CON 3 N PT LOT 9	24.70	10.00	Wilson James A, Wilson Patricia L,	\$0.00	\$0.00	\$3,458.00	\$3,458.00
00123500	CON 3 PT LOT 9 RP 51R12114	56.15	22.72	Desroche Kenneth Michael, Desroche Laura Lee,	\$0.00	\$0.00	\$7,855.00	\$7,855.00
00123600	CON 3 PT LOT 9	50.00	20.23	Collins Gloria J, Collins Kevin M,	\$0.00	\$0.00	\$6,995.00	\$6,995.00
00124200	CON 3 PT LOT 10	133.59	54.06	Chow Joseph,	\$0.00	\$12,895.00	\$18,692.00	\$31,587.00
00220600	CON 3 N PT LOT 11	100.00	40.47	Szabo Arpad, Spataro Tony,	\$0.00	\$31,262.00	\$14,669.00	\$45,931.00
00213700	CON 3 S PT LOT 11 RP 51R3731	10.05	4.07	Efstathiadis Peter & Diana, Martinovski Lubica & Danny,	\$0.00	\$0.00	\$1,411.00	\$1,411.00
00214000	CON 3 S PT LOT 11 RP 51R3731	26.60	10.76	1281597 Ontario Inc,	\$0.00	\$0.00	\$3,733.00	\$3,733.00
00220400	CON 3 N PT LOT 12	50.00	20.23	Plypiak Stefan, Plypiak Olga,	\$0.00	\$4,826.00	\$7,114.00	\$11,940.00
00214100	CON 3 PT LOT 12 RP 51R8969	93.30	37.76	Horodinsky John Boris, Horodinsky Erika,	\$0.00	\$9,007.00	\$13,100.00	\$22,107.00
00220300	CON 3 N PT LOT 13 RP	100.80	40.79	Crestrail Investments Inc,	\$0.00	\$0.00	\$14,199.00	\$14,199.00
00214400	CON 3 S PT LOT 13	100.00	40.47	Yamamoto Haruko & Kerry S, Yamamoto Shigeo,	\$0.00	\$9,653.00	\$14,040.00	\$23,693.00
00214500	CON 3 S PT LOT 14	100.00	40.47	Kell Emily Anne, Kell Larry E,	\$0.00	\$9,653.00	\$14,040.00	\$23,693.00
00214600	CON 3 S PT LOT 15	50.00	20.23	Campbell Marjorie A,	\$0.00	\$0.00	\$7,019.00	\$7,019.00
00214700	CON 3 S PT LOT 15	50.00	20.23	Tsui Leung-Cho,	\$0.00	\$0.00	\$7,019.00	\$7,019.00
00220200	CON 3 N PT LOT 14 & 15	129.59	52.44	Top Hill View Estates Inc,	\$0.00	\$0.00	\$18,193.00	\$18,193.00
00300500	CON 3 N PT LOT 16	97.30	39.38	Sinclair Ruth E, Sinclair Keith D,	\$0.00	\$0.00	\$13,661.00	\$13,661.00
00215000	CON 3 S PT LOT 16	97.06	39.28	Campbell Colin R, Todd Sarah Marjorie,	\$0.00	\$0.00	\$13,627.00	\$13,627.00
00220000	CON 3 N PT LOT 17	24.71	10.00	Kell Farms Limited,	\$0.00	\$0.00	\$3,469.00	\$3,469.00
00215300	CON 3 S PT LOT 17 RP 51R3338	21.65	8.76	Kell John Albert,	\$0.00	\$0.00	\$3,039.00	\$3,039.00
00215400	CON 3 S PT LOT 17	24.07	9.74	Kell Donna Jean Chantler,	\$0.00	\$0.00	\$3,379.00	\$3,379.00
00106900	CON 2 N PT LOT 3	34.25	13.86	Farisland Limited,	\$0.00	\$0.00	\$985.00	\$985.00
00104200	CON 2 S PT LOT 3	32.37	13.10	2088464 Ontario Limited, White Horse Investments Corp, Fresco	\$0.00	\$0.00	\$931.00	\$931.00
00106800	CON 2 N PT LOT 4	102.47	41.47	Meneguzzi Peter, Meneguzzi Diana,	\$0.00	\$0.00	\$2,947.00	\$2,947.00
00104500	CON 2 S PT LOT 4 RP 51R2576	40.00	16.19	674569 Ontario Limited,	\$0.00	\$0.00	\$1,151.00	\$1,151.00
00106400	CON 2 N PT LOT 5	10.03	4.06	Reilly Grant Norman, Reilly Sarah Beth,	\$0.00	\$0.00	\$289.00	\$289.00
00106600	CON 2 N PT LOT 5 UFFI	12.92	5.23	Wilson Donald Edgar, Wilson Catherine Ann,	\$0.00	\$0.00	\$372.00	\$372.00
00104700	CON 2 S PT LOT 5	98.00	39.66	Yoo Young Nam, Yoo Hung Sun,	\$0.00	\$0.00	\$2,818.00	\$2,818.00
00105200	CON 2 PT LOT 6 RP 51R26611	51.38	20.79	P S K Holdings Inc,	\$0.00	\$0.00	\$1,477.00	\$1,477.00
00105220	CON 2 PT LOT 6 RP 51R26611	48.76	19.73	Limited, The Simpson/Elson Group,	\$0.00	\$0.00	\$1,402.00	\$1,402.00
00119500	CON 2 S PT LOT 7	83.50	33.79	Armstrong James Garry,	\$0.00	\$0.00	\$2,401.00	\$2,401.00
00122100	CON 2 N PT LOT 8	50.00	20.23	Seven Willows Holdings Inc,	\$0.00	\$0.00	\$2,831.00	\$2,831.00
00119600	CON 2 S PT LOT 8 RP 51R3193	25.56	10.34	Mcarthur Sandra Kim,	\$0.00	\$0.00	\$771.00	\$771.00
00121400	CON 2 N PT LOT 9	25.21	10.20	1409563 Ontario Limited,	\$0.00	\$2,433.00	\$3,443.00	\$5,876.00
00121500	CON 2 N PT LOT 9	25.21	10.20	Horodinsky Farms Inc,	\$0.00	\$2,433.00	\$3,443.00	\$5,876.00
00121600	CON 2 N PT LOT 9	25.20	10.20	Cestarc Sada,	\$0.00	\$2,433.00	\$3,443.00	\$5,876.00
00121700	CON 2 N PT LOT 9	25.20	10.20	Canton Ines, Trevisan E & L,	\$0.00	\$2,433.00	\$3,443.00	\$5,876.00
00120400	CON 2 S PT LOT 9	25.28	10.23	Tasca Norma, Tasca Louis Joseph,	\$16,166.00	\$10,039.00	\$2,669.00	\$28,874.00
00121100	CON 2 W PT LOT 10 RP	28.00	11.33	Horodinsky Farms Inc,	\$0.00	\$2,703.00	\$2,860.00	\$5,563.00
00121200	CON 2 N PT LOT 10	22.19	8.98	Sciara Giuseppe & Rosa, Digiantommaso Linda,	\$0.00	\$2,142.00	\$2,658.00	\$4,800.00
00120500	CON 2 S PT LOT 10	13.00	5.26	Tasca Louis Joseph, Tasca Norma,	\$0.00	\$3,952.00	\$780.00	\$4,732.00
00120600	INNISFIL CON 2 W 1/2 PT LOT 10	37.00	14.97	Marques Gardens Ltd, Marques Peter Antonio,	\$0.00	\$10,679.00	\$1,772.00	\$12,451.00
00120800	CON 2 SE PT LOT 10	50.00	20.23	Marques Gardens Ltd,	\$0.00	\$14,718.00	\$2,300.00	\$17,018.00
00121000	CON 2 PT LOT 10	25.22	10.21	1409563 Ontario Limited,	\$0.00	\$2,435.00	\$3,482.00	\$5,917.00
00212700	CON 2 N PT LOT 11	25.29	10.23	Yamamoto Kerry S, Yamamoto Shigeo,	\$0.00	\$2,440.00	\$3,549.00	\$5,989.00
00212800	CON 2 N PT LOT 11	25.20	10.20	Yamamoto Shigeo, Yamamoto Kerry Shigeru,	\$0.00	\$2,433.00	\$3,538.00	\$5,971.00

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
00212900	CON 2 N PT LOT 11	50.00	20.23	1281597 Ontario Inc,	\$0.00	\$13,543.00	\$7,019.00	\$20,562.00
00206400	CON 2 S PT LOT 11 PARTS 1 &	50.00	20.23	Horodynsky Farms Inc,	\$0.00	\$4,826.00	\$6,769.00	\$11,595.00
00206600	CON 2 PT LOTS 11 & 12 RP	100.00	40.47	1409563 Ontario Liimited,	\$0.00	\$9,653.00	\$13,540.00	\$23,193.00
00212300	CON 2 N PT LOT 12	10.06	4.07	Horodynsky John Boris,	\$0.00	\$971.00	\$1,411.00	\$2,382.00
00212400	CON 2 N PT LOT 12	15.00	6.07	1281597 Ontario Inc,	\$0.00	\$1,448.00	\$2,106.00	\$3,554.00
00212500	CON 2 N PT LOT 12	25.20	10.20	Horodynsky Farms Inc,	\$0.00	\$2,433.00	\$3,538.00	\$5,971.00
00212600	CON 2 N PT LOT 12	25.21	10.20	Horodynsky Paul, Horodynsky Kellie	\$0.00	\$2,433.00	\$3,538.00	\$5,971.00
00207400	CON 2 S PT LOT 13	50.00	20.23	Kell Keith E,	\$0.00	\$4,826.00	\$6,639.00	\$11,465.00
00207600	CON 2 LOT 14	200.00	80.94	Innis Properties Limited,	\$0.00	\$9,653.00	\$27,320.00	\$36,973.00
00211300	CON 2 N PT LOT 15	48.93	19.80	Campbell Ian Todd,	\$0.00	\$0.00	\$6,870.00	\$6,870.00
00207700	YONGE STREET CON 2 S PT LOT	60.91	24.65	Rosenberg Alex & Lily, Rosenberg Eisen Frances R,	\$0.00	\$0.00	\$8,551.00	\$8,551.00
00207800	CON 2 S PT LOT 15	38.88	15.73	Mccathie Rosemarie,	\$0.00	\$0.00	\$5,457.00	\$5,457.00
00210900	CON 2 N PT LOT 15 RP	48.18	19.50	Thompson Margaret Lo, Thompson Gordon Alla,	\$0.00	\$0.00	\$6,766.00	\$6,766.00
00210400	CON 2 N PT LOT 16	82.77	33.50	Campbell Martina P A, Campbell Ian Todd,	\$0.00	\$0.00	\$11,622.00	\$11,622.00
00208500	CON 2 S PT LOT 16	93.90	38.00	Simpson Richard,	\$0.00	\$0.00	\$13,183.00	\$13,183.00
00208700	CON 2 S PT LOT 17	24.71	10.00	Sturgeon Glenda Mary, Sturgeon Neil Burgess,	\$0.00	\$0.00	\$3,469.00	\$3,469.00
00210000	CON 2 PT LOT 17 N PT LOT 18	48.68	19.70	Kell Farms Limited,	\$0.00	\$0.00	\$6,833.00	\$6,833.00
00103300	CON 1 PT LOT 3	4.42	1.79	Faggion John, Faggion Beatrice,	\$0.00	\$0.00	\$118.00	\$118.00
00103200	CON 1 N PT LOT 3 S PT LOT 3	4.42	1.79	Two Cooks Developments Limited,	\$0.00	\$0.00	\$118.00	\$118.00
00100600	CON 1 S PT LOT 3 RP 51R4607	4.42	1.79	Borgo Almerigo,	\$0.00	\$0.00	\$118.00	\$118.00
00100700	CON 1 S PT LOT 3 RP 51R4607	10.00	4.05	Prim Sonia Mary, Prim Pierre Elliott,	\$0.00	\$0.00	\$266.00	\$266.00
00103000	CON 1 N PT LOT 5 RP 51R32751	94.05	38.06	Posius Vytautas, Posius Doris May,	\$0.00	\$0.00	\$2,593.00	\$2,593.00
00103100	CON 1 PT LOT 4 RP 51R33535	98.81	39.99	One Cook Developments Limited,	\$0.00	\$0.00	\$2,725.00	\$2,725.00
00100800	CON 1 S PT LOT 4	100.52	40.68	Sjoblom Kaarina,	\$0.00	\$0.00	\$2,676.00	\$2,676.00
00101400	CON 1 S PT LOT 6	90.53	36.64	Rayton Aldora, Minns Heather,	\$0.00	\$23,771.00	\$2,410.00	\$26,181.00
00102800	CON 1 N PT LOT 6 RP 51R5927	98.56	39.89	Minns Heather, Rayton Aldora,	\$0.00	\$24,831.00	\$2,671.00	\$27,502.00
00102200	CON 1 W PT LOT 7	2.85	1.15	Minns Heather, Rayton Aldora,	\$0.00	\$285.00	\$78.00	\$363.00
00119100	CON 1 N PT LOT 8	49.00	19.83	Kopec Diane, Walewski John Henry,	\$0.00	\$4,730.00	\$1,491.00	\$6,221.00
00117000	CON 1 PT LOT 9	60.00	24.28	Kemeny George, Kemeny Michael, Kemeny William,	\$0.00	\$5,792.00	\$1,754.00	\$7,546.00
00117200	CON 1 PT LOT 9	28.00	11.33	Kemeny George,	\$0.00	\$2,703.00	\$845.00	\$3,548.00
00118800	CON 1 N PT LOT 9	11.00	4.45	Homecko Oksana, Homecko	\$0.00	\$1,061.00	\$335.00	\$1,396.00
00119000	CON 1 N PT LOT 9	30.69	12.42	Kemeny Michael,	\$0.00	\$2,963.00	\$934.00	\$3,897.00
00117300	CON 1 S PT LOT 9	60.07	24.31	Homecko Katy, Homecko William,	\$0.00	\$5,799.00	\$1,813.00	\$7,612.00
00117400	CON 1 S PT LOT 9	17.00	6.88	Lee Roy Edward, Young James Richard,	\$0.00	\$1,641.00	\$513.00	\$2,154.00
00117600	CON 1 S PT LOT 10	14.00	5.67	Toich Christopher Michael, Toich Sandra,	\$0.00	\$1,352.00	\$423.00	\$1,775.00
00117800	INNISFIL CON 1 S PT LOT 10	17.01	6.88	Toich Mary, Toich Anthony,	\$0.00	\$1,641.00	\$513.00	\$2,154.00
00118300	CON 1 PT LOT 10	29.30	11.86	2204277 Ontario Ltd,	\$0.00	\$2,829.00	\$892.00	\$3,721.00
00118350	CON 1 PT LOT 10 AND RP;51R167	3.70	1.50	L & L Gardens Inc	\$0.00	\$358.00	\$113.00	\$471.00
00118400	CON 1 PT LOT 10 RP 51R11089	30.00	12.14	Marques Gardens Ltd,	\$0.00	\$2,896.00	\$913.00	\$3,809.00
00118500	CON 1 N PT LOT 10	29.38	11.89	Radvanyi Leslie Andr,	\$0.00	\$2,836.00	\$894.00	\$3,730.00
00200500	INNISFIL CON 1 S PT LOT 11	42.06	17.02	Zielke Cheryl L, Zielke Glenn R,	\$0.00	\$4,060.00	\$1,270.00	\$5,330.00
00206000	CON 1 N PT LOT 11	25.00	10.12	Tasca Norman Michael, Tasca Louis Joseph,	\$0.00	\$2,414.00	\$768.00	\$3,182.00
00206100	CON 1 N PT LOT 11	25.00	10.12	Tasca Louis Joseph, Tasca Norman Michael,	\$0.00	\$2,414.00	\$764.00	\$3,178.00
00206300	CON 1 N PT LOT 11	50.00	20.23	L & L Gardens Inc,	\$0.00	\$4,826.00	\$1,521.00	\$6,347.00
00205900	CON 1 N PT LOT 12	100.00	40.47	Sawyer William Douglas, Sawyer Brian Eben, Sawyer Donald Elmer,	\$0.00	\$9,653.00	\$3,079.00	\$12,732.00
00201100	CON 1 S PT LOT 12	97.60	39.50	Matchett Joan M, Matchett Kenneth	\$0.00	\$0.00	\$2,936.00	\$2,936.00
00201200	CON 1 S PT LOT 13 RP	99.45	40.25	Kell John Albert, Kell Susan	\$0.00	\$0.00	\$3,002.00	\$3,002.00
00205800	CON 1 N PT LOT 13 N PT LOT	150.00	60.70	Sawyer Donald Elmer,	\$0.00	\$0.00	\$4,635.00	\$4,635.00
00201600	CON 1 S PT LOT 14	49.54	20.05	Gilmore Earle D, Gilmore Helen L,	\$0.00	\$0.00	\$1,507.00	\$1,507.00
00205600	CON 1 E PT LOT 14	100.00	40.47	Kell Farms Limited,	\$0.00	\$0.00	\$3,090.00	\$3,090.00
00205400	CON 1 N PT LOT 15	95.90	38.81	Kell Farms Limited,	\$0.00	\$0.00	\$8,215.00	\$8,215.00
00201800	CON 1 S PT LOT 15 RP	89.41	36.18	Kell Keith E, Kell Helen M,	\$0.00	\$0.00	\$2,741.00	\$2,741.00
00205200	CON 1 N PT LOT 16	58.05	23.49	Kell Farms Limited,	\$0.00	\$0.00	\$8,150.00	\$8,150.00
00204700	CON 1 N PT LOT 17	39.81	16.11	Drybrough Jeanette Elaine E, Drybrough Robert Wesley,	\$0.00	\$0.00	\$5,589.00	\$5,589.00
07415500	CON 15 PT LOT 10	11.81	4.78	Toich Anthony, Toich Mary,	\$0.00	\$1,140.00	\$331.00	\$1,471.00
07415600	CON 15 PT LOT 10	7.90	3.20	Plytnik Tania,	\$0.00	\$763.00	\$222.00	\$985.00
07416600	CON 15 PT LOT 12	18.57	7.52	Zielke Glenn, Zielke Ron,	\$0.00	\$0.00	\$521.00	\$521.00
07416700	CON 15 PT LOT 13 RP 51R17736	25.07	10.15	Constable Sharon P, Constable Alexander John,	\$0.00	\$0.00	\$703.00	\$703.00
07416800	CON 15 PT LOTS 13 & 14	24.00	9.71	Kell Emily Anne, Kell Larry E,	\$0.00	\$0.00	\$673.00	\$673.00
07417000	CON 15 PT LOTS 14 & 15	20.35	8.24	Zielke Lynda M, Zielke Ronald R,	\$0.00	\$0.00	\$571.00	\$571.00
07417200	CON 15 PT LOT 15	19.30	7.81	Kell Keith E, Kell Helen M,	\$0.00	\$0.00	\$541.00	\$541.00
07413900	CON 14 N PT LOT 10	25.00	10.12	Spina Francesco, Spina Rosetta,	\$0.00	\$2,414.00	\$701.00	\$3,115.00
07336100	CON 14 S PT LOT 10 LESS	84.26	34.10	Jebb Barry Murphy, Jebb Douglas Barry,	\$0.00	\$0.00	\$2,363.00	\$2,363.00

Roll No.	Description	Area Affected (Acres) (Ha.)		Owner	Special Benefit	Benefit	Outlet	Total Assessment
07413201	CON 14 N PT LOT 12 RP	98.47	39.85	Steimle Wilfred,	\$0.00	\$0.00	\$2,762.00	\$2,762.00
07395400	CON 14 S PT LOT 12	94.27	38.15	Nunes Honorina,	\$0.00	\$0.00	\$2,124.00	\$2,124.00
07413100	CON 14 N PT LOT 13	99.50	40.27	Kell Larry E, Kell Emily Anne,	\$0.00	\$0.00	\$2,791.00	\$2,791.00
07335300	CON 14 S PT LOT 13	100.00	40.47	Sturgeon Timothy Neil,	\$0.00	\$0.00	\$2,805.00	\$2,805.00
07413000	CON 14 N PT LOT 14	100.00	40.47	Zielke Daniel Richard,	\$0.00	\$0.00	\$2,805.00	\$2,805.00
07334901	CON 14 S PT LOT 14 RP	21.67	8.77	Excavating & Grading Ltd, P & A Timbers & Sons,	\$0.00	\$0.00	\$608.00	\$608.00
07412900	CON 14 N PT LOT 15 RP	101.71	41.16	1402802 Ontario Inc.,	\$0.00	\$0.00	\$2,853.00	\$2,853.00
07334400	CON 14 S PT LOT 15 UFFI	18.09	7.32	Procter Carol Glenda, Procter Wayne Herbert,	\$0.00	\$0.00	\$507.00	\$507.00
07412720	CON 14 N PT LOT 16 RP	51.79	20.96	1402802 Ontario Inc.,	\$0.00	\$0.00	\$1,453.00	\$1,453.00
07333400	CON 13 N PT LOT 12	9.88	4.00	Sturgeon Dyce Mc Dowell,	\$0.00	\$0.00	\$277.00	\$277.00
07333512	CON 13 N PT LOT 13	16.54	6.69	Hasbrooke Holdings Limited	\$0.00	\$0.00	\$464.00	\$464.00
07333510	CON 13 N PT LOT 13	50.48	20.43	Hasbrooke Holdings Limited,	\$0.00	\$0.00	\$1,416.00	\$1,416.00
07333500	CON 13 N PT LOT 13 RP	8.99	3.64	Hasbrooke Holdings Limited,	\$0.00	\$0.00	\$252.00	\$252.00
Total on Privately-Owned - Agricultural Lands					\$16,166.00	\$330,894.00	\$1,098,458.00	\$1,445,518.00

**SECTION 26 INCREASED COSTS - NON PRO-RATABLE**

Description	Owner	Special Benefit	Benefit	Outlet	Total Assessment
4th Line	Town of Innisfil	\$90,875.00	\$0.00	\$0.00	\$90,875.00
Total Section 26 Increased Costs (Non Pro-ratable)		\$90,875.00	\$0.00	\$0.00	\$90,875.00

<b>TOTAL ASSESSMENT - SOUTH INNISFIL CREEK DRAIN (MAIN BRANCH)</b>		<b>\$484,049.00</b>	<b>\$1,308,645.00</b>	<b>\$1,835,684.00</b>	<b>\$3,628,378.00</b>
<b>Total Area:</b>		<b>16,988.45</b>	<b>6,875.04</b>		

**"SCHEDULE D"**  
**DETAILS OF SPECIAL BENEFIT**  
**SOUTH INNISFIL CREEK DRAIN (MAIN DRAIN)**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

**SPECIAL BENEFIT ASSESSMENT**  
**(GENERAL DESCRIPTION OF SPECIAL BENEFIT)**

Roll No.	Owner	Item Description	Estimated Cost	Cost of Report	Special Benefit
00119800	1523566 Ontario Limited,	25% of farm access culvert costs and engineering	\$81,625.00	\$12,627.00	\$94,252.00
00120000	Sucession Financial Group Inc,	25% of farm access culvert costs and engineering	\$81,625.00	\$12,627.00	\$94,252.00
00120200	Armstrong Troy	25% of farm access culvert costs and engineering	\$81,625.00	\$12,627.00	\$94,252.00
00120300	Mcarthur Sandra Kim,	25% of farm access culvert costs and engineering	\$81,625.00	\$12,627.00	\$94,252.00
00120400	Chiodo Peter,	25% of stone erosion protection for farm access culvert banks and engineering	\$14,000.00	\$2,166.00	\$16,166.00
<b>Total Special Benefit Assessment (Excl. Non Pro-Ratable Costs).....</b>			<b>\$326,500.00</b>	<b>\$50,508.00</b>	<b>\$393,174.00</b>

**SPECIAL BENEFIT ASSESSMENT**  
**(SECTION 26 - NON PRO-RATABLE COSTS)**

Roll No.	Owner	Item Description	Estimated Cost	Cost of Report	Special Benefit
4th Line	Town of Innisfil	Station 7+352 (4 <sup>th</sup> Line) – Remove existing pipe culverts and replace with a new 24 m long, 4720 mm x 3070 mm corrugated steel pipe (CSP) multi-plate pipe arch c/w vertical concrete endwalls	\$78,700.00	\$12,175.00	\$90,875.00
<b>Total Special Benefit Assessment (Non Pro-Ratable Costs).....</b>			<b>\$78,700.00</b>	<b>\$12,175.00</b>	<b>\$90,875.00</b>

**OVERALL TOTAL SPECIAL BENEFIT ASSESSMENT ..... \$484,049.00**

**"SCHEDULE B1"**  
**SCHEDULE OF ALLOWANCES**  
**SOUTH INNISFIL CREEK DRAIN (OVERFLOW AREA 1)**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

Roll No.	Description	Owner	Section 29 Land	Section 30 Damages	Total Allowances
00101200	CON 1 S PT LOT 5	1665328 Ontario Ltd,	\$150,000.00	\$0.00	\$150,000.00
<b>TOTAL ALLOWANCES .....</b>			<b>\$150,000.00</b>	<b>\$0.00</b>	<b>\$150,000.00</b>

**"SCHEDULE C1"**  
**SCHEDULE OF ASSESSMENT**  
**SOUTH INNISFIL CREEK DRAIN (OVERFLOW AREA 1)**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

**ONTARIO LANDS:**

Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
Highway 400	215.23	87.10	Ministry of Transportation	\$0.00	\$0.00	\$48,477.00	\$48,477.00
County Road 89	101.68	41.15	Ministry of Transportation	\$0.00	\$0.00	\$17,116.00	\$17,116.00
00101100 INNISFIL CON 1 S PT LOT 5 RP	15.03	6.08	Government Services, Director Municipal S,	\$0.00	\$0.00	\$483.00	\$483.00
00102100 CON 1 PT LOT 6 PT LOT 7	8.15	3.30	Transportation Ministry,	\$0.00	\$0.00	\$275.00	\$275.00
00102400 CON 1 PT LOT 7 RP 51R8414	3.45	1.40	Transportation Ministry	\$0.00	\$0.00	\$116.00	\$116.00
02105100 CON 6 S PT LOT 15	2.00	0.81	Director Municipal Subsidies, Ministry Of Transportation,	\$0.00	\$0.00	\$150.00	\$150.00
Total on Ontario Lands.....				\$0.00	\$0.00	\$66,617.00	\$66,617.00

**MUNICIPAL LANDS:**

Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
7th Line	6.62	2.68	Town of Innisfil	\$0.00	\$0.00	\$1,991.00	\$1,991.00
6th Line	37.39	15.13	Town of Innisfil	\$0.00	\$0.00	\$11,238.00	\$11,238.00
5th Line	38.57	15.61	Town of Innisfil	\$0.00	\$0.00	\$9,714.00	\$9,714.00
4th Line	40.23	16.28	Town of Innisfil	\$0.00	\$0.00	\$9,071.00	\$9,071.00
3rd Line	40.13	16.24	Town of Innisfil	\$0.00	\$0.00	\$8,872.00	\$8,872.00
5 Sideroad	40.13	16.24	Simcoe County	\$0.00	\$0.00	\$8,882.00	\$8,882.00
10 Sideroad	48.51	19.83	Simcoe County	\$0.00	\$0.00	\$11,096.00	\$11,096.00
2nd Line	48.63	19.68	Town of Innisfil	\$0.00	\$0.00	\$9,688.00	\$9,688.00
14th Line	12.28	4.97	Town of Innisfil	\$0.00	\$0.00	\$2,178.00	\$2,178.00
15th Line	26.86	10.87	Town of Innisfil	\$0.00	\$0.00	\$4,764.00	\$4,764.00
County Road 89	260.70	105.50	Simcoe County	\$0.00	\$0.00	\$46,233.00	\$46,233.00
County Road 4 (Young Street)	66.32	26.84	Simcoe County	\$0.00	\$0.00	\$9,968.00	\$9,968.00
Village of Churchill Block Assessment No. 1 Roads	6.67	2.70	Town of Innisfil	\$0.00	\$0.00	\$1,835.00	\$1,835.00
Village of Churchill Block Assessment No. 2 Roads North of 4th Line	14.41	5.83	Town of Innisfil	\$0.00	\$0.00	\$3,962.00	\$3,962.00
Village of Churchill Block Assessment No. 2 Roads South of 4th Line	14.41	5.83	Town of Innisfil	\$0.00	\$0.00	\$3,508.00	\$3,508.00
Village of Churchill Block Assessment No. 3 Roads	3.39	1.37	Town of Innisfil	\$0.00	\$0.00	\$824.00	\$824.00
00220320 CON 3 N PT LOT 13 RP	1.24	0.50	Town Of Innisfil,	\$0.00	\$0.00	\$121.00	\$121.00
07417700 CON 15 PT LOT 15 RP 51R32484	2.73	1.10	Town Of Innisfil,	\$0.00	\$0.00	\$103.00	\$103.00
07417800 CON 15 PT LOT 15	2.00	0.81	Town Of Innisfil,	\$0.00	\$0.00	\$89.00	\$89.00
Total on Municipal Lands.....				\$0.00	\$0.00	\$144,137.00	\$144,137.00

**PRIVATELY-OWNED - NON-AGRICULTURAL LANDS:**

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
01801500	CON 6 S PT LOT 5 N PT LOT 5	149.00	60.30	Van Der Mast Maria Hendrika,	\$0.00	\$0.00	\$8,958.00	\$8,958.00
01801600	CON 6 S PT LOT 5	0.50	0.20	Baguley Warren Keith, Baguley Barbara Mari,	\$0.00	\$0.00	\$30.00	\$30.00
00325724	PLAN M448 BLK 59	2.05	0.83	Town Of Innisfil,	\$0.00	\$0.00	\$123.00	\$123.00
00325712	PLAN M448 LOT 53	0.50	0.20	Magri David Raymond, Magri Eleanor Ann,	\$0.00	\$0.00	\$89.00	\$89.00
00325714	PLAN M448 LOT 54	0.52	0.21	Hamilton Kimberly Anne, Hamilton Moore Deborah, Moore Peter,	\$0.00	\$0.00	\$92.00	\$92.00
02000201	CON 6 S PT LOT 8 RP 51R17257	0.81	0.33	Winter Ruthann Iris, Winter Kenneth	\$0.00	\$0.00	\$115.00	\$115.00
02104400	CON 6 S PT LOT 11	50.00	20.23	Awrey Orville Frankl,	\$0.00	\$0.00	\$2,262.00	\$2,262.00
02104500	CON 6 S PT LOT 12	24.46	9.90	Bernt Kurt Anthony,	\$0.00	\$0.00	\$1,471.00	\$1,471.00
02104600	CON 6 S PT LOT 12	26.32	10.65	Kent Grace Irene, Kent Gordon	\$0.00	\$0.00	\$1,582.00	\$1,582.00
02104700	CON 6 S PT LOT 12	39.66	16.05	Joseph,	\$0.00	\$0.00	\$2,384.00	\$2,384.00
02104800	CON 6 S PT LOT 13	50.00	20.23	Zlender Anna Josephine,	\$0.00	\$0.00	\$3,005.00	\$3,005.00
02104900	CON 6 S PT LOT 13	50.00	20.23	Slaby Michael H Wm,	\$0.00	\$0.00	\$3,005.00	\$3,005.00
02105300	CON 6 S PT LOT 15	0.64	0.26	Huisman Donna Marie,	\$0.00	\$0.00	\$104.00	\$104.00
00231500	CON 6 N PT LOT 15	7.38	2.99	Sixth Line Cemetery,	\$0.00	\$0.00	\$444.00	\$444.00
02105400	CON 6 S PT LOT 15 PLAN 1120	25.75	10.42	Shakell Pamela, Shakell Glen Alexander,	\$0.00	\$0.00	\$1,548.00	\$1,548.00
02105500	CON 6 S PT LOT 15 PLAN 1120	6.94	2.81	1796463 Ontario Inc,	\$0.00	\$0.00	\$417.00	\$417.00
00114802	CON 5 PT S 1/2 LOT 5 RP	0.46	0.19	Martin Kenneth Leslie, Martin Yvette Melissa,	\$0.00	\$0.00	\$85.00	\$85.00
00115300	CON 5 N PT LOT 5	1.25	0.51	Eyers Stella T, Eyers Robert A,	\$0.00	\$0.00	\$133.00	\$133.00
00115100	CON 5 N PT LOT 6 51R-3091	1.01	0.41	Sturgess Helen P Estate Of,	\$0.00	\$0.00	\$122.00	\$122.00
00126900	CON 5 S PT LOT 8 S PT LOT 9	50.88	20.59	Dean Jacqueline,	\$0.00	\$0.00	\$1,692.00	\$1,692.00



Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
00127500	CON 5 N PT LOT 9	99.66	40.33	Guido Lecce Holdings (1994) Inc, Domenic B Lecce Holdings (1994)	\$0.00	\$0.00	\$5,991.00	\$5,991.00
00127600	CON 5 N PT LOT 9 RP 51R1970	0.35	0.14	Bowman Selby,	\$0.00	\$0.00	\$62.00	\$62.00
00226700	INNISFIL CON 5 S PT LOT 11	19.16	7.75	Kumph Jennifer,	\$0.00	\$0.00	\$717.00	\$717.00
00226725	INNISFIL CON 5 S PT LOT 11	2.03	0.82	Graham Brian Joseph	\$0.00	\$0.00	\$122.00	\$122.00
00226800	CON 5 S PT LOT 11	21.34	8.64	Zhang Hui, Li Min,	\$0.00	\$0.00	\$1,283.00	\$1,283.00
00227000	CON 5 S PT LOT 11	12.54	5.07	Street Dalton Paul, Street Loxi	\$0.00	\$0.00	\$753.00	\$753.00
00227100	CON 5 S PT LOT 11	9.87	3.99	Treloar Jennifer Jean, Treloar Timothy John,	\$0.00	\$0.00	\$593.00	\$593.00
00227200	CON 5 S PT LOT 11	10.78	4.36	Adams Kelly Leigh, Adams Donald Joseph,	\$0.00	\$0.00	\$648.00	\$648.00
00227300	CON 5 S PT LOT 11	10.20	4.13	Smith Lisa Marie,	\$0.00	\$0.00	\$614.00	\$614.00
00227500	CON 5 S PT LOT 12	25.00	10.12	Wasyluk Steve,	\$0.00	\$0.00	\$1,503.00	\$1,503.00
00227600	CON 5 S PT LOT 12 RP	13.00	5.26	Nguyen Ngoc Phi,	\$0.00	\$0.00	\$410.00	\$410.00
00227700	CON 5 S PT LOT 12	12.00	4.86	Dinh Hanh Thi,	\$0.00	\$0.00	\$722.00	\$722.00
00232001	CON 5 N PT LOT 12 RP	0.72	0.29	Wheeler Elmo John, Wheeler Rosie Stirling,	\$0.00	\$0.00	\$110.00	\$110.00
00232201	CON 5 PT LOT 11 RP 51R14687	0.50	0.20	Prosser Teresa,	\$0.00	\$0.00	\$89.00	\$89.00
00227900	CON 5 PT LOT 13 LESS RP	99.09	40.10	Innisfil Properties Inc,	\$0.00	\$0.00	\$5,957.00	\$5,957.00
00227910	CON 5 PT LOT 13 RP 51R28666	0.91	0.37	Kniazefi Richard Teddy, Kniazefi Corinne,	\$0.00	\$0.00	\$118.00	\$118.00
00228200	CON 5 S PT LOT 15 RP	0.24	0.10	Scythes Darryl Edmund,	\$0.00	\$0.00	\$15.00	\$15.00
00228300	CON 5 S PT LOT 15 RP	0.53	0.21	Browne Colin,	\$0.00	\$0.00	\$31.00	\$31.00
00228400	CON 5 S PT LOT 15	0.36	0.15	Diceman Douglas Clar, Diceman Margaret Ann,	\$0.00	\$0.00	\$22.00	\$22.00
00228500	CON 5 S PT LOT 15	0.44	0.18	Coulter David A, Coulter Mary L,	\$0.00	\$0.00	\$27.00	\$27.00
00228600	CON 5 S PT LOT 15 RP	0.54	0.22	Laurin Timothy,	\$0.00	\$0.00	\$33.00	\$33.00
00228700	CON 5 S PT LOT 15	0.32	0.13	Chornenki Victoria Lynn, Chornenki Peter Paul,	\$0.00	\$0.00	\$19.00	\$19.00
00111400	CON 4 S PT LOT 2 RP 51R11548	1.00	0.40	Latanville June, Oscar, Robyn, Howlett Donna & Robert,	\$0.00	\$0.00	\$72.00	\$72.00
00111600	CON 4 PT LOT 3 RP 51R3904	4.35	1.76	Merrall Gregory William, Kippers Elisabeth,	\$0.00	\$0.00	\$158.00	\$158.00
00112000	CON 4 S PT LOT 5	100.00	40.47	Persico Angelo, Persico Augusto,	\$0.00	\$0.00	\$3,788.00	\$3,788.00
00112501	CON 4 N PT LOT 5 RP 51R29944	1.61	0.65	Jones Linda Carole, Jones Warren Oliver,	\$0.00	\$0.00	\$92.00	\$92.00
00112300	CON 4 S PT LOT 6 RP 51R10442	1.90	0.77	Metcalfe John Joseph,	\$0.00	\$0.00	\$98.00	\$98.00
00125801	CON 4 PT LOT 8 RP 51R16304	0.57	0.23	Coutts Reta M,	\$0.00	\$0.00	\$78.00	\$78.00
00126200	CON 4 N PT LOT 9	99.50	40.27	Lucas William G, Lucas Ruth	\$0.00	\$0.00	\$4,786.00	\$4,786.00
00126201	CON 4 N PT LOT 9 RP 51R12167	0.46	0.19	Winslow Daryl, Winslow Linda,	\$0.00	\$0.00	\$68.00	\$68.00
00125910	CON 4 S PT LOT 9 RP 51R25573	1.00	0.40	Thew James, Thew Doris,	\$0.00	\$0.00	\$95.00	\$95.00
00126000	CON 4 S PT LOT 10 RP	99.56	40.29	Pillitteri Pasquale,	\$0.00	\$0.00	\$4,788.00	\$4,788.00
00126100	CON 4 N PT LOT 10 RP	97.57	39.49	Pillitteri Pasquale,	\$0.00	\$0.00	\$4,693.00	\$4,693.00
00126110	CON 4 N PT LOT 10 RP	0.59	0.24	Hillock Jean C,	\$0.00	\$0.00	\$80.00	\$80.00
00226400	CON 4 N PT LOT 11 N PT LOT	100.00	40.47	1665328 Ontario Ltd,	\$0.00	\$0.00	\$5,666.00	\$5,666.00
00220900	CON 4 PT S 1/2 LOT 11 INSTR	5.38	2.18	Tuzi Geraldo, Tuzi Angelo,	\$0.00	\$0.00	\$296.00	\$296.00
00226001	CON 4 PT LOT 14 51R-15146	1.03	0.42	Favret Chiara Maria, Favret	\$0.00	\$0.00	\$113.00	\$113.00
00221300	CON 4 S PT LOT 14	1.37	0.55	Doner Darrell, Jambor Joseph, Toth Lorraine,	\$0.00	\$0.00	\$123.00	\$123.00
00221400	CON 4 S PT LOT 14	1.37	0.55	Mann Susan Marie, Mann David	\$0.00	\$0.00	\$123.00	\$123.00
00225800	CON 4 N PT LOT 15 RP 51R4544	0.57	0.23	Brauti Kevin Jeffrey, Toole Amber Delynn,	\$0.00	\$0.00	\$89.00	\$89.00
00225300	CON 4 N PT LOT 15	0.51	0.21	2765870 Canada Inc,	\$0.00	\$0.00	\$84.00	\$84.00
00225500	CON 4 N PT LOT 15 RP 51R2647	0.69	0.28	Kell Kenneth,	\$0.00	\$0.00	\$99.00	\$99.00
00225200	CON 4 N PT LOT 15 RP	5.91	2.39	Lanka Elmar Estate Of,	\$0.00	\$0.00	\$325.00	\$325.00
00225210	CON 4 N PT LOT 15 RP	5.45	2.21	Gialedakis Louie,	\$0.00	\$0.00	\$300.00	\$300.00
00225000	CON 4 N PT LOT 16	43.24	17.50	Demarco Michele, Demarco Maria,	\$0.00	\$0.00	\$2,106.00	\$2,106.00
00224200	CON 4 N PT LOT 16	10.07	4.08	The Simcoe County District School Board,	\$0.00	\$0.00	\$555.00	\$555.00
00224300	CON 4 N PT LOT 16 RP 51R1954	0.94	0.38	Hill Gregory Norman,	\$0.00	\$0.00	\$108.00	\$108.00
00224700	CON 4 N PT LOT 16 RP	1.04	0.42	Smith Douglas James, Smith Bonnie	\$0.00	\$0.00	\$113.00	\$113.00
00224800	CON 4 N PT LOT 16 RP 51R9911	0.40	0.16	Dunn Amanda Jayne, Ruegg David John,	\$0.00	\$0.00	\$65.00	\$65.00
00224801	CON 4 N PT LOT 16 RP	1.85	0.75	Austin Kenneth George, Austin Trudy Leah-Anne,	\$0.00	\$0.00	\$135.00	\$135.00
00224802	CON 4 N PT LOT 16 RP	1.83	0.74	Eeles Holly Lillian Muriel, Eeles Robert Wade,	\$0.00	\$0.00	\$135.00	\$135.00
00224900	CON 4 N PT LOT 16	1.28	0.52	Demarco Maria, Demarco Michele,	\$0.00	\$0.00	\$122.00	\$122.00
00109901	CON 3 N PT LOT 4 RP 51R13234	1.00	0.41	Short Joy, Dougherty Gary,	\$0.00	\$0.00	\$74.00	\$74.00
00108110	CON 3 S PT LOT 5 RP 51R24103	3.49	1.41	Henry Robert Eric	\$0.00	\$0.00	\$130.00	\$130.00
00109400	CON 3 N PT LOT 5 RP 51R2958	0.80	0.33	Gelfand Michael John L, Kull Ellen,	\$0.00	\$0.00	\$76.00	\$76.00
00109500	CON 3 N PT LOT 5	1.00	0.40	United Bethesda Ceme,	\$0.00	\$0.00	\$78.00	\$78.00
00109700	CON 3 N PT LOT 5 RP 51R5443	0.58	0.24	Hill Lorna E L, Hill Steven Wm,	\$0.00	\$0.00	\$60.00	\$60.00
00109705	CON 3 N PT LOT 5 RP 51R16455	0.53	0.21	Hill Lorna E.L.,	\$0.00	\$0.00	\$56.00	\$56.00
00108700	CON 3 N PT LOT 6	10.05	4.07	Sebastiano Stephanie Anne, Dougherty Leroy Eric,	\$0.00	\$0.00	\$399.00	\$399.00
00108800	CON 3 N PT LOT 6	1.00	0.40	Franner Robert, Lozinski Melanie,	\$0.00	\$0.00	\$78.00	\$78.00
00108900	CON 3 PT LOT 6	10.57	4.28	Brankston Craig, Brankston Gail,	\$0.00	\$0.00	\$420.00	\$420.00
00109000	CON 3 PT LOT 6	15.00	6.07	Ioannou Margaret, Ioannou George,	\$0.00	\$0.00	\$595.00	\$595.00
00109100	CON 3 PT LOT 6	15.16	6.14	Rampodarat J, Tirbeni Taramattie,	\$0.00	\$0.00	\$602.00	\$602.00
00123000	CON 3 S PT LOT 8	2.00	0.81	Petropoulos Peter, Petropoulos	\$0.00	\$0.00	\$120.00	\$120.00

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
00123001	CON 3 W PT LOT 8 RP 51R17195	0.93	0.38	Allen Robert James,	\$0.00	\$0.00	\$95.00	\$95.00
00123200	CON 3 S PT LOT 8 RP 51R8351	0.46	0.19	Dermott Gwen Ellen,	\$0.00	\$0.00	\$68.00	\$68.00
00124801	CON 3 PT LOT 8 RP 51R27991	2.47	1.00	Reynolds Glenn Thomas, Reynolds Michealle Edith,	\$0.00	\$0.00	\$134.00	\$134.00
00124810	CON 3 PT LOT 8 RP 51R21206	0.72	0.29	Cestarc Brandon, Cestarc Vesna,	\$0.00	\$0.00	\$88.00	\$88.00
00124500	CON 3 N PT LOT 9	24.78	10.03	1765448 Ontario Inc,	\$0.00	\$0.00	\$1,192.00	\$1,192.00
00123400	CON 3 PT LOT 9	52.58	21.28	Petrolo Elizabeth,	\$0.00	\$0.00	\$2,529.00	\$2,529.00
00124300	CON 3 N PT LOT 10 51R18321	2.97	1.20	Perkins Donna Sue, Perkins Harry James,	\$0.00	\$0.00	\$143.00	\$143.00
00124301	CON 3 PT LOT 10 51R 18321	20.76	8.40	Squibb Harry G,	\$0.00	\$0.00	\$998.00	\$998.00
00123700	CON 3 S PT LOT 10	10.00	4.05	Levy Kevin Arnold,	\$0.00	\$0.00	\$481.00	\$481.00
00123800	CON 3 PT LOT 10	11.00	4.45	Bryan Adam,	\$0.00	\$0.00	\$529.00	\$529.00
00123900	CON 3 S PT LOT 10	14.94	6.05	Leal Fernanda Maria,	\$0.00	\$0.00	\$719.00	\$719.00
00124100	CON 3 S PT LOT 10	14.94	6.05	Nelson Michael Andrew, Nelson Melissa Ellen,	\$0.00	\$0.00	\$719.00	\$719.00
00213300	CON 3 S PT LOT 11 RP 51R3731	9.62	3.89	Liberatore Susan, Bova Christina,	\$0.00	\$0.00	\$468.00	\$468.00
00213400	CON 3 S PT LOT 11 RP 51R3731	10.05	4.07	Norrie Gina,	\$0.00	\$0.00	\$490.00	\$490.00
00213500	CON 3 S PT LOT 11 RP 51R3731	10.05	4.07	Mccarthy Michael J, Mccarthy Curtis Iris, Carbone Eugenio,	\$0.00	\$0.00	\$490.00	\$490.00
00213600	CON 3 S PT LOT 11 RP 51R3731	10.05	4.07	Curtis Iris, Carbone Eugenio,	\$0.00	\$0.00	\$490.00	\$490.00
00213800	CON 3 S PT LOT 11 RP 51R6188	13.42	5.43	Yoon Hyunchul, Yoon Mi-Hyang,	\$0.00	\$0.00	\$653.00	\$653.00
00213900	CON 3 S PT LOT 11 RP 51R6188	13.43	5.43	R Three Limited,	\$0.00	\$0.00	\$653.00	\$653.00
00220500	CON 3 N PT LOT 12	50.00	20.23	Craig Darcy Truman, Wolfond Chad,	\$0.00	\$0.00	\$2,554.00	\$2,554.00
00214300	CON 3 S PT LOT 12	10.01	4.05	Xenophonos Theodoro, Xenophonos Christin,	\$0.00	\$0.00	\$487.00	\$487.00
00300600	CON 3 N PT LOT 15	9.81	3.97	Johnson & Ghodiwalla & Modi, Patel & Ferreora & Tamakuwala,	\$0.00	\$0.00	\$478.00	\$478.00
00215200	CON 3 S PT LOT 16	0.30	0.12	Kerr Vanessa, Ledlie Mark Stephen,	\$0.00	\$0.00	\$43.00	\$43.00
00104400	CON 2 S PT LOT 3 RP 51R19342	0.69	0.28	Ley Brenda, Ley Lloyd James,	\$0.00	\$0.00	\$65.00	\$65.00
00104600	CON 2 S PT LOT 4	59.08	23.91	Miles Eleanor Elizabeth, Miles William Francis,	\$0.00	\$0.00	\$2,149.00	\$2,149.00
00104620	CON 2 PT LOT 4 RP 51R19528	0.92	0.37	Day Roy Laverne,	\$0.00	\$0.00	\$71.00	\$71.00
00105800	CON 2 N PT LOT 5	9.89	4.00	Yoon Mi-Hyang, Yoon Hyunchul,	\$0.00	\$0.00	\$359.00	\$359.00
00105900	CON 2 N PT LOT 5	9.90	4.01	Barber Bartt Steven,	\$0.00	\$0.00	\$360.00	\$360.00
00106000	CON 2 N PT LOT 5	9.93	4.02	Krebs-Wickens Iris, Wickens J, Wirz Raymond & Betty,	\$0.00	\$0.00	\$361.00	\$361.00
00106100	CON 2 N PT LOT 5	10.01	4.05	Grigoroff Alexander & Angelo, Grigoroff Gordon & Zoi,	\$0.00	\$0.00	\$364.00	\$364.00
00106200	CON 2 N PT LOT 5	9.72	3.93	Sieber Helga,	\$0.00	\$0.00	\$353.00	\$353.00
00106300	CON 2 N PT LOT 5	9.74	3.94	Nothrop Carol,	\$0.00	\$0.00	\$354.00	\$354.00
00106500	CON 2 N PT LOT 5	10.03	4.06	Scorziello Antonio,	\$0.00	\$0.00	\$365.00	\$365.00
00106700	CON 2 N PT LOT 5	10.02	4.05	Watt Allan Wayne, Watt Deborah	\$0.00	\$0.00	\$364.00	\$364.00
00104900	CON 2 S PT LOT 5 RP 51R7662	0.52	0.21	Ley Ronald Garry, Ley Sharon Irene,	\$0.00	\$0.00	\$56.00	\$56.00
00105400	CON 2 N PT LOT 6	18.83	7.62	Menzel Loni, Morwick Edward	\$0.00	\$0.00	\$685.00	\$685.00
00105500	CON 2 NW PT LOT 6	10.87	4.40	Misiaszek Wesley, Brooks Brenda,	\$0.00	\$0.00	\$395.00	\$395.00
00105600	CON 2 N PT LOT 6	10.89	4.41	Barbosa Maria, Barbosa Lino,	\$0.00	\$0.00	\$396.00	\$396.00
00105700	CON 2 N PT LOT 6 RP 51R22843	21.11	8.54	Carpino Avril Anne, Carpino Hussain Irene, Hussain Sarfraz,	\$0.00	\$0.00	\$768.00	\$768.00
00105300	CON 2 N PT LOT 6	33.47	13.54	Hussain Irene, Hussain Sarfraz,	\$0.00	\$0.00	\$1,217.00	\$1,217.00
00122600	CON 2 N PT LOT 7	90.00	36.42	Ellen'S Investment Holdings Lt,	\$0.00	\$0.00	\$3,571.00	\$3,571.00
00122300	CON 2 PT LOT 7 RP 51R6047	0.60	0.24	Jolie Bonnie Jean, Jolie Francis F,	\$0.00	\$0.00	\$66.00	\$66.00
00122400	CON 2 N PT LOT 7 RP 51R2208	0.60	0.24	Lacroix Denise A, Lacroix John P,	\$0.00	\$0.00	\$66.00	\$66.00
00119510	CON 2 S PT LOT 7 RP 51R33480	1.50	0.61	Armstrong Troy	\$0.00	\$0.00	\$55.00	\$55.00
00119700	CON 2 S PT LOT 8 RP 51R3193	25.04	10.13	Chiodo Peter,	\$0.00	\$0.00	\$993.00	\$993.00
00119800	CON 2 S PT LOT 8	50.00	20.23	Filice Antonio, Filice Marina Rosa,	\$0.00	\$0.00	\$1,983.00	\$1,983.00
00121800	CON 2 N PT LOT 8	25.00	10.12	Mora Heidi, Mora Imre,	\$0.00	\$0.00	\$1,097.00	\$1,097.00
00121900	CON 2 N PT LOT 8	12.50	5.06	Reynolds Jean E, Reynolds Zylstra Charles Klaas, Zylstra Corrie,	\$0.00	\$0.00	\$549.00	\$549.00
00122000	CON 2 N PT LOT 8 RP 51R28222	12.50	5.06	Zylstra Charles Klaas, Zylstra Corrie,	\$0.00	\$0.00	\$496.00	\$496.00
00120000	CON 2 S PT LOT 9	25.15	10.18	Mora Imre, Cestarc Joseph,	\$0.00	\$0.00	\$1,074.00	\$1,074.00
00120100	CON 2 S PT LOT 9	25.20	10.20	Mora Imre, Cestarc Joseph,	\$0.00	\$0.00	\$1,076.00	\$1,076.00
00120200	CON 2 S PT LOT 9	12.64	5.12	Bordon Mario Oscar, Bordon Tarantino C & Marchese Ida,	\$0.00	\$0.00	\$540.00	\$540.00
00120300	CON 2 S PT LOT 9	12.64	5.12	Andreacchi A & Garito Lina,	\$0.00	\$0.00	\$540.00	\$540.00
00120900	CON 2 N PT LOT 10	25.22	10.21	Horodinsky Farms Inc,	\$0.00	\$0.00	\$1,107.00	\$1,107.00
00206700	CON 2 S PT LOT 12	25.00	10.12	Galloro Maria J,	\$0.00	\$0.00	\$977.00	\$977.00
00206800	CON 2 S PT LOT 12	12.47	5.05	Galloro Frank Joseph,	\$0.00	\$0.00	\$488.00	\$488.00
00206900	CON 2 S PT LOT 12	12.46	5.04	Tesic Milos,	\$0.00	\$0.00	\$487.00	\$487.00
00211600	CON 2 N PT LOT 13	15.00	6.07	Evers Darlene Jane,	\$0.00	\$0.00	\$550.00	\$550.00
00211700	CON 2 N PT LOT 13	10.00	4.05	Risi Tulio,	\$0.00	\$0.00	\$487.00	\$487.00
00211800	CON 2 N PT LOT 13	17.50	7.08	Grydsuk James Darryl,	\$0.00	\$0.00	\$852.00	\$852.00
00211900	CON 2 N PT LOT 13	20.00	8.09	Goncalves Olinda, Goncalves Michael,	\$0.00	\$0.00	\$973.00	\$973.00
00212000	CON 2 N PT LOT 13	37.69	15.25	Yamamoto Kerry,	\$0.00	\$0.00	\$1,143.00	\$1,143.00
00207000	CON 2 S PT LOT 13	25.00	10.12	Jones Clifton & Debbie, Wiltshire Milton & Lorna,	\$0.00	\$0.00	\$977.00	\$977.00
00207100	CON 2 S PT LOT 13	12.30	4.98	Kril John, Kril Anna,	\$0.00	\$0.00	\$481.00	\$481.00
00207200	CON 2 S PT LOT 13	12.30	4.98	Badstober Barbara An, Badstober Rudolf Joh,	\$0.00	\$0.00	\$481.00	\$481.00
00212100	CON 2 N PT LOT 12	15.06	6.09	Boston Mills Investment Holdin,	\$0.00	\$0.00	\$697.00	\$697.00
00212200	CON 2 N PT LOT 12	10.06	4.07	Sharma Sanjeev,	\$0.00	\$0.00	\$490.00	\$490.00
00211100	CON 2 PT LOT 15	0.12	0.05	Director Municipal Subsidies, Ministry Of Transportation,	\$0.00	\$0.00	\$18.00	\$18.00

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
00208000	CON 2 S PT LOT 15	0.58	0.23	Esau Linda Gail, Kalcic Gregory Dougl,	\$0.00	\$0.00	\$79.00	\$79.00
00210901	CON 2 PT LOT 15 RP 51R15380	0.84	0.34	Kent Kevin,	\$0.00	\$0.00	\$94.00	\$94.00
00211000	CON 2 N PT LOT 15 RP 51R740	0.48	0.20	Budd Patricia Gail, Budd Alan	\$0.00	\$0.00	\$72.00	\$72.00
00210200	CON 2 PT LOT 16 RP51R8537	0.46	0.19	Campbell Martina P A, Campbell Ian Todd,	\$0.00	\$0.00	\$69.00	\$69.00
00210500	CON 2 N PT LOT 16	0.52	0.21	Cuneen Daniel,	\$0.00	\$0.00	\$75.00	\$75.00
00210600	CON 2 N PT LOT 16	14.25	5.77	Zendelek Boguslaw, Zendelek Roberla,	\$0.00	\$0.00	\$694.00	\$694.00
00208200	CON 2 S PT LOT 16	1.53	0.62	Wood Larry James, Wood Constance Ruth,	\$0.00	\$0.00	\$111.00	\$111.00
00208300	CON 2 S PT LOT 16	1.57	0.64	Byngnes Thorleif, Byngnes Evelyn,	\$0.00	\$0.00	\$113.00	\$113.00
00208520	CON 2 PT LOT 16 RP 51R18491	0.57	0.23	Groves Linda,	\$0.00	\$0.00	\$79.00	\$79.00
00100900	CON 1 S PT LOT 4	1.09	0.44	Wigle Tonya, Ferguson Brian,	\$0.00	\$0.00	\$70.00	\$70.00
00103110	CON 1 PT LOT 4 RP 51R33535	1.19	0.48	Lang Margaret Iris	\$0.00	\$0.00	\$41.00	\$41.00
00101200	CON 1 S PT LOT 5	84.62	34.24	1665328 Ontario Ltd,	\$0.00	\$0.00	\$2,721.00	\$2,721.00
00102600	CON 1 N PT LOT 6 RP 51R9251	0.69	0.28	Little Joseph David, Lemoine Cassidy Julee,	\$0.00	\$0.00	\$61.00	\$61.00
00103010	CON 1 N PT LOT 5 RP 51R32751	1.33	0.54	Beattie Aaron	\$0.00	\$0.00	\$47.00	\$47.00
00101300	CON 1 PT LOT 6 RP 51R19649	0.57	0.23	Minns Heather Grace,	\$0.00	\$0.00	\$55.00	\$55.00
00101500	CON 1 S PT LOT 6	1.00	0.40	Wallace Helen Jean,	\$0.00	\$0.00	\$67.00	\$67.00
00101700	CON 1 S PT LOT 6	0.63	0.26	Palmer Randall,	\$0.00	\$0.00	\$58.00	\$58.00
00101800	CON 1 S PT LOT 6	0.34	0.14	Beattie Cecilia May, Beattie George David,	\$0.00	\$0.00	\$35.00	\$35.00
00101900	CON 1 S PT LOT 6	0.23	0.09	Bell Canada,	\$0.00	\$0.00	\$22.00	\$22.00
00119400	CON 1 N PT LOT 7	84.00	33.99	Succession Financial Group Inc,	\$0.00	\$0.00	\$3,055.00	\$3,055.00
00116600	CON 1 S PT LOT 7 RP 51R24159	62.43	25.26	Aqua-Gem Investments Limited,	\$0.00	\$0.00	\$2,214.00	\$2,214.00
00116700	CON 1 S PT LOT 7 RP 51R29670	2.28	0.92	1045901 Ontario Ltd,	\$0.00	\$0.00	\$95.00	\$95.00
00119200	CON 1 N PT LOT 8	49.00	19.83	1523566 Ontario Limited,	\$0.00	\$0.00	\$1,871.00	\$1,871.00
00116900	CON 1 S PT LOT 8	102.67	41.55	Flammini Maria, Dicarolo Stefano, Vincenzo Carmen,	\$0.00	\$0.00	\$3,781.00	\$3,781.00
00117500	CON 1 S PT LOT 10	13.00	5.26	Rudnisky Wally,	\$0.00	\$0.00	\$496.00	\$496.00
00117700	CON 1 S PT LOT 10	13.00	5.26	Fabiano Caterina, Fabiano Luigi,	\$0.00	\$0.00	\$496.00	\$496.00
00117900	INNIFIL CON 1 S PT LOT 10	9.87	3.99	Mark Dover Franklin, Mark Yasuko,	\$0.00	\$0.00	\$376.00	\$376.00
00118000	INNIFIL CON 1 S PT LOT 10	9.83	3.98	Mark Yasuko, Maehara Masumi,	\$0.00	\$0.00	\$375.00	\$375.00
00118100	INNIFIL CON 1 PT LOTS 10	23.08	9.34	Riley Margaret,	\$0.00	\$0.00	\$881.00	\$881.00
00118600	CON 1 N PT LOT 10	5.00	2.02	Rudnisky Wally,	\$0.00	\$0.00	\$192.00	\$192.00
00118700	CON 1 N PT LOT 10	5.00	2.02	Santos Maria De Lurdes A, Santos Filipe,	\$0.00	\$0.00	\$192.00	\$192.00
00200100	INNIFIL CON 1 PT LOTS 10	11.82	4.78	Malik Sohaib, Awan Basim,	\$0.00	\$0.00	\$451.00	\$451.00
00200200	CON 1 S PT LOT 11	21.62	8.75	Elfassy Suzanne,	\$0.00	\$0.00	\$825.00	\$825.00
00200300	CON 1 C PT PT LOT 11	14.48	5.86	Burrows Ralph Joel, Burrows Marie,	\$0.00	\$0.00	\$553.00	\$553.00
00200400	CON 1 PART C PT LOT 11	14.00	5.67	Kosinec Melody,Paul,John, Kosinec Michael & Darlene,	\$0.00	\$0.00	\$535.00	\$535.00
00200700	CON 1 S PT LOT 11	1.01	0.41	Zielke Karl Andrea, Zielke Marilyn Ethel,	\$0.00	\$0.00	\$77.00	\$77.00
00200800	CON 1 S PT LOT 12	0.48	0.19	Matchett Edward William	\$0.00	\$0.00	\$54.00	\$54.00
00200900	CON 1 S PT LOT 12	0.40	0.16	Matchett Edward William	\$0.00	\$0.00	\$45.00	\$45.00
00201300	CON 1 S PT LOT 13 RP 51R4112	0.55	0.22	Brillinger Stephen, Brillinger	\$0.00	\$0.00	\$60.00	\$60.00
00201500	CON 1 S PT LOT 14 RP 51R5147	0.46	0.19	Long Roy, Long Diane,	\$0.00	\$0.00	\$54.00	\$54.00
00201801	CON 1 S PT LOT 15 RP	0.59	0.24	Keil-Rose Barbara L, Rose David S,	\$0.00	\$0.00	\$63.00	\$63.00
00204900	CON 1 N PT LOT 16	0.75	0.30	Clements Cemetery,	\$0.00	\$0.00	\$90.00	\$90.00
07216401	CON 15 N PT LOT 3 RP 51R2687	3.09	1.25	Vernon Mary Lorna, Vernon Paul Douglas,	\$0.00	\$0.00	\$104.00	\$104.00
07216402	CON 15 E PT LOT 4 RP	2.00	0.81	Cruz Gil Da Silva, Cruz Maria Rosa,	\$0.00	\$0.00	\$84.00	\$84.00
07216300	CON 15 W PT LOT 4	11.61	4.70	Lemoine Joanne Marie,	\$0.00	\$0.00	\$391.00	\$391.00
07216301	CON 15 W PT LOT 4 RP 51R2445	1.60	0.65	Reis Armando,	\$0.00	\$0.00	\$78.00	\$78.00
07216302	CON 15 PT LOT 4 RP 51R13298	1.19	0.48	Pedneault Marc	\$0.00	\$0.00	\$73.00	\$73.00
07216200	CON 15 W PT LOT 4 RP 51R2445	0.57	0.23	Lotton Kenneth Roy, Lotton Shirley Gail,	\$0.00	\$0.00	\$55.00	\$55.00
07216000	CON 15 W PT LOT 5	3.21	1.30	Adf Investments Ltd,	\$0.00	\$0.00	\$108.00	\$108.00
07215900	CON 15 PT LOT 5	14.01	5.67	1833044 Ontario Limited,	\$0.00	\$0.00	\$472.00	\$472.00
07215901	CON 15 W PT LOT 6 RP	14.21	5.75	Carra Carlos A, Carra Mary,	\$0.00	\$0.00	\$478.00	\$478.00
07215902	CON 15 PT LOT 5 RP 51R3667	3.39	1.37	1606148 Ontario Limited,	\$0.00	\$0.00	\$114.00	\$114.00
07215903	CON 15 PT LOT 5 RP 51R3667	5.91	2.39	Tenax Limited,	\$0.00	\$0.00	\$199.00	\$199.00
07215910	CON 15 PT LOT 6 RP 51R24049	2.20	0.89	Carra Mary, Carra Carlos A,	\$0.00	\$0.00	\$89.00	\$89.00
07215602	CON 15 PT LOT 6 RP RP	0.99	0.40	Fellman Brent Lorne, Fellman Nicole Lydon,	\$0.00	\$0.00	\$67.00	\$67.00
07215700	CON 15 PT LOT 6	0.47	0.19	Bucko John,	\$0.00	\$0.00	\$47.00	\$47.00
07215600	CON 15 E PT LOT 6 RP 51R9368	14.48	5.86	442023 Ontario Limited,	\$0.00	\$0.00	\$487.00	\$487.00
07414900	CON 14 PT LOT 7 CON 15 PT	8.20	3.32	Taurus Cookstown Partners Ltd,	\$0.00	\$0.00	\$291.00	\$291.00
07415000	CON 15 PT LOT 8	19.48	7.88	De Sao Jose Isidro, De Sao Jose Marie,	\$0.00	\$0.00	\$691.00	\$691.00
07415100	CON 15 PT LOT 8 RP 51R1259	2.76	1.12	Carmel (Canada), Sisters Of Our Lady Of Mount,	\$0.00	\$0.00	\$104.00	\$104.00
07415101	CON 15 PT LOT 8	1.76	0.71	Town Of Innisfil,	\$0.00	\$0.00	\$86.00	\$86.00
07415200	CON 15 PT LOT 8 RP 51R1259	5.25	2.12	Carmel (Canada), Sisters Of Our Lady Of Mount,	\$0.00	\$0.00	\$186.00	\$186.00
07415201	CON 15 PT LOT 8 RP 51R1259	5.25	2.12	Giorno Fabio,	\$0.00	\$0.00	\$186.00	\$186.00
07415300	CON 15 E PT LOT 9	11.50	4.65	Groombridge Helen E,	\$0.00	\$0.00	\$408.00	\$408.00
07415400	CON 15 W PT LOT 9	25.20	10.20	Brash Alan, Mitchell James David, Brash Donna,	\$0.00	\$0.00	\$894.00	\$894.00

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
07415700	CON 15 PT LOT 10	2.99	1.21	Kingsly Thomas,	\$0.00	\$0.00	\$106.00	\$106.00
07415800	CON 15 PT LOT 10 RP 51R14343	4.00	1.62	Le Coche Franco, Le Coche Teresa,	\$0.00	\$0.00	\$142.00	\$142.00
07415900	CON 15 PT LOT 10 RP 51R14343	4.70	1.90	Esposito Raffaele & Le Coche Francesca Lucia, Le Coche Flora	\$0.00	\$0.00	\$167.00	\$167.00
07416000	WEST GWILLIMBURY CON 15 PT	4.67	1.89	Esposito Raffaele,	\$0.00	\$0.00	\$166.00	\$166.00
07416100	CON 15 PT LOT 11 RP 51R19888	21.61	8.75	Alam Quazi N, Alam Akhtari B,	\$0.00	\$0.00	\$570.00	\$570.00
07416101	CON 15 PT LOT 11 RP 51R1889	0.58	0.24	Fenech Mary Grace,	\$0.00	\$0.00	\$59.00	\$59.00
07416102	CON 15 PT LOT 11 RP 51R19888	0.66	0.27	Bell Gale Ann,	\$0.00	\$0.00	\$63.00	\$63.00
07416110	CON 15 PT LOT 11 RP 51R19888	0.61	0.25	Kuzmyk Sharon, Kuzmyk Robert	\$0.00	\$0.00	\$60.00	\$60.00
07416200	CON 15 PT LOT 11 RP 51R22346	4.56	1.85	Lombardi Diana, Fava Vince,	\$0.00	\$0.00	\$162.00	\$162.00
07416210	CON 15 PT LOT 11 RP 51R22346	0.64	0.26	Hajdukiewicz Phyllis,	\$0.00	\$0.00	\$62.00	\$62.00
07416300	CON 15 PT LOT 11	5.00	2.02	Nemeth Bill,	\$0.00	\$0.00	\$177.00	\$177.00
07416400	CON 15 PT LOTS 11 & 12	3.61	1.46	Haythorne Owen A,	\$0.00	\$0.00	\$128.00	\$128.00
07416401	CON 15 PT LOTS 11 & 12 RP	2.09	0.85	Bondi Barry,	\$0.00	\$0.00	\$91.00	\$91.00
07416500	CON 15 PT LOT 12 RP 51R13335	9.78	3.96	Rautiainen Jorma, Rautiainen Trudy,	\$0.00	\$0.00	\$347.00	\$347.00
07416501	CON 15 PT LOT 12 RP	5.25	2.12	Pereira Fernando, Pereira Helena,	\$0.00	\$0.00	\$186.00	\$186.00
07416520	CON 15 PT LOT 12 RP 51R19937	0.85	0.34	Palazzo Joann, Palazzo Nicola,	\$0.00	\$0.00	\$69.00	\$69.00
07416710	CON 15 PT LOT 13 RP 51R29485	0.68	0.28	Pais Carlos M,	\$0.00	\$0.00	\$64.00	\$64.00
07416720	CON 15 PT LOT 13 RP 51R29485	0.68	0.28	Pagnan-Venroy Donna, Venroy Anthony,	\$0.00	\$0.00	\$64.00	\$64.00
07416701	CON 15 W PT LOT 13 RP	0.96	0.39	Miller Kerri Lee, Miller Aaron William,	\$0.00	\$0.00	\$70.00	\$70.00
07416702	CON 15 PT LOT 13 RP 51R17736	1.94	0.79	Downs Susan,	\$0.00	\$0.00	\$88.00	\$88.00
07416900	CON 15 PT LOTS 13 & 14	0.45	0.18	Ontario Hydro, Assessment And Taxation,	\$0.00	\$0.00	\$47.00	\$47.00
07416801	CON 15 PT LOT 14	0.54	0.22	Harris William, Harris Nadia,	\$0.00	\$0.00	\$56.00	\$56.00
07417001	CON 15 PT LOT 15 51R-2200	0.46	0.19	Goodwin David Earl, Costain	\$0.00	\$0.00	\$50.00	\$50.00
07417040	CON 15 PT LOTS 14 & 15 RP	0.69	0.28	Zielke Lynda Margaret,	\$0.00	\$0.00	\$64.00	\$64.00
07417100	CON 15 PT LOT 15	0.46	0.19	McCullough Joanne D,	\$0.00	\$0.00	\$50.00	\$50.00
07417300	CON 15 PT LOT 15	0.27	0.11	Innisfil Hydro Distribution Systems Limited, Innisfil Ds - 2255 Highway	\$0.00	\$0.00	\$29.00	\$29.00
07417400	5460 YONGE STREET CON 15 PT	1.28	0.52	Kim Sang-Soon,	\$0.00	\$0.00	\$79.00	\$79.00
07417500	CON 15 PT LOT 15	0.89	0.36	Kim Myung-Hoan, Kim Sang-Soon,	\$0.00	\$0.00	\$69.00	\$69.00
07417600	CON 15 PT LOT 15	0.98	0.40	Ciotti Bernardo, Ciotti Elvira,	\$0.00	\$0.00	\$70.00	\$70.00
07417901	CON 15 PT LOT 15	0.46	0.19	Hughes Anne Matilda,	\$0.00	\$0.00	\$50.00	\$50.00
07414400	CON 14 N PT LOT 8	11.61	4.70	De Sao Jose Martin, De Sao Jose Isidro,	\$0.00	\$0.00	\$412.00	\$412.00
07414500	CON 14 N PT LOT 8	14.33	5.80	Cesta Alberico, Cesta Maria Adua,	\$0.00	\$0.00	\$508.00	\$508.00
07414600	CON 14 N PT LOT 8 RP	7.41	3.00	Taurus Cookstown Partners Ltd,	\$0.00	\$0.00	\$263.00	\$263.00
07414700	CON 14 N PT LOT 8 RP	9.88	4.00	Taurus Cookstown Partners Ltd,	\$0.00	\$0.00	\$351.00	\$351.00
07414100	CON 14 N PT LOT 9	25.00	10.12	Gatti Roberto, Gatti Giovanni, Gatti Giorgio,	\$0.00	\$0.00	\$887.00	\$887.00
07414200	CON 14 N PT LOT 9	21.99	8.90	Waz Janina Emilia, Waz Janusz,	\$0.00	\$0.00	\$780.00	\$780.00
07414300	CON 14 N PT LOT 9	16.31	6.60	Galati Lisa & Tony, Granato Anna R & Galati D,	\$0.00	\$0.00	\$578.00	\$578.00
07414000	CON 14 N PT LOT 9 ROW CON 15	25.00	10.12	Schiafone Maria, Schiafone Biagio,	\$0.00	\$0.00	\$887.00	\$887.00
07336200	CON 14 S PT LOT 9 RP	15.07	6.10	Marques Jorge,	\$0.00	\$0.00	\$535.00	\$535.00
07336300	CON 14 S PT LOT 9 RP	4.20	1.70	2031430 Ontario Ltd,	\$0.00	\$0.00	\$149.00	\$149.00
07413701	CON 14 PT LOT 10 RP 51R16346	1.00	0.40	Leithwood Debra, Wright Lisa, Fenz Paul Eric,	\$0.00	\$0.00	\$70.00	\$70.00
07413700	CON 14 N PT LOT 10	24.01	9.72	Skuljicak Marko, Skuljicak Mirjana, Skuljicak Mijo,	\$0.00	\$0.00	\$852.00	\$852.00
07413800	CON 14 N PT LOT 10	52.00	21.04	Corbo Vincenzo, Colonna Rocco, Corbo Filomena, Colonna Carmela,	\$0.00	\$0.00	\$1,844.00	\$1,844.00
07336101	CON 14 S PT LOT 10 RP	1.09	0.44	Cole Andrew James, Cole Petra Deanne,	\$0.00	\$0.00	\$74.00	\$74.00
07335901	CON 14 PT LOT 11 RP 51R15161	1.82	0.74	Garvey Timothy John, Garvey Patricia Lynn,	\$0.00	\$0.00	\$87.00	\$87.00
07335700	CON 14 W PT LOT 11	6.12	2.48	Forget Nicole, Forget Dean,	\$0.00	\$0.00	\$217.00	\$217.00
07335601	CON 14 W PT LOT 11 RP	9.56	3.87	Kennedy Gertrude E A,	\$0.00	\$0.00	\$339.00	\$339.00
07413900	CON 14 E PT LOT 11	50.00	20.23	Ostojic Anastazija Nada, Ostojic Dragan,	\$0.00	\$0.00	\$1,773.00	\$1,773.00
07413901	CON 14 N PT LOT 11	20.92	8.47	Lind Nelly A, Lind Tonis,	\$0.00	\$0.00	\$742.00	\$742.00
07413400	CON 14 W PT LOT 11	10.49	4.25	Heinemann Steven Atilla, Kim Chung- Im,	\$0.00	\$0.00	\$372.00	\$372.00
07413500	CON 14 W PT LOT 11	10.55	4.27	Evans Cynthia Anne, Evans John David,	\$0.00	\$0.00	\$374.00	\$374.00
07413600	CON 14 W PT LOT 11	10.57	4.28	Petryna Peter J,	\$0.00	\$0.00	\$375.00	\$375.00
07336000	CON 14 W PT LOT 11	10.49	4.25	Tesic Vlado & Helen, Tesic Zarko & Mary,	\$0.00	\$0.00	\$372.00	\$372.00
07335900	CON 14 W PT LOT 11 LESS	6.59	3.48	Collins Fiona Joy,	\$0.00	\$0.00	\$305.00	\$305.00
07335800	CON 14 W PT LOT 11	10.48	4.24	Markowitz Bette Marlene, Markowitz Myron Joseph,	\$0.00	\$0.00	\$372.00	\$372.00
07335500	CON 14 S PT LOT 11	44.11	17.85	Ibrajev Vladimir, Ibrajev Renate,	\$0.00	\$0.00	\$1,028.00	\$1,028.00
07335600	CON 14 W PT LOT 11	4.67	1.89	Batsch Sherri-Lynn, Batsch Ronald,	\$0.00	\$0.00	\$166.00	\$166.00
07413200	CON 14 N PT LOT 12 RP	1.53	0.62	Wrzala Elzbieta, Wrzala Artur,	\$0.00	\$0.00	\$81.00	\$81.00
07413101	CON 14 N PT LOT 13	0.57	0.23	Kneeshaw Connie Leanne,	\$0.00	\$0.00	\$57.00	\$57.00
07412901	CON 14 N PT LOT 15 RP	0.51	0.20	Parsons Mary Lynn, Parsons Levi Ward,	\$0.00	\$0.00	\$53.00	\$53.00
07412902	CON 14 PT N 1/2 LOT 15 RP	0.53	0.21	Zielke Frederick David Jr, Zielke Kimberly Anne,	\$0.00	\$0.00	\$54.00	\$54.00

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
07412700	CON 14 N PT LOT 16 RP	3.38	1.37	Kell Roger, Kell John Albert, Kell	\$0.00	\$0.00	\$120.00	\$120.00
07412710	CON 14 N PT LOT 16 RP	2.44	0.99	Stovold Louise, Stovold Christopher,	\$0.00	\$0.00	\$99.00	\$99.00
07412400	CON 14 N PT LOT 16	0.35	0.14	Gariffe Nancy, Paige Kenneth	\$0.00	\$0.00	\$37.00	\$37.00
07412500	CON 14 N PT LOT 16 51R6341	0.30	0.12	Webster Linda Ann, Becic John	\$0.00	\$0.00	\$32.00	\$32.00
07412600	CON 14 N PT LOT 16	0.47	0.19	Kneeshaw Bonnie G,	\$0.00	\$0.00	\$50.00	\$50.00
07412601	CON 14 N PT LOT 16 51R-6341	0.46	0.19	Kneeshaw Bonnie G, Kneeshaw James F,	\$0.00	\$0.00	\$50.00	\$50.00
07333401	CON 13 N PT LOT 12	2.47	1.00	Sturgeon Doris, Sturgeon William Robert,	\$0.00	\$0.00	\$99.00	\$99.00
07333501	CON 13 N 1/2 LOT13 51R 13385	2.44	0.99	Mattingley Douglas G, Mattingley Ruth Anne,	\$0.00	\$0.00	\$99.00	\$99.00
	CON 4 LOT 15	59.02	23.88	Village of Churchill Block Assessment No.1 lands	\$0.00	\$0.00	\$8,620.00	\$8,620.00
	CON 4 LOT 15	16.21	6.56	Village of Churchill Block Assessment No.2 lands north of 4th Line	\$0.00	\$0.00	\$2,368.00	\$2,368.00
	CON 3 LOT 15	62.97	25.48	Village of Churchill Block Assessment No.2 lands south of 4th Line	\$0.00	\$0.00	\$9,198.00	\$9,198.00
	CON 4 LOT 16	14.96	6.05	Village of Churchill Block Assessment No.3 lands	\$0.00	\$0.00	\$2,184.00	\$2,184.00
Total on Privately-Owned - Non-Agricultural Lands.....					\$0.00	\$0.00	\$193,442.00	\$193,442.00

**PRIVATELY-OWNED - AGRICULTURAL LANDS**

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Assessment
01801400	CON 6 S PT LOT 4	51.26	20.74	Robson Julia E,	\$0.00	\$0.00	\$3,081.00	\$3,081.00
01802010	CON 6 N PT LOT 6 RP 51R9053	0.46	0.19	Henry John Frederick, Henry Angus	\$0.00	\$0.00	\$28.00	\$28.00
01801800	CON 6 S PT LOT 6 PL51R-18366	0.57	0.23	Hilverda John, Hilverda Pamela,	\$0.00	\$0.00	\$34.00	\$34.00
01801900	CON 6 S PT LOT 6	89.37	36.17	Hilverda Pamela, Hilverda John,	\$0.00	\$0.00	\$5,373.00	\$5,373.00
01802000	CON 6 N PT LOT 6	32.62	13.20	1665328 Ontario Ltd,	\$0.00	\$0.00	\$1,961.00	\$1,961.00
01801300	CON 6 S PT LOT 4	39.17	15.85	Ruch Ruth Ann, Ruch Terry Ward,	\$0.00	\$0.00	\$2,355.00	\$2,355.00
01800900	CON 6 S PT LOT 3	7.49	3.03	1045990 Ontario Inc,	\$0.00	\$0.00	\$450.00	\$450.00
00325722	PLAN M448 LOT 58	0.49	0.20	Dykie Stephen William, Reta Erica	\$0.00	\$0.00	\$30.00	\$30.00
00325710	PLAN M448 LOT 52	0.42	0.17	Stopyra Agata, Stopyra Dariusz,	\$0.00	\$0.00	\$25.00	\$25.00
00325706	PLAN M448 LOT 50	0.37	0.15	Gogos George,	\$0.00	\$0.00	\$22.00	\$22.00
00325708	PLAN M448 LOT 51	0.44	0.18	Reindl Johanna,	\$0.00	\$0.00	\$27.00	\$27.00
00325704	PLAN M448 LOT 49	0.00	0.00	Savard Huguette,	\$0.00	\$0.00	\$0.00	\$0.00
00325718	PLAN M448 LOT 56	0.51	0.21	Weeks Ronald Stanley,	\$0.00	\$0.00	\$31.00	\$31.00
00325720	PLAN M448 LOT 57	0.50	0.20	Baynham Rosemary Elizabeth,	\$0.00	\$0.00	\$89.00	\$89.00
00325716	PLAN M448 LOT 55	0.52	0.21	Mcinnis Steven Larry, Doyle Marion	\$0.00	\$0.00	\$31.00	\$31.00
02000100	CON 6 LOT 7	105.04	42.51	751518 Ontario Limited,	\$0.00	\$0.00	\$6,315.00	\$6,315.00
02000200	CON 6 S PT LOT 8	19.50	7.89	Sutton Raymond B, Sutton Lois Ann,	\$0.00	\$0.00	\$1,172.00	\$1,172.00
02000300	CON 6 S PT LOT 9	27.40	11.09	Sinagoga Anthony, Sinagoga Maria,	\$0.00	\$0.00	\$1,647.00	\$1,647.00
02000400	CON 6 S PT LOT 10	42.70	17.28	Gemstone Property Ltd,	\$0.00	\$0.00	\$2,567.00	\$2,567.00
02104300	CON 6 S PT LOT 11	10.92	4.42	Hall Catherine Rita,	\$0.00	\$0.00	\$657.00	\$657.00
02105000	CON 6 S PT LOT 14	100.00	40.47	Pratt Winston Ivan,	\$0.00	\$0.00	\$6,012.00	\$6,012.00
02105200	CON 6 S PT LOT 15	45.83	18.55	Cole Elayne, Cole James Guy,	\$0.00	\$0.00	\$2,756.00	\$2,756.00
00115500	CON 5 N PT LOT 5 N PT LOT 4	79.77	32.28	1715573 Ontario Limited,	\$0.00	\$0.00	\$4,795.00	\$4,795.00
00114600	CON 5 PT LOTS 3 AND 4 RP	5.96	2.41	1715573 Ontario Limited,	\$0.00	\$0.00	\$358.00	\$358.00
00114800	CON 5 S PT LOT 5 RP 51R35273	47.44	19.20	1715573 Ontario Limited,	\$0.00	\$0.00	\$2,852.00	\$2,852.00
00114900	CON 5 S PT LOT 6	50.00	20.23	Pearson Evelyn Irene,	\$0.00	\$0.00	\$3,005.00	\$3,005.00
00115000	CON 5 S PT LOT 6 N PT LOT 6	124.00	50.18	1715573 Ontario Limited,	\$0.00	\$0.00	\$7,454.00	\$7,454.00
00127900	CON 5 N PT LOT 7	99.00	40.06	1720121 Ontario Limited,	\$0.00	\$0.00	\$5,951.00	\$5,951.00
00126700	CON 5 S PT LOT 7	98.00	39.66	Vandermast Cornelius, Vandermast Maria,	\$0.00	\$0.00	\$5,892.00	\$5,892.00
00127700	CON 5 N PT LOT 8 S PT LOT 8	180.00	72.84	Vandermast Maria Hendrikaa,	\$0.00	\$0.00	\$10,821.00	\$10,821.00
00127000	CON 5 S PT LOT 9	70.00	28.33	Trombley Virginia Ga,	\$0.00	\$0.00	\$4,208.00	\$4,208.00
00127100	CON 5 S PT LOT 10 RP 51R1802	25.12	10.17	Taylor Gary Michael, Wagner	\$0.00	\$0.00	\$1,511.00	\$1,511.00
00127200	CON 5 S PT LOT 10 RP 51R1802	25.12	10.17	Troiano Guiseppe, Troiano	\$0.00	\$0.00	\$1,511.00	\$1,511.00
00127300	CON 5 S PT LOT 10 RP 51R5438	50.41	20.40	Henniger Paul David,	\$0.00	\$0.00	\$3,030.00	\$3,030.00
00127400	CON 5 N PT LOT 10	100.00	40.47	Sawyer Garry Stanley, Sawyer Sharon Jean,	\$0.00	\$0.00	\$6,012.00	\$6,012.00
00232000	CON 5 N PT LOT 12 S PT LOT	149.28	60.41	Farr James H, Farr Thomas L,	\$0.00	\$0.00	\$8,974.00	\$8,974.00
00232200	CON 5 N PT LOT 11	99.45	40.25	Leonienco Mathilda Ann, Leonienco	\$0.00	\$0.00	\$5,979.00	\$5,979.00
00226900	CON 5 S PT LOT 11	14.31	5.79	Van Kuik Theodore,	\$0.00	\$0.00	\$860.00	\$860.00
00231900	CON 5 N PT LOTS 13 AND 14 RP	170.00	68.80	1665328 Ontario Ltd,	\$0.00	\$0.00	\$8,687.00	\$8,687.00
00228000	CON 5 PT LOT 14 RP 51R34693	130.00	52.61	1665328 Ontario Ltd,	\$0.00	\$0.00	\$7,815.00	\$7,815.00
00229000	CON 5 PT LOT 15 RP 51R6609	185.84	75.21	Kell Farms Limited,	\$0.00	\$0.00	\$11,173.00	\$11,173.00
00231300	CON 5 N PT LOT 16	98.16	39.72	1589114 Ontario Ltd,	\$0.00	\$0.00	\$5,901.00	\$5,901.00
00229100	CON 5 S PT LOT 16	97.95	39.64	882022 Ontario Limited,	\$0.00	\$0.00	\$5,889.00	\$5,889.00
00229200	CON 5 S PT LOT 17	14.26	5.77	Tse Keith, Hunt Karen,	\$0.00	\$0.00	\$857.00	\$857.00
00113000	CON 4 N PT LOT 2 RP 51R7189	27.35	11.07	4090 4Th Line Inc,	\$0.00	\$0.00	\$995.00	\$995.00
00111100	CON 4 S PT LOT 2 RP 51R5549	21.72	8.79	Spataro Lina, Pontieri Joanne, Spataro Manuel, Spataro Joseph,	\$0.00	\$0.00	\$790.00	\$790.00

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
00111200	CON 4 S PT LOT 2 RP 51R11548	73.24	29.64	4090 4Th Line Inc,	\$0.00	\$0.00	\$2,664.00	\$2,664.00
00111700	CON 4 PT LOT 3 RP 51R7189	156.74	63.43	4090 4Th Line Inc,	\$0.00	\$0.00	\$5,701.00	\$5,701.00
00112600	CON 4 N PT LOT 4	98.99	40.06	Baker Brian, Baker Margaret Rose,	\$0.00	\$0.00	\$3,600.00	\$3,600.00
00111900	CON 4 S PT LOT 4	100.00	40.47	Marling Barbara Elizabeth, Marling David John Albert,	\$0.00	\$0.00	\$3,637.00	\$3,637.00
00112500	CON 4 N PT LOT 5	98.39	39.82	Jones Sidney Orville, Jones Sandra Louise,	\$0.00	\$0.00	\$3,904.00	\$3,904.00
00112400	CON 4 N PT LOT 6	90.00	36.42	Pearson Evelyn Irene,	\$0.00	\$0.00	\$3,571.00	\$3,571.00
00112100	CON 4 S PT LOT 6	92.45	37.41	1665328 Ontario Ltd,	\$0.00	\$0.00	\$3,668.00	\$3,668.00
00126400	CON 4 N PT LOT 7	92.63	37.49	1665328 Ontario Ltd,	\$0.00	\$0.00	\$4,455.00	\$4,455.00
00125400	CON 4 S PT LOT 7 51R-5140	29.99	12.14	Gdm Terraco Inc,	\$0.00	\$0.00	\$1,443.00	\$1,443.00
00125500	CON 4 S PT LOT 7 RP 51R18261	34.97	14.15	Franline Investments Limited,	\$0.00	\$0.00	\$1,682.00	\$1,682.00
00125600	CON 4 S PT LOT 7 RP 51R2122	25.00	10.12	Del Bel Belluz N & C, Grillo Frank & Nina,	\$0.00	\$0.00	\$1,203.00	\$1,203.00
00126300	CON 4 N PT LOT 8	100.00	40.47	Eschli Jamie, Eschli Michael,	\$0.00	\$0.00	\$4,810.00	\$4,810.00
00125800	CON 4 PT LOTS 8 AND 9 RP	149.26	60.40	Posius Vytautas, Posius Doris May,	\$0.00	\$0.00	\$7,178.00	\$7,178.00
00125900	CON 4 S PT LOT 9 RP 51R21455	48.77	19.74	S I L Developments Inc, Zaretsky Ruth, Soudack Sigmund,	\$0.00	\$0.00	\$2,346.00	\$2,346.00
00220700	CON 4 S PT LOT 11	50.00	20.23	Kell Farms Limited,	\$0.00	\$0.00	\$2,750.00	\$2,750.00
00220902	CON 4 PT S 1/2 LOT 11 INSTR	5.38	2.18	Tuzi Angelo,	\$0.00	\$0.00	\$296.00	\$296.00
00220904	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Gargaro Antonio,	\$0.00	\$0.00	\$296.00	\$296.00
00220906	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Tuzi Geraldo,	\$0.00	\$0.00	\$296.00	\$296.00
00220908	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Alves Manuela, Alves Manuel Pinto,	\$0.00	\$0.00	\$296.00	\$296.00
00220910	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Rodrigues Jose Luis, Rodrigues Grace,	\$0.00	\$0.00	\$296.00	\$296.00
00220912	CON 4 PT S 1/2 LOT 11 INSTR	5.40	2.19	Tuzi Geraldo,	\$0.00	\$0.00	\$298.00	\$298.00
00220914	CON 4 PT S 1/2 LOT 11 INSTR	5.40	2.19	Rodrigues Grace, Rodrigues Jose Luis,	\$0.00	\$0.00	\$298.00	\$298.00
00220916	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Fernandes Jose, Fernandes Elvira,	\$0.00	\$0.00	\$296.00	\$296.00
00226300	CON 4 N PT LOT 12	100.00	40.47	1665328 Ontario Ltd,	\$0.00	\$0.00	\$5,666.00	\$5,666.00
00220918	CON 4 PT S 1/2 LOT 12 INSTR	10.08	4.08	Valente Lucy Mkary M, Valente Michael Paul,	\$0.00	\$0.00	\$555.00	\$555.00
00220920	CON 4 PT S 1/2 LOT 12 INSTR	10.09	4.08	Tersigni Maria,	\$0.00	\$0.00	\$555.00	\$555.00
00220922	CON 4 PT S 1/2 LOT 12 INSTR	10.09	4.08	Tuzi Angelo,	\$0.00	\$0.00	\$555.00	\$555.00
00220924	CON 4 PT S 1/2 LOT 12 INSTR	10.09	4.08	De Santis Lisa,	\$0.00	\$0.00	\$555.00	\$555.00
00220926	CON 4 PT S 1/2 LOT 12 INSTR	10.09	4.08	Tuzi Geraldo,	\$0.00	\$0.00	\$555.00	\$555.00
00220928	CON 4 PT S 1/2 LOT 12 INSTR	10.10	4.09	Tersigni Maria,	\$0.00	\$0.00	\$556.00	\$556.00
00220930	CON 4 S PT LOT 12	26.30	10.64	Kerkhof Aubrey,	\$0.00	\$0.00	\$1,446.00	\$1,446.00
00220932	CON 4 PT S 1/2 LOT 12 INSTR	10.23	4.14	Tuzi Angelo, Tuzi Geraldo,	\$0.00	\$0.00	\$563.00	\$563.00
00226100	CON 4 N PT LOT 13 UFFI	100.00	40.47	1665328 Ontario Ltd,	\$0.00	\$0.00	\$5,501.00	\$5,501.00
00221000	CON 4 S PT LOT 13	100.00	40.47	Suite 212, Amaron Investments L,	\$0.00	\$0.00	\$5,501.00	\$5,501.00
00226000	CON 4 N PT LOT 14 PL	103.67	41.95	Favret Chiara Maria, Favret	\$0.00	\$0.00	\$5,702.00	\$5,702.00
00221100	CON 4 S PT LOT 14	94.30	38.16	Amaron Investments L, Suite 212,	\$0.00	\$0.00	\$5,187.00	\$5,187.00
00225700	CON 4 PT LOT 15 RP 51R28045	87.33	35.34	1636574 Ontario Inc,	\$0.00	\$0.00	\$4,804.00	\$4,804.00
00224400	CON 4 N PT LOT 16 RP	60.12	24.33	Barnstable Park Realty Corp,	\$0.00	\$0.00	\$3,307.00	\$3,307.00
00311400	CON 4 S PT LOT 16 PLUS PLAN	41.00	16.59	Sinclair Keith D, Sinclair Ruth E,	\$0.00	\$0.00	\$1,996.00	\$1,996.00
00221600	CON 4 S PT LOT 17	9.88	4.00	Kell Susan Frances, Kell John	\$0.00	\$0.00	\$481.00	\$481.00
00101100	CON 3 N PT LOT 2	99.90	40.43	848670 Ontario Limited,	\$0.00	\$0.00	\$3,634.00	\$3,634.00
00107600	CON 3 S PT LOT 2 RP 51R7496	13.05	5.28	Wardlaw Paul Wilbert,	\$0.00	\$0.00	\$475.00	\$475.00
00110000	CON 3 N PT LOT 3	100.00	40.47	Klymiuk Maria, Klymiuk William,	\$0.00	\$0.00	\$3,727.00	\$3,727.00
00107700	CON 3 S PT LOT 3	76.36	30.90	Lukovits Joseph, Radocsi Anna,	\$0.00	\$0.00	\$2,777.00	\$2,777.00
00109900	CON 3 N PT LOT 4 S PT LOT 4	148.67	60.16	Wardlaw Paul Wilbert,	\$0.00	\$0.00	\$5,407.00	\$5,407.00
00107900	CON 3 S PT LOT 4 RP 51R4606	26.33	10.66	Evans Charlot Andrea,	\$0.00	\$0.00	\$958.00	\$958.00
00108000	CON 3 S PT LOT 4 RP 51R4606	26.40	10.68	Chapter Homes Inc,	\$0.00	\$0.00	\$960.00	\$960.00
00109800	INNISFIL CON 3 N PT LOT 5	102.05	41.30	1665328 Ontario Ltd,	\$0.00	\$0.00	\$3,957.00	\$3,957.00
00108100	CON 3 S PT LOT 5	96.50	39.05	Henry Angus Franklin, Henry David John,	\$0.00	\$0.00	\$3,597.00	\$3,597.00
00108400	CON 3 S PT LOT 6 LESS	90.23	36.51	Rainey Eleanor A, Rainey Eric H & Janine M,	\$0.00	\$0.00	\$3,430.00	\$3,430.00
00108500	CON 3 N PT LOT 6	31.29	12.66	Ferrazzo Salvatore/Pasquale, Ferrazzo Michele/Maria,	\$0.00	\$0.00	\$1,241.00	\$1,241.00
00109200	CON 3 PT LOT 6 15.24 AC	15.24	6.17	Frasca Maria,	\$0.00	\$0.00	\$605.00	\$605.00
00125100	CON 3 N PT LOT 7	38.78	15.69	Mauti Maria Luisa, Mauti Umberto,	\$0.00	\$0.00	\$1,538.00	\$1,538.00
00125000	CON 3 N PT LOT 7	50.65	20.50	Albanese John D, Albanese Maria,	\$0.00	\$0.00	\$2,117.00	\$2,117.00
00122900	CON 3 S PT LOT 7	82.86	33.53	1665328 Ontario Ltd,	\$0.00	\$0.00	\$3,711.00	\$3,711.00
00124900	CON 3 W PT LOT 8 RP 51R19347	96.35	38.99	1665328 Ontario Ltd,	\$0.00	\$0.00	\$4,634.00	\$4,634.00
00124600	CON 3 E PT LOT 8 RP 51R4914	24.89	10.07	Woods Cheryl Lee, Woods Philip Daniel,	\$0.00	\$0.00	\$1,197.00	\$1,197.00
00124800	CON 3 E PT LOT 8 RP 51R4962	79.27	32.08	1665328 Ontario Ltd,	\$0.00	\$0.00	\$3,812.00	\$3,812.00
00124400	CON 3 N PT LOT 9	24.70	10.00	Wilson James A, Wilson Patricia L,	\$0.00	\$0.00	\$1,188.00	\$1,188.00
00123500	CON 3 PT LOT 9 RP 51R12114	56.15	22.72	Desroche Kenneth Michael, Desroche Laura Lee,	\$0.00	\$0.00	\$2,700.00	\$2,700.00
00123600	CON 3 PT LOT 9	50.00	20.23	Collins Gloria J, Collins Kevin M,	\$0.00	\$0.00	\$2,404.00	\$2,404.00
00124200	CON 3 PT LOT 10	133.59	54.06	Chow Joseph,	\$0.00	\$0.00	\$6,425.00	\$6,425.00
00220600	CON 3 N PT LOT 11	100.00	40.47	Szabo Arpad, Spataro Tony,	\$0.00	\$0.00	\$5,666.00	\$5,666.00
00213700	CON 3 S PT LOT 11 RP 51R3731	10.05	4.07	Efstathiadis Peter & Diana, Martinovski Lubica & Danny,	\$0.00	\$0.00	\$490.00	\$490.00
00214000	CON 3 S PT LOT 11 RP 51R3731	26.60	10.76	1281597 Ontario Inc,	\$0.00	\$0.00	\$1,295.00	\$1,295.00
00220400	CON 3 N PT LOT 12	50.00	20.23	Plypiak Stefan, Plypiak Olga,	\$0.00	\$0.00	\$2,554.00	\$2,554.00
00214100	CON 3 PT LOT 12 RP 51R8969	93.30	37.76	Horodysky John Boris, Horodysky Erika,	\$0.00	\$0.00	\$4,544.00	\$4,544.00
00220300	CON 3 N PT LOT 13 RP	100.80	40.79	Crestrail Investments Inc,	\$0.00	\$0.00	\$4,969.00	\$4,969.00
00214400	CON 3 S PT LOT 13	100.00	40.47	Yamamoto Haruko & Kerry S, Yamamoto Shigeo,	\$0.00	\$0.00	\$4,870.00	\$4,870.00

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00214500	CON 3 S PT LOT 14	100.00	40.47	Kell Emily Anne, Kell Larry E,	\$0.00	\$0.00	\$4,870.00	\$4,870.00
00214600	CON 3 S PT LOT 15	50.00	20.23	Campbell Marjorie A,	\$0.00	\$0.00	\$2,434.00	\$2,434.00
00214700	CON 3 S PT LOT 15	50.00	20.23	Tsui Leung-Cho,	\$0.00	\$0.00	\$2,434.00	\$2,434.00
00220200	CON 3 N PT LOT 14 & 15	129.59	52.44	Top Hill View Estates Inc,	\$0.00	\$0.00	\$6,310.00	\$6,310.00
00300500	CON 3 N PT LOT 16	97.30	39.38	Sinclair Ruth E, Sinclair Keith D,	\$0.00	\$0.00	\$4,739.00	\$4,739.00
00215000	CON 3 S PT LOT 16	97.06	39.28	Campbell Colin R, Todd Sarah Marjorie,	\$0.00	\$0.00	\$4,726.00	\$4,726.00
00220000	CON 3 N PT LOT 17	24.71	10.00	Kell Farms Limited,	\$0.00	\$0.00	\$1,203.00	\$1,203.00
00215300	CON 3 S PT LOT 17 RP 51R3338	21.65	8.76	Kell John Albert,	\$0.00	\$0.00	\$1,054.00	\$1,054.00
00215400	CON 3 S PT LOT 17	24.07	9.74	Kell Donna Jean Chantler,	\$0.00	\$0.00	\$1,172.00	\$1,172.00
00106900	CON 2 N PT LOT 3	34.25	13.86	Farisland Limited,	\$0.00	\$0.00	\$1,246.00	\$1,246.00
00104200	CON 2 S PT LOT 3	32.37	13.10	2088464 Ontario Limited, White Horse Investments Corp, Fresco	\$0.00	\$0.00	\$1,177.00	\$1,177.00
00106800	CON 2 N PT LOT 4	102.47	41.47	Meneguzzi Peter, Meneguzzi Diana,	\$0.00	\$0.00	\$3,727.00	\$3,727.00
00104500	CON 2 S PT LOT 4 RP 51R2576	40.00	16.19	674569 Ontario Limited,	\$0.00	\$0.00	\$1,455.00	\$1,455.00
00106400	CON 2 N PT LOT 5	10.03	4.06	Reilly Grant Norman, Reilly Sarah Beth,	\$0.00	\$0.00	\$365.00	\$365.00
00106600	CON 2 N PT LOT 5 UFFI	12.92	5.23	Wilson Donald Edgar, Wilson Catherine Ann,	\$0.00	\$0.00	\$470.00	\$470.00
00104700	CON 2 S PT LOT 5	98.00	39.66	Yoo Young Nam, Yoo Hung Sun,	\$0.00	\$0.00	\$3,564.00	\$3,564.00
00105200	CON 2 PT LOT 6 RP 51R26611	51.38	20.79	P S K Holdings Inc,	\$0.00	\$0.00	\$1,868.00	\$1,868.00
00105220	CON 2 PT LOT 6 RP 51R26611	48.76	19.73	Limited, The Simpson/Elson Group,	\$0.00	\$0.00	\$1,773.00	\$1,773.00
00119500	CON 2 S PT LOT 7	83.50	33.79	Armstrong James Garry,	\$0.00	\$0.00	\$3,037.00	\$3,037.00
00122100	CON 2 N PT LOT 8	50.00	20.23	Seven Willows Holdings Inc,	\$0.00	\$0.00	\$1,983.00	\$1,983.00
00119600	CON 2 S PT LOT 8 RP 51R3193	25.56	10.34	Mcarthur Sandra Kim,	\$0.00	\$0.00	\$975.00	\$975.00
00121400	CON 2 N PT LOT 9	25.21	10.20	1409563 Ontario Limited,	\$0.00	\$0.00	\$1,106.00	\$1,106.00
00121500	CON 2 N PT LOT 9	25.21	10.20	Horodinsky Farms Inc,	\$0.00	\$0.00	\$1,106.00	\$1,106.00
00121600	CON 2 N PT LOT 9	25.20	10.20	Cestarc Sanda,	\$0.00	\$0.00	\$1,106.00	\$1,106.00
00121700	CON 2 N PT LOT 9	25.20	10.20	Canton Ines, Trevisan E & L,	\$0.00	\$0.00	\$1,106.00	\$1,106.00
00120400	CON 2 S PT LOT 9	25.28	10.23	Tasca Norma, Tasca Louis Joseph,	\$0.00	\$0.00	\$988.00	\$988.00
00121100	CON 2 W PT LOT 10 RP	28.00	11.33	Horodinsky Farms Inc,	\$0.00	\$0.00	\$1,229.00	\$1,229.00
00121200	CON 2 N PT LOT 10	22.19	8.98	Sciara Giuseppe & Rosa, Digiantommaso Linda,	\$0.00	\$0.00	\$974.00	\$974.00
00120500	CON 2 S PT LOT 10	13.00	5.26	Tasca Louis Joseph, Tasca Norma,	\$0.00	\$0.00	\$508.00	\$508.00
00120600	INNISFIL CON 2 W 1/2 PT LOT 10	37.00	14.97	Marques Gardens Ltd, Marques Peter Antonio,	\$0.00	\$0.00	\$1,445.00	\$1,445.00
00120800	CON 2 SE PT LOT 10	50.00	20.23	Marques Gardens Ltd,	\$0.00	\$0.00	\$1,953.00	\$1,953.00
00121000	CON 2 PT LOT 10	25.22	10.21	1409563 Ontario Limited,	\$0.00	\$0.00	\$1,153.00	\$1,153.00
00212700	CON 2 N PT LOT 11	25.29	10.23	Yamamoto Kerry S, Yamamoto Shigeo,	\$0.00	\$0.00	\$1,231.00	\$1,231.00
00212800	CON 2 N PT LOT 11	25.20	10.20	Yamamoto Shigeo, Yamamoto Kerry Shigeru,	\$0.00	\$0.00	\$1,227.00	\$1,227.00
00212900	CON 2 N PT LOT 11	50.00	20.23	1281597 Ontario Inc,	\$0.00	\$0.00	\$2,434.00	\$2,434.00
00206400	CON 2 S PT LOT 11 PARTS 1 &	50.00	20.23	Horodinsky Farms Inc,	\$0.00	\$0.00	\$2,119.00	\$2,119.00
00206600	CON 2 PT LOTS 11 & 12 RP	100.00	40.47	1409563 Ontario Limited,	\$0.00	\$0.00	\$4,238.00	\$4,238.00
00212300	CON 2 N PT LOT 12	10.06	4.07	Horodinsky John Boris,	\$0.00	\$0.00	\$490.00	\$490.00
00212400	CON 2 N PT LOT 12	15.00	6.07	1281597 Ontario Inc,	\$0.00	\$0.00	\$730.00	\$730.00
00212500	CON 2 N PT LOT 12	25.20	10.20	Horodinsky Farms Inc,	\$0.00	\$0.00	\$1,227.00	\$1,227.00
00212600	CON 2 N PT LOT 12	25.21	10.20	Horodinsky Paul, Horodinsky Kellie	\$0.00	\$0.00	\$1,227.00	\$1,227.00
00207400	CON 2 S PT LOT 13	50.00	20.23	Kell Keith E,	\$0.00	\$0.00	\$1,953.00	\$1,953.00
00207600	CON 2 LOT 14	200.00	80.94	Innis Properties Limited,	\$0.00	\$0.00	\$8,777.00	\$8,777.00
00211300	CON 2 N PT LOT 15	48.93	19.80	Campbell Ian Todd,	\$0.00	\$0.00	\$2,382.00	\$2,382.00
00207700	YONGE STREET CON 2 S PT LOT	60.91	24.65	Rosenberg Alex & Lily, Rosenberg Eisen Frances R,	\$0.00	\$0.00	\$2,966.00	\$2,966.00
00207800	CON 2 S PT LOT 15	38.88	15.73	Mccathie Rosemarie,	\$0.00	\$0.00	\$1,893.00	\$1,893.00
00210900	CON 2 N PT LOT 15 RP	48.18	19.50	Thompson Margaret Lo, Thompson Gordon Alla,	\$0.00	\$0.00	\$2,346.00	\$2,346.00
00210400	CON 2 N PT LOT 16	82.77	33.50	Campbell Martina P A, Campbell Ian Todd,	\$0.00	\$0.00	\$4,031.00	\$4,031.00
00208500	CON 2 S PT LOT 16	93.90	38.00	Simpson Richard,	\$0.00	\$0.00	\$4,572.00	\$4,572.00
00208700	CON 2 S PT LOT 17	24.71	10.00	Sturgeon Glenda Mary, Sturgeon Neil Burgess,	\$0.00	\$0.00	\$1,203.00	\$1,203.00
00210000	CON 2 PT LOT 17 N PT LOT 18	48.68	19.70	Kell Farms Limited,	\$0.00	\$0.00	\$2,370.00	\$2,370.00
00103300	CON 1 PT LOT 3	4.42	1.79	Faggion John, Faggion Beatrice,	\$0.00	\$0.00	\$149.00	\$149.00
00103200	CON 1 N PT LOT 3 S PT LOT 3	4.42	1.79	Two Cooks Developments Limited,	\$0.00	\$0.00	\$149.00	\$149.00
00100600	CON 1 S PT LOT 3 RP 51R4607	4.42	1.79	Borgo Almerigo,	\$0.00	\$0.00	\$149.00	\$149.00
00100700	CON 1 S PT LOT 3 RP 51R4607	10.00	4.05	Prim Sonia Mary, Prim Pierre Elliott,	\$0.00	\$0.00	\$337.00	\$337.00
00103000	CON 1 N PT LOT 5 RP 51R32751	94.05	38.06	Posius Vytautas, Posius Doris May,	\$0.00	\$0.00	\$3,279.00	\$3,279.00
00103100	CON 1 PT LOT 4 RP 51R33535	98.81	39.99	One Cook Developments Limited,	\$0.00	\$0.00	\$3,446.00	\$3,446.00
00100800	CON 1 S PT LOT 4	100.52	40.68	Sjoblom Kaarina,	\$0.00	\$0.00	\$3,384.00	\$3,384.00
00101400	CON 1 S PT LOT 6	90.53	36.64	Rayton Aldora, Minns Heather,	\$0.00	\$0.00	\$3,048.00	\$3,048.00
00102800	CON 1 N PT LOT 6 RP 51R5927	98.56	39.89	Minns Heather, Rayton Aldora,	\$0.00	\$0.00	\$3,378.00	\$3,378.00
00102200	CON 1 W PT LOT 7	2.85	1.15	Minns Heather, Rayton Aldora,	\$0.00	\$0.00	\$99.00	\$99.00
00119100	CON 1 N PT LOT 8	49.00	19.83	Kopec Diane, Walewski John Henry,	\$0.00	\$0.00	\$1,885.00	\$1,885.00
00117000	CON 1 PT LOT 9	60.00	24.28	Kemeny George, Kemeny Michael, Kemeny William,	\$0.00	\$0.00	\$2,218.00	\$2,218.00
00117200	CON 1 PT LOT 9	28.00	11.33	Kemeny George,	\$0.00	\$0.00	\$1,069.00	\$1,069.00
00118800	CON 1 N PT LOT 9	11.00	4.45	Homecko Oksana, Homecko	\$0.00	\$0.00	\$423.00	\$423.00
00119000	CON 1 N PT LOT 9	30.69	12.42	Kemeny Michael,	\$0.00	\$0.00	\$1,181.00	\$1,181.00
00117300	CON 1 S PT LOT 9	60.07	24.31	Homecko Katy, Homecko William,	\$0.00	\$0.00	\$2,293.00	\$2,293.00
00117400	CON 1 S PT LOT 9	17.00	6.88	Lee Roy Edward, Young James Richard,	\$0.00	\$0.00	\$649.00	\$649.00

Roll No.	Description	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
00117600	CON 1 S PT LOT 10	14.00	5.67	Toich Christopher Michael, Toich Sandra,	\$0.00	\$0.00	\$535.00	\$535.00
00117800	INNISFIL CON 1 S PT LOT 10	17.01	6.88	Toich Mary, Toich Anthony,	\$0.00	\$0.00	\$649.00	\$649.00
00118350	CON 1 PT LOT 10 AND RP;51R167	3.70	1.50	L & L Gardens Inc	\$0.00	\$0.00	\$143.00	\$143.00
00118300	CON 1 PT LOT 10	29.30	11.86	2204277 Ontario Ltd,	\$0.00	\$0.00	\$1,128.00	\$1,128.00
00118400	CON 1 PT LOT 10 RP 51R11089	30.00	12.14	Marques Gardens Ltd,	\$0.00	\$0.00	\$1,154.00	\$1,154.00
00118500	CON 1 N PT LOT 10	29.38	11.89	Radvanyi Leslie Andr,	\$0.00	\$0.00	\$1,130.00	\$1,130.00
00200500	INNISFIL CON 1 S PT LOT 11	42.06	17.02	Zielke Cheryl L, Zielke Glenn R,	\$0.00	\$0.00	\$1,606.00	\$1,606.00
00206000	CON 1 N PT LOT 11	25.00	10.12	Tasca Norman Michael, Tasca Louis Joseph,	\$0.00	\$0.00	\$972.00	\$972.00
00206100	CON 1 N PT LOT 11	25.00	10.12	Tasca Louis Joseph, Tasca Norman Michael,	\$0.00	\$0.00	\$966.00	\$966.00
00206300	CON 1 N PT LOT 11	50.00	20.23	L & L Gardens Inc,	\$0.00	\$0.00	\$1,923.00	\$1,923.00
00205900	CON 1 N PT LOT 12	100.00	40.47	Sawyer William Douglas, Sawyer Brian Eben, Sawyer Donald Elmer,	\$0.00	\$0.00	\$3,894.00	\$3,894.00
00201100	CON 1 S PT LOT 12	97.60	39.50	Matchett Joan M, Matchett Kenneth	\$0.00	\$0.00	\$3,713.00	\$3,713.00
00201200	CON 1 S PT LOT 13 RP	99.45	40.25	Kell John Albert, Kell Susan	\$0.00	\$0.00	\$3,797.00	\$3,797.00
00205800	CON 1 N PT LOT 13 N PT LOT	150.00	60.70	Sawyer Donald Elmer,	\$0.00	\$0.00	\$5,861.00	\$5,861.00
00201600	CON 1 S PT LOT 14	49.54	20.05	Gilmore Earle D, Gilmore Helen L,	\$0.00	\$0.00	\$1,906.00	\$1,906.00
00205600	CON 1 E PT LOT 14	100.00	40.47	Kell Farms Limited,	\$0.00	\$0.00	\$3,908.00	\$3,908.00
00205400	CON 1 N PT LOT 15	95.90	38.81	Kell Farms Limited,	\$0.00	\$0.00	\$4,209.00	\$4,209.00
00201800	CON 1 S PT LOT 15 RP	89.41	36.18	Kell Keith E, Kell Helen M,	\$0.00	\$0.00	\$3,467.00	\$3,467.00
00205200	CON 1 N PT LOT 16	58.05	23.49	Kell Farms Limited,	\$0.00	\$0.00	\$2,826.00	\$2,826.00
00204700	CON 1 N PT LOT 17	39.81	16.11	Drybrough Jeanette Elaine E, Drybrough Robert Wesley,	\$0.00	\$0.00	\$1,938.00	\$1,938.00
07415500	CON 15 PT LOT 10	11.81	4.78	Toich Anthony, Toich Mary,	\$0.00	\$0.00	\$419.00	\$419.00
07415600	CON 15 PT LOT 10	7.90	3.20	Plytnik Tania,	\$0.00	\$0.00	\$280.00	\$280.00
07416600	CON 15 PT LOT 12	18.57	7.52	Zielke Glenn, Zielke Ron,	\$0.00	\$0.00	\$659.00	\$659.00
07416700	CON 15 PT LOT 13 RP 51R17736	25.07	10.15	Constable Sharon P, Constable Alexander John,	\$0.00	\$0.00	\$890.00	\$890.00
07416800	CON 15 PT LOTS 13 & 14	24.00	9.71	Kell Emily Anne, Kell Larry E,	\$0.00	\$0.00	\$851.00	\$851.00
07417000	CON 15 PT LOTS 14 & 15	20.35	8.24	Zielke Lynda M, Zielke Ronald R,	\$0.00	\$0.00	\$722.00	\$722.00
07417200	CON 15 PT LOT 15	19.30	7.81	Kell Keith E, Kell Helen M,	\$0.00	\$0.00	\$685.00	\$685.00
07413900	CON 14 N PT LOT 10	25.00	10.12	Spina Francesco, Spina Rosetta,	\$0.00	\$0.00	\$887.00	\$887.00
07336100	CON 14 S PT LOT 10 LESS	84.26	34.10	Jebb Barry Murphy, Jebb Douglas Barry,	\$0.00	\$0.00	\$2,989.00	\$2,989.00
07413201	CON 14 N PT LOT 12 RP	98.47	39.85	Steimle Wilfred,	\$0.00	\$0.00	\$3,493.00	\$3,493.00
07335400	CON 14 S PT LOT 12	94.27	38.15	Nunes Honorina,	\$0.00	\$0.00	\$2,686.00	\$2,686.00
07413100	CON 14 N PT LOT 13	99.50	40.27	Kell Larry E, Kell Emily Anne,	\$0.00	\$0.00	\$3,530.00	\$3,530.00
07335300	CON 14 S PT LOT 13	100.00	40.47	Sturgeon Timothy Neil,	\$0.00	\$0.00	\$3,547.00	\$3,547.00
07413000	CON 14 N PT LOT 14	100.00	40.47	Zielke Daniel Richard,	\$0.00	\$0.00	\$3,547.00	\$3,547.00
07334901	CON 14 S PT LOT 14 RP	21.67	8.77	Excavating & Grading Ltd, P & A Timbers & Sons,	\$0.00	\$0.00	\$769.00	\$769.00
07412900	CON 14 N PT LOT 15 RP	101.71	41.16	1402802 Ontario Inc,	\$0.00	\$0.00	\$3,608.00	\$3,608.00
07334400	CON 14 S PT LOT 15 UFFI	18.09	7.32	Procter Carol Glenda, Procter Wayne Herbert,	\$0.00	\$0.00	\$651.00	\$651.00
07412720	CON 14 N PT LOT 16 RP	51.79	20.96	1402802 Ontario Inc,	\$0.00	\$0.00	\$1,837.00	\$1,837.00
07333400	CON 13 N PT LOT 12	9.88	4.00	Sturgeon Dyce Mc Dowell,	\$0.00	\$0.00	\$351.00	\$351.00
07333512	CON 13 N PT LOT 13	16.54	6.69	Hasbrooke Holdings Limited	\$0.00	\$0.00	\$586.00	\$586.00
07333510	CON 13 N PT LOT 13	50.48	20.43	Hasbrooke Holdings Limited,	\$0.00	\$0.00	\$1,791.00	\$1,791.00
07333500	CON 13 N PT LOT 13 RP	8.99	3.64	Hasbrooke Holdings Limited,	\$0.00	\$0.00	\$319.00	\$319.00
Total on Privately-Owned - Agricultural Lands.....					\$0.00	\$0.00	\$551,964.00	\$551,964.00
<b>TOTAL ASSESSMENT - SOUTH INNISFIL CREEK DRAIN (OVERFLOW AREA 1)</b> .....					<b>\$0.00</b>	<b>\$0.00</b>	<b>\$956,160.00</b>	<b>\$956,160.00</b>
		(Acres)	(Ha.)					
<b>Total Area:</b>		<b>16,988.45</b>	<b>6,875.04</b>					



**"SCHEDULE B2"**  
**SCHEDULE OF ALLOWANCES**  
**SOUTH INNISFIL CREEK DRAIN (OVERFLOW AREA 3)**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

Roll No.	Description	Owner	Section 29 Land	Section 30 Damages	Total Allowances
00226300	CON 4 N PT LOT 12	1665328 Ontario Ltd,	\$300,000.00	\$0.00	\$300,000.00
<b>TOTAL ALLOWANCES</b>			<b>\$300,000.00</b>	<b>\$0.00</b>	<b>\$300,000.00</b>

**"SCHEDULE C2"**  
**SCHEDULE OF ASSESSMENT**  
**SOUTH INNISFIL CREEK DRAIN (OVERFLOW AREA 3)**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

**ONTARIO LANDS:**

Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
Highway 400	215.23	87.10	Ministry of Transportation	\$0.00	\$0.00	\$66,660.00	\$66,660.00
County Road 89	101.68	41.15	Ministry of Transportation	\$0.00	\$0.00	\$23,531.00	\$23,531.00
00101100 INNISFIL CON 1 S PT LOT 5 RP	15.03	6.08	Government Services, Director Municipal S,	\$0.00	\$0.00	\$664.00	\$664.00
00102100 CON 1 PT LOT 6 PT LOT 7	8.15	3.30	Transportation Ministry,	\$0.00	\$0.00	\$377.00	\$377.00
00102400 CON 1 PT LOT 7 RP 51R8414	3.45	1.40	Transportation Ministry	\$0.00	\$0.00	\$160.00	\$160.00
02105100 CON 6 S PT LOT 15	2.00	0.81	Director Municipal Subsidies, Ministry Of Transportation,	\$0.00	\$0.00	\$207.00	\$207.00
Total on Ontario Lands.....				\$0.00	\$0.00	\$91,599.00	\$91,599.00

**MUNICIPAL LANDS:**

Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
7th Line	6.62	2.68	Town of Innisfil	\$0.00	\$0.00	\$2,737.00	\$2,737.00
6th Line	37.39	15.13	Town of Innisfil	\$0.00	\$0.00	\$15,450.00	\$15,450.00
5th Line	38.57	15.61	Town of Innisfil	\$0.00	\$0.00	\$13,355.00	\$13,355.00
4th Line	40.23	16.28	Town of Innisfil	\$0.00	\$0.00	\$12,471.00	\$12,471.00
3rd Line	40.13	16.24	Town of Innisfil	\$0.00	\$0.00	\$12,198.00	\$12,198.00
5 Sideroad	40.13	16.24	Simcoe County	\$0.00	\$0.00	\$12,210.00	\$12,210.00
10 Sideroad	48.51	19.63	Simcoe County	\$0.00	\$0.00	\$15,254.00	\$15,254.00
2nd Line	48.63	19.68	Town of Innisfil	\$0.00	\$0.00	\$13,319.00	\$13,319.00
14th Line	12.28	4.97	Town of Innisfil	\$0.00	\$0.00	\$2,994.00	\$2,994.00
15th Line	26.86	10.87	Town of Innisfil	\$0.00	\$0.00	\$6,549.00	\$6,549.00
County Road 89	260.70	105.50	Simcoe County	\$0.00	\$0.00	\$53,865.00	\$53,865.00
County Road 4 (Young Street)	66.32	26.84	Simcoe County	\$0.00	\$0.00	\$13,704.00	\$13,704.00
Village of Churchill Block Assessment No. 1 Roads	6.67	2.70	Town of Innisfil	\$0.00	\$0.00	\$2,523.00	\$2,523.00
Village of Churchill Block Assessment No. 2 Roads North of 4th Line	14.41	5.83	Town of Innisfil	\$0.00	\$0.00	\$5,447.00	\$5,447.00
Village of Churchill Block Assessment No. 2 Roads South of 4th Line	14.41	5.83	Town of Innisfil	\$0.00	\$0.00	\$4,822.00	\$4,822.00
Village of Churchill Block Assessment No. 3 Roads	3.39	1.37	Town of Innisfil	\$0.00	\$0.00	\$1,133.00	\$1,133.00
00220320 CON 3 N PT LOT 13 RP	1.24	0.50	Town Of Innisfil,	\$0.00	\$0.00	\$166.00	\$166.00
07417700 CON 15 PT LOT 15 RP 51R32484	2.73	1.10	Town Of Innisfil,	\$0.00	\$0.00	\$142.00	\$142.00
07417800 CON 15 PT LOT 15	2.00	0.81	Town Of Innisfil,	\$0.00	\$0.00	\$122.00	\$122.00
Total on Municipal Lands.....				\$0.00	\$0.00	\$188,461.00	\$188,461.00

**PRIVATELY-OWNED - NON-AGRICULTURAL LANDS:**

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
01801500	CON 6 S PT LOT 5 N PT LOT 5	149.00	60.30	Van Der Mast Maria Hendrika,	\$0.00	\$0.00	\$12,315.00	\$12,315.00
01801600	CON 6 S PT LOT 5	0.50	0.20	Baguley Warren Keith, Baguley Barbara Mari,	\$0.00	\$0.00	\$41.00	\$41.00
00325724	PLAN M448 BLK 59	2.05	0.83	Town Of Innisfil,	\$0.00	\$0.00	\$170.00	\$170.00
00325712	PLAN M448 LOT 53	0.50	0.20	Magri David Raymond, Magri Eleanor Ann,	\$0.00	\$0.00	\$123.00	\$123.00
00325714	PLAN M448 LOT 54	0.52	0.21	Hamilton Kimberly Anne, Hamilton	\$0.00	\$0.00	\$127.00	\$127.00
02000201	CON 6 S PT LOT 8 RP 51R17257	0.81	0.33	Moore Deborah, Moore Peter,	\$0.00	\$0.00	\$158.00	\$158.00
02104400	CON 6 S PT LOT 11	50.00	20.23	Winter Ruthann Iris, Winter Kenneth	\$0.00	\$0.00	\$3,110.00	\$3,110.00
02104500	CON 6 S PT LOT 12	24.46	9.90	Awrey Orville Frankl,	\$0.00	\$0.00	\$2,022.00	\$2,022.00
02104600	CON 6 S PT LOT 12	26.32	10.65	Bemt Kurt Anthony,	\$0.00	\$0.00	\$2,175.00	\$2,175.00
02104700	CON 6 S PT LOT 12	39.66	16.05	Kent Grace Irene, Kent Gordon Joseph,	\$0.00	\$0.00	\$3,278.00	\$3,278.00
02104800	CON 6 S PT LOT 13	50.00	20.23	Zlender Anna Josephine,	\$0.00	\$0.00	\$4,132.00	\$4,132.00
02104900	CON 6 S PT LOT 13	50.00	20.23	Slaby Michael H Wm,	\$0.00	\$0.00	\$4,132.00	\$4,132.00
02105300	CON 6 S PT LOT 15	0.64	0.26	Huisman Donna Marie,	\$0.00	\$0.00	\$143.00	\$143.00
00231500	CON 6 N PT LOT 15	7.38	2.99	Sixth Line Cemetery,	\$0.00	\$0.00	\$611.00	\$611.00
02105400	CON 6 S PT LOT 15 PLAN 1120	25.75	10.42	Shakell Pamela, Shakell Glen Alexander,	\$0.00	\$0.00	\$2,128.00	\$2,128.00
02105500	CON 6 S PT LOT 15 PLAN 1120	6.94	2.81	1796463 Ontario Inc,	\$0.00	\$0.00	\$574.00	\$574.00
00114802	CON 5 PT S 1/2 LOT 5 RP	0.46	0.19	Martin Kenneth Leslie, Martin Yvette Melissa,	\$0.00	\$0.00	\$116.00	\$116.00
00115300	CON 5 N PT LOT 5	1.25	0.51	Eyers Stella T, Eyers Robert A,	\$0.00	\$0.00	\$182.00	\$182.00
00115100	CON 5 N PT LOT 6 51R-3091	1.01	0.41	Sturgess Helen P Estate Of,	\$0.00	\$0.00	\$167.00	\$167.00
00126900	CON 5 S PT LOT 8 S PT LOT 9	50.88	20.59	Dean Jacqueline,	\$0.00	\$0.00	\$2,326.00	\$2,326.00
00127500	CON 5 N PT LOT 9	99.66	40.33	Guido Lecce Holdings (1994) Inc, Domenic B Lecce Holdings (1994)	\$0.00	\$0.00	\$8,237.00	\$8,237.00

Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment	
00127600	CON 5 N PT LOT 9 RP 51R1970	0.35	0.14	Bowman Selby,	\$0.00	\$0.00	\$86.00	\$86.00
00226700	INNISFIL CON 5 S PT LOT 11	19.16	7.75	Kumph Jennifer,	\$0.00	\$0.00	\$985.00	\$985.00
00226725	INNISFIL CON 5 S PT LOT 11	2.03	0.82	Graham Brian Joseph	\$0.00	\$0.00	\$167.00	\$167.00
00226800	CON 5 S PT LOT 11	21.34	8.64	Zhang Hui, Li Min,	\$0.00	\$0.00	\$1,765.00	\$1,765.00
00227000	CON 5 S PT LOT 11	12.54	5.07	Street Dalton Paul, Street Loxi	\$0.00	\$0.00	\$1,035.00	\$1,035.00
00227100	CON 5 S PT LOT 11	9.87	3.99	Treloar Jennifer Jean, Treloar Timothy John,	\$0.00	\$0.00	\$815.00	\$815.00
00227200	CON 5 S PT LOT 11	10.78	4.36	Adams Kelly Leigh, Adams Donald Joseph,	\$0.00	\$0.00	\$890.00	\$890.00
00227300	CON 5 S PT LOT 11	10.20	4.13	Smith Lisa Marie,	\$0.00	\$0.00	\$843.00	\$843.00
00227500	CON 5 S PT LOT 12	25.00	10.12	Wasyluk Steve,	\$0.00	\$0.00	\$2,067.00	\$2,067.00
00227600	CON 5 S PT LOT 12 RP	13.00	5.26	Nguyen Ngoc Phi,	\$0.00	\$0.00	\$564.00	\$564.00
00227700	CON 5 S PT LOT 12	12.00	4.86	Dinh Hanh Thi,	\$0.00	\$0.00	\$993.00	\$993.00
00232001	CON 5 N PT LOT 12 RP	0.72	0.29	Wheeler Elmo John, Wheeler Rosie Stirling,	\$0.00	\$0.00	\$151.00	\$151.00
00232201	CON 5 PT LOT 11 RP 51R14687	0.50	0.20	Prosser Teresa,	\$0.00	\$0.00	\$123.00	\$123.00
00227900	CON 5 PT LOT 13 LESS RP	99.09	40.10	Innisfil Properties Inc,	\$0.00	\$0.00	\$8,190.00	\$8,190.00
00227910	CON 5 PT LOT 13 RP 51R28666	0.91	0.37	Kniazeff Richard Teddy, Kniazeff Corinne,	\$0.00	\$0.00	\$162.00	\$162.00
00228200	CON 5 S PT LOT 15 RP	0.24	0.10	Scythes Darryl Edmund,	\$0.00	\$0.00	\$20.00	\$20.00
00228300	CON 5 S PT LOT 15 RP	0.53	0.21	Browne Colin,	\$0.00	\$0.00	\$43.00	\$43.00
00228400	CON 5 S PT LOT 15	0.36	0.15	Diceman Douglas Clar, Diceman Margaret Ann,	\$0.00	\$0.00	\$31.00	\$31.00
00228500	CON 5 S PT LOT 15	0.44	0.18	Coulter David A, Coulter Mary L,	\$0.00	\$0.00	\$37.00	\$37.00
00228600	CON 5 S PT LOT 15 RP	0.54	0.22	Laurin Timothy,	\$0.00	\$0.00	\$45.00	\$45.00
00228700	CON 5 S PT LOT 15	0.32	0.13	Chormenki Victoria Lynn, Chormenki Peter Paul,	\$0.00	\$0.00	\$27.00	\$27.00
00111400	CON 4 S PT LOT 2 RP 51R11548	1.00	0.40	Latanville June,Oscar,Robyn, Howlett Donna & Robert,	\$0.00	\$0.00	\$99.00	\$99.00
00111600	CON 4 PT LOT 3 RP 51R3904	4.35	1.76	Merrall Gregory William, Kippers Elisabeth,	\$0.00	\$0.00	\$217.00	\$217.00
00112000	CON 4 S PT LOT 5	100.00	40.47	Persico Angelo, Persico Augusto,	\$0.00	\$0.00	\$5,207.00	\$5,207.00
00112501	CON 4 N PT LOT 5 RP 51R29944	1.61	0.65	Jones Linda Carole, Jones Warren Oliver,	\$0.00	\$0.00	\$127.00	\$127.00
00112300	CON 4 S PT LOT 6 RP 51R10442	1.90	0.77	Metcalfe John Joseph,	\$0.00	\$0.00	\$135.00	\$135.00
00125801	CON 4 PT LOT 8 RP 51R16304	0.57	0.23	Coutts Reta M,	\$0.00	\$0.00	\$107.00	\$107.00
00126200	CON 4 N PT LOT 9	99.50	40.27	Lucas William G, Lucas Ruth Adeline,	\$0.00	\$0.00	\$6,579.00	\$6,579.00
00126201	CON 4 N PT LOT 9 RP 51R12167	0.46	0.19	Winslow Daryl, Winslow Linda,	\$0.00	\$0.00	\$93.00	\$93.00
00125910	CON 4 S PT LOT 9 RP 51R25573	1.00	0.40	Thew James, Thew Doris,	\$0.00	\$0.00	\$131.00	\$131.00
00126000	CON 4 S PT LOT 10 RP	99.56	40.29	Pillitteri Pasquale,	\$0.00	\$0.00	\$6,583.00	\$6,583.00
00126100	CON 4 N PT LOT 10 RP	97.57	39.49	Pillitteri Pasquale,	\$0.00	\$0.00	\$6,452.00	\$6,452.00
00126110	CON 4 N PT LOT 10 RP	0.59	0.24	Hillock Jean C,	\$0.00	\$0.00	\$110.00	\$110.00
00226400	CON 4 N PT LOT 11 N PT LOT	100.00	40.47	1665328 Ontario Ltd,	\$0.00	\$0.00	\$7,790.00	\$7,790.00
00220900	CON 4 PT S 1/2 LOT 11 INSTR	5.38	2.18	Tuzi Geraldo, Tuzi Angelo,	\$0.00	\$0.00	\$407.00	\$407.00
00226001	CON 4 PT LOT 14 51R-15146	1.03	0.42	Favret Chiara Maria, Favret	\$0.00	\$0.00	\$155.00	\$155.00
00221300	CON 4 S PT LOT 14	1.37	0.55	Doner Darrell, Jambor Joseph, Toth Lorraine,	\$0.00	\$0.00	\$170.00	\$170.00
00221400	CON 4 S PT LOT 14	1.37	0.55	Mann Susan Marie, Mann David Neil,	\$0.00	\$0.00	\$170.00	\$170.00
00225800	CON 4 N PT LOT 15 RP 51R4544	0.57	0.23	Brauti Kevin Jeffrey, Toole Amber Delynn,	\$0.00	\$0.00	\$122.00	\$122.00
00225300	CON 4 N PT LOT 15	0.51	0.21	2765870 Canada Inc,	\$0.00	\$0.00	\$116.00	\$116.00
00225500	CON 4 N PT LOT 15 RP 51R2647	0.69	0.28	Kell Kenneth,	\$0.00	\$0.00	\$136.00	\$136.00
00225200	CON 4 N PT LOT 15 RP	5.91	2.39	Lanka Elmar Estate Of,	\$0.00	\$0.00	\$447.00	\$447.00
00225210	CON 4 N PT LOT 15 RP	5.45	2.21	Gialedakis Louie,	\$0.00	\$0.00	\$413.00	\$413.00
00225000	CON 4 N PT LOT 16	43.24	17.50	Demarco Michele, Demarco Maria,	\$0.00	\$0.00	\$2,895.00	\$2,895.00
00224200	CON 4 N PT LOT 16	10.07	4.08	The Simcoe County District School Board,	\$0.00	\$0.00	\$762.00	\$762.00
00224300	CON 4 N PT LOT 16 RP 51R1954	0.94	0.38	Hill Gregory Norman,	\$0.00	\$0.00	\$149.00	\$149.00
00224700	CON 4 N PT LOT 16 RP	1.04	0.42	Smith Douglas James, Smith Bonnie	\$0.00	\$0.00	\$155.00	\$155.00
00224800	CON 4 N PT LOT 16 RP 51R9911	0.40	0.16	Dunn Amanda Jayne, Ruegg David John,	\$0.00	\$0.00	\$90.00	\$90.00
00224801	CON 4 N PT LOT 16 RP	1.85	0.75	Austin Kenneth George, Austin Trudy Leah-Anne,	\$0.00	\$0.00	\$186.00	\$186.00
00224802	CON 4 N PT LOT 16 RP	1.83	0.74	Eeles Holly Lillian Muriel, Eeles Robert Wade,	\$0.00	\$0.00	\$185.00	\$185.00
00224900	CON 4 N PT LOT 16	1.28	0.52	Demarco Maria, Demarco Michele,	\$0.00	\$0.00	\$168.00	\$168.00
00109901	CON 3 N PT LOT 4 RP 51R13234	1.00	0.41	Short Joy, Dougherty Gary,	\$0.00	\$0.00	\$101.00	\$101.00
00108110	CON 3 S PT LOT 5 RP 51R24103	3.49	1.41	Henry Robert Eric	\$0.00	\$0.00	\$179.00	\$179.00
00109400	CON 3 N PT LOT 5 RP 51R2958	0.80	0.33	Gelfand Michael John L, Kull Ellen,	\$0.00	\$0.00	\$105.00	\$105.00
00109500	CON 3 N PT LOT 5	1.00	0.40	United Bethesda Ceme,	\$0.00	\$0.00	\$108.00	\$108.00
00109700	CON 3 N PT LOT 5 RP 51R5443	0.58	0.24	Hill Lorna E L, Hill Steven Wm,	\$0.00	\$0.00	\$83.00	\$83.00
00109705	CON 3 N PT LOT 5 RP 51R16455	0.53	0.21	Hill Lorna E.L.,	\$0.00	\$0.00	\$77.00	\$77.00
00108300	CON 3 S PT LOT 6 RP 51R6697	0.69	0.28	Wheeler Shirley,	\$0.00	\$0.00	\$94.00	\$94.00
00108700	CON 3 N PT LOT 6	10.05	4.07	Sebastiano Stephanie Anne, Dougherty Leroy Eric,	\$0.00	\$0.00	\$549.00	\$549.00

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00108800	CON 3 N PT LOT 6	1.00	0.40	Franner Robert, Lozinski Melanie,	\$0.00	\$0.00	\$108.00	\$108.00
00108900	CON 3 PT LOT 6	10.57	4.28	Brankston Craig, Brankston Gail,	\$0.00	\$0.00	\$577.00	\$577.00
00109000	CON 3 PT LOT 6	15.00	6.07	Ioannou Margaret, Ioannou George,	\$0.00	\$0.00	\$818.00	\$818.00
00109100	CON 3 PT LOT 6	15.16	6.14	Rampodarat J, Tirbeni Taramattie,	\$0.00	\$0.00	\$828.00	\$828.00
00123000	CON 3 S PT LOT 8	2.00	0.81	Petropoulos Peter, Petropoulos Jean,	\$0.00	\$0.00	\$165.00	\$165.00
00123001	CON 3 W PT LOT 8 RP 51R17195	0.93	0.38	Allen Robert James,	\$0.00	\$0.00	\$130.00	\$130.00
00123200	CON 3 S PT LOT 8 RP 51R8351	0.46	0.19	Dermott Gwen Ellen,	\$0.00	\$0.00	\$93.00	\$93.00
00124801	CON 3 PT LOT 8 RP 51R27991	2.47	1.00	Reynolds Glenn Thomas, Reynolds Michealle Edith,	\$0.00	\$0.00	\$185.00	\$185.00
00124810	CON 3 PT LOT 8 RP 51R21206	0.72	0.29	Cestaric Brandon, Cestaric Vesna,	\$0.00	\$0.00	\$121.00	\$121.00
00124500	CON 3 N PT LOT 9	24.78	10.03	1765448 Ontario Inc,	\$0.00	\$0.00	\$1,639.00	\$1,639.00
00123400	CON 3 PT LOT 9	52.58	21.28	Petrolo Elizabeth,	\$0.00	\$0.00	\$3,477.00	\$3,477.00
00124300	CON 3 N PT LOT 10 51R18321	2.97	1.20	Perkins Donna Sue, Perkins Harry James,	\$0.00	\$0.00	\$196.00	\$196.00
00124301	CON 3 PT LOT 10 51R 18321	20.76	8.40	Squibb Harry G,	\$0.00	\$0.00	\$1,372.00	\$1,372.00
00123700	CON 3 S PT LOT 10	10.00	4.05	Levy Kevin Arnold,	\$0.00	\$0.00	\$662.00	\$662.00
00123800	CON 3 PT LOT 10	11.00	4.45	Bryan Adam,	\$0.00	\$0.00	\$727.00	\$727.00
00123900	CON 3 S PT LOT 10	14.94	6.05	Leat Fernanda Maria,	\$0.00	\$0.00	\$988.00	\$988.00
00124100	CON 3 S PT LOT 10	14.94	6.05	Nelson Michael Andrew, Nelson Melissa Ellen,	\$0.00	\$0.00	\$988.00	\$988.00
00213300	CON 3 S PT LOT 11 RP 51R3731	9.62	3.89	Liberatore Susan, Bova Christina,	\$0.00	\$0.00	\$644.00	\$644.00
00213400	CON 3 S PT LOT 11 RP 51R3731	10.05	4.07	Norrie Gina,	\$0.00	\$0.00	\$673.00	\$673.00
00213500	CON 3 S PT LOT 11 RP 51R3731	10.05	4.07	Mccarthy Michael J, Mccarthy Brenda	\$0.00	\$0.00	\$673.00	\$673.00
00213600	CON 3 S PT LOT 11 RP 51R3731	10.05	4.07	Curtis Iris, Carbone Eugenio,	\$0.00	\$0.00	\$673.00	\$673.00
00213800	CON 3 S PT LOT 11 RP 51R6188	13.42	5.43	Yoon Hyunchul, Yoon Mi-Hyang,	\$0.00	\$0.00	\$898.00	\$898.00
00213900	CON 3 S PT LOT 11 RP 51R6188	13.43	5.43	R Three Limited,	\$0.00	\$0.00	\$898.00	\$898.00
00220500	CON 3 N PT LOT 12	50.00	20.23	Craig Darcy Truman, Wolfond Chad,	\$0.00	\$0.00	\$3,512.00	\$3,512.00
00214300	CON 3 S PT LOT 12	10.01	4.05	Xenophontos Theodoro, Xenophontos Christin,	\$0.00	\$0.00	\$670.00	\$670.00
00300600	CON 3 N PT LOT 15	9.81	3.97	Johnson & Ghodiwalla & Modi, Patel & Ferreora & Tamakuwala,	\$0.00	\$0.00	\$657.00	\$657.00
00215200	CON 3 S PT LOT 16	0.30	0.12	Kerr Vanessa, Ledlie Mark Stephen,	\$0.00	\$0.00	\$60.00	\$60.00
00104400	CON 2 S PT LOT 3 RP 51R19342	0.69	0.28	Ley Brenda, Ley Lloyd James,	\$0.00	\$0.00	\$90.00	\$90.00
00104600	CON 2 S PT LOT 4	59.08	23.91	Miles Eleanor Elizabeth, Miles William Francis,	\$0.00	\$0.00	\$2,954.00	\$2,954.00
00104620	CON 2 PT LOT 4 RP 51R19528	0.92	0.37	Day Roy Laverne,	\$0.00	\$0.00	\$98.00	\$98.00
00105800	CON 2 N PT LOT 5	9.89	4.00	Yoon Mi-Hyang, Yoon Hyunchul,	\$0.00	\$0.00	\$494.00	\$494.00
00105900	CON 2 N PT LOT 5	9.90	4.01	Barber Bart Steven,	\$0.00	\$0.00	\$495.00	\$495.00
00106000	CON 2 N PT LOT 5	9.93	4.02	Krebs-Wickens Iris, Wickens J, Wirz Raymond & Betty,	\$0.00	\$0.00	\$497.00	\$497.00
00106100	CON 2 N PT LOT 5	10.01	4.05	Grigoroff Alexander & Angelo, Grigoroff Gordon & Zoi,	\$0.00	\$0.00	\$500.00	\$500.00
00106200	CON 2 N PT LOT 5	9.72	3.93	Sieber Helga,	\$0.00	\$0.00	\$486.00	\$486.00
00106300	CON 2 N PT LOT 5	9.74	3.94	Nothrop Carol,	\$0.00	\$0.00	\$487.00	\$487.00
00106500	CON 2 N PT LOT 5	10.03	4.06	Scorziello Antonio,	\$0.00	\$0.00	\$502.00	\$502.00
00106700	CON 2 N PT LOT 5	10.02	4.05	Watt Allan Wayne, Watt Deborah	\$0.00	\$0.00	\$500.00	\$500.00
00104900	CON 2 S PT LOT 5 RP 51R7862	0.52	0.21	Ley Ronald Garry, Ley Sharon Irene,	\$0.00	\$0.00	\$77.00	\$77.00
00105400	CON 2 N PT LOT 6	18.83	7.62	Menzel Loni, Morwick Edward Young,	\$0.00	\$0.00	\$942.00	\$942.00
00105500	CON 2 N/W PT LOT 6	10.87	4.40	Misiaszek Wesley, Brooks Brenda,	\$0.00	\$0.00	\$544.00	\$544.00
00105600	CON 2 N PT LOT 6	10.89	4.41	Barbosa Maria, Barbosa Lino,	\$0.00	\$0.00	\$545.00	\$545.00
00105700	CON 2 N PT LOT 6 RP 51R22843	21.11	8.54	Carpino Avril Anne, Carpino Carmen,	\$0.00	\$0.00	\$1,055.00	\$1,055.00
00105300	CON 2 N PT LOT 6	33.47	13.54	Hussain Irene, Hussain Sarfraz,	\$0.00	\$0.00	\$1,673.00	\$1,673.00
00122600	CON 2 N PT LOT 7	90.00	36.42	Ellen'S Investment Holdings Lt,	\$0.00	\$0.00	\$4,909.00	\$4,909.00
00122300	CON 2 PT LOT 7 RP 51R6047	0.60	0.24	Jolie Bonnie Jean, Jolie Francis F,	\$0.00	\$0.00	\$91.00	\$91.00
00122400	CON 2 N PT LOT 7 RP 51R2208	0.60	0.24	Lacroix Denise A, Lacroix John P,	\$0.00	\$0.00	\$91.00	\$91.00
00119510	CON 2 S PT LOT 7 RP 51R33480	1.50	0.61	Armstrong Troy	\$0.00	\$0.00	\$75.00	\$75.00
00119700	CON 2 S PT LOT 8 RP 51R3193	25.04	10.13	Chiodo Peter,	\$0.00	\$0.00	\$1,365.00	\$1,365.00
00119800	CON 2 S PT LOT 8	50.00	20.23	Filice Antonio, Filice Marina Rosa,	\$0.00	\$0.00	\$2,727.00	\$2,727.00
00121800	CON 2 N PT LOT 8	25.00	10.12	Mora Heidi, Mora Imre,	\$0.00	\$0.00	\$1,509.00	\$1,509.00
00121900	CON 2 N PT LOT 8	12.50	5.06	Reynolds Jean E, Reynolds Frederick	\$0.00	\$0.00	\$754.00	\$754.00
00122000	CON 2 N PT LOT 8 RP 51R28222	12.50	5.06	Zylstra Charles Klaas, Zylstra Corrie,	\$0.00	\$0.00	\$682.00	\$682.00
00120000	CON 2 S PT LOT 9	25.15	10.18	Mora Imre, Cestaric Joseph,	\$0.00	\$0.00	\$1,476.00	\$1,476.00
00120100	CON 2 S PT LOT 9	25.20	10.20	Mora Imre, Cestaric Joseph,	\$0.00	\$0.00	\$1,479.00	\$1,479.00
00120200	CON 2 S PT LOT 9	12.64	5.12	Bordon Mario Oscar, Bordon	\$0.00	\$0.00	\$742.00	\$742.00
00120300	CON 2 S PT LOT 9	12.64	5.12	Tarantino C & Marchese Ida, Andreacchi A & Garito Lina,	\$0.00	\$0.00	\$742.00	\$742.00
00120900	CON 2 N PT LOT 10	25.22	10.21	Horodinsky Farms Inc,	\$0.00	\$0.00	\$1,522.00	\$1,522.00
00206700	CON 2 S PT LOT 12	25.00	10.12	Galloro Maria J,	\$0.00	\$0.00	\$1,343.00	\$1,343.00
00206800	CON 2 S PT LOT 12	12.47	5.05	Galloro Frank Joseph,	\$0.00	\$0.00	\$670.00	\$670.00
00206900	CON 2 S PT LOT 12	12.46	5.04	Tesic Mios,	\$0.00	\$0.00	\$669.00	\$669.00
00211600	CON 2 N PT LOT 13	15.00	6.07	Evers Darlene Jane,	\$0.00	\$0.00	\$756.00	\$756.00
00211700	CON 2 N PT LOT 13	10.00	4.05	Risi Tulio,	\$0.00	\$0.00	\$670.00	\$670.00
00211800	CON 2 N PT LOT 13	17.50	7.08	Grydsuk James Darryl,	\$0.00	\$0.00	\$1,171.00	\$1,171.00
00211900	CON 2 N PT LOT 13	20.00	8.09	Goncalves Olinda, Goncalves Michael,	\$0.00	\$0.00	\$1,338.00	\$1,338.00

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00212000	CON 2 N PT LOT 13	37.69	15.25	Yamamoto Kerry,	\$0.00	\$0.00	\$1,572.00	\$1,572.00
00207000	CON 2 S PT LOT 13	25.00	10.12	Jones Clifton & Debbie, Willshire Milton & Lorna,	\$0.00	\$0.00	\$1,343.00	\$1,343.00
00207100	CON 2 S PT LOT 13	12.30	4.98	Kril John, Kril Anna,	\$0.00	\$0.00	\$661.00	\$661.00
00207200	CON 2 S PT LOT 13	12.30	4.98	Badstober Barbara An, Badstober Rudolf Joh,	\$0.00	\$0.00	\$661.00	\$661.00
00212100	CON 2 N PT LOT 12	15.06	6.09	Boston Mills Investment Holdin,	\$0.00	\$0.00	\$958.00	\$958.00
00212200	CON 2 N PT LOT 12	10.06	4.07	Sharma Sanjeev,	\$0.00	\$0.00	\$673.00	\$673.00
00211100	CON 2 PT LOT 15	0.12	0.05	Director Municipal Subsidies, Ministry Of Transportation,	\$0.00	\$0.00	\$25.00	\$25.00
00208000	CON 2 S PT LOT 15	0.58	0.23	Esau Linda Gail, Kalcic Gregory Doug,	\$0.00	\$0.00	\$108.00	\$108.00
00210901	CON 2 PT LOT 15 RP 51R15380	0.84	0.34	Kent Kevin,	\$0.00	\$0.00	\$129.00	\$129.00
00211000	CON 2 N PT LOT 15 RP 51R740	0.48	0.20	Budd Patricia Gail, Budd Alan James,	\$0.00	\$0.00	\$99.00	\$99.00
00210200	CON 2 PT LOT 16 RP51R8537	0.46	0.19	Campbell Martina P A, Campbell Ian Todd,	\$0.00	\$0.00	\$94.00	\$94.00
00210500	CON 2 N PT LOT 16	0.52	0.21	Cuneen Daniel,	\$0.00	\$0.00	\$102.00	\$102.00
00210600	CON 2 N PT LOT 16	14.25	5.77	Zendelek Boguslaw, Zendelek Roberta,	\$0.00	\$0.00	\$954.00	\$954.00
00208200	CON 2 S PT LOT 16	1.53	0.62	Wood Larry James, Wood Constance Ruth,	\$0.00	\$0.00	\$153.00	\$153.00
00208300	CON 2 S PT LOT 16	1.57	0.64	Bygnes Thorleif, Bygnes Evelyn,	\$0.00	\$0.00	\$155.00	\$155.00
00208520	CON 2 PT LOT 16 RP 51R18491	0.57	0.23	Groves Linda,	\$0.00	\$0.00	\$108.00	\$108.00
00100900	CON 1 S PT LOT 4	1.09	0.44	Wigle Tonya, Ferguson Brian,	\$0.00	\$0.00	\$97.00	\$97.00
00103110	CON 1 PT LOT 4 RP 51R33535	1.19	0.48	Lang Margaret Iris	\$0.00	\$0.00	\$57.00	\$57.00
00101200	CON 1 S PT LOT 5	84.62	34.24	1665328 Ontario Ltd,	\$0.00	\$0.00	\$3,741.00	\$3,741.00
00103010	CON 1 N PT LOT 5 RP 51R32751	1.33	0.54	Beattie Aaron	\$0.00	\$0.00	\$64.00	\$64.00
00102600	CON 1 N PT LOT 6 RP 51R9251	0.69	0.28	Little Joseph David, Lemoine Cassidy Julie,	\$0.00	\$0.00	\$83.00	\$83.00
00101300	CON 1 PT LOT 6 RP 51R19649	0.57	0.23	Minns Heather Grace,	\$0.00	\$0.00	\$75.00	\$75.00
00101500	CON 1 S PT LOT 6	1.00	0.40	Wallace Helen Jean,	\$0.00	\$0.00	\$91.00	\$91.00
00101700	CON 1 S PT LOT 6	0.63	0.26	Palmer Randall,	\$0.00	\$0.00	\$80.00	\$80.00
00101800	CON 1 S PT LOT 6	0.34	0.14	Beattie Cecilia May, Beattie George David,	\$0.00	\$0.00	\$48.00	\$48.00
00101900	CON 1 S PT LOT 6	0.23	0.09	Bell Canada,	\$0.00	\$0.00	\$31.00	\$31.00
00119400	CON 1 N PT LOT 7	84.00	33.99	Succession Financial Group Inc,	\$0.00	\$0.00	\$4,200.00	\$4,200.00
00116600	CON 1 S PT LOT 7 RP 51R24159	62.43	25.26	Aqua-Gem Investments Limited,	\$0.00	\$0.00	\$3,044.00	\$3,044.00
00116700	CON 1 S PT LOT 7 RP 51R29670	2.28	0.92	1045901 Ontario Ltd,	\$0.00	\$0.00	\$131.00	\$131.00
00119200	CON 1 N PT LOT 8	49.00	19.83	1523566 Ontario Limited,	\$0.00	\$0.00	\$2,572.00	\$2,572.00
00116900	CON 1 S PT LOT 8	102.67	41.55	Fiammini Maria, Dicarlo Stefano, Vincenzo Carmen,	\$0.00	\$0.00	\$5,197.00	\$5,197.00
00117500	CON 1 S PT LOT 10	13.00	5.26	Rudnisky Wally,	\$0.00	\$0.00	\$682.00	\$682.00
00117700	CON 1 S PT LOT 10	13.00	5.26	Fabiano Caterina, Fabiano Luigi,	\$0.00	\$0.00	\$682.00	\$682.00
00117900	INNISFIL CON 1 S PT LOT 10	9.87	3.99	Mark Dover Franklin, Mark Yasuko,	\$0.00	\$0.00	\$517.00	\$517.00
00118000	INNISFIL CON 1 S PT LOT 10	9.83	3.98	Mark Yasuko, Maehara Masumi,	\$0.00	\$0.00	\$516.00	\$516.00
00118100	INNISFIL CON 1 PT LOTS 10	23.08	9.34	Riley Margaret,	\$0.00	\$0.00	\$1,211.00	\$1,211.00
00118600	CON 1 N PT LOT 10	5.00	2.02	Rudnisky Wally,	\$0.00	\$0.00	\$264.00	\$264.00
00118700	CON 1 N PT LOT 10	5.00	2.02	Santos Maria De Lurdes A, Santos Filipe,	\$0.00	\$0.00	\$264.00	\$264.00
00200100	INNISFIL CON 1 PT LOTS 10	11.82	4.78	Malik Sohaib, Awan Basim,	\$0.00	\$0.00	\$620.00	\$620.00
00200200	CON 1 S PT LOT 11	21.62	8.75	Elfassy Suzanne,	\$0.00	\$0.00	\$1,135.00	\$1,135.00
00200300	CON 1 C PT LOT 11	14.48	5.86	Burrows Ralph Joel, Burrows Marie,	\$0.00	\$0.00	\$760.00	\$760.00
00200400	CON 1 PART C PT LOT 11	14.00	5.67	Kosinec Melody,Paul,John, Kosinec Michael & Darlene,	\$0.00	\$0.00	\$735.00	\$735.00
00200700	CON 1 S PT LOT 11	1.01	0.41	Zielke Karl Andrea, Zielke Marilyn Ethel,	\$0.00	\$0.00	\$106.00	\$106.00
00200800	CON 1 S PT LOT 12	0.48	0.19	Matchett Edward William	\$0.00	\$0.00	\$74.00	\$74.00
00200900	CON 1 S PT LOT 12	0.40	0.16	Matchett Edward William	\$0.00	\$0.00	\$62.00	\$62.00
00201300	CON 1 S PT LOT 13 RP 51R4112	0.55	0.22	Brillinger Stephen, Brillinger Kathleen,	\$0.00	\$0.00	\$83.00	\$83.00
00201500	CON 1 S PT LOT 14 RP 51R5147	0.46	0.19	Long Roy, Long Diane,	\$0.00	\$0.00	\$74.00	\$74.00
00201801	CON 1 S PT LOT 15 RP	0.59	0.24	Kell-Rose Barbara L, Rose David S,	\$0.00	\$0.00	\$87.00	\$87.00
00204900	CON 1 N PT LOT 16	0.75	0.30	Clements Cemetery,	\$0.00	\$0.00	\$124.00	\$124.00
07216401	CON 15 N PT LOT 3 RP 51R2687	3.09	1.25	Vernon Mary Lorna, Vernon Paul Douglas,	\$0.00	\$0.00	\$143.00	\$143.00
07216402	CON 15 E PT LOT 4 RP	2.00	0.81	Cruz Gil Da Silva, Cruz Maria Rosa,	\$0.00	\$0.00	\$116.00	\$116.00
07216300	CON 15 W PT LOT 4	11.61	4.70	Lemoine Joanne Marie,	\$0.00	\$0.00	\$538.00	\$538.00
07216301	CON 15 W PT LOT 4 RP 51R2445	1.60	0.65	Reis Armando,	\$0.00	\$0.00	\$108.00	\$108.00
07216302	CON 15 PT LOT 4 RP 51R13298	1.19	0.48	Pedneault Marc	\$0.00	\$0.00	\$100.00	\$100.00
07216200	CON 15 W PT LOT 4 RP 51R2445	0.57	0.23	Lotton Kenneth Roy, Lotton Shirley Gail,	\$0.00	\$0.00	\$75.00	\$75.00
07216000	CON 15 W PT LOT 5	3.21	1.30	Adf Investments Ltd,	\$0.00	\$0.00	\$149.00	\$149.00
07215900	CON 15 PT LOT 5	14.01	5.67	1833044 Ontario Limited,	\$0.00	\$0.00	\$648.00	\$648.00
07215901	CON 15 W PT LOT 6 RP	14.21	5.75	Carra Carlos A, Carra Mary,	\$0.00	\$0.00	\$658.00	\$658.00
07215902	CON 15 PT LOT 5 RP 51R3667	3.39	1.37	1606148 Ontario Limited,	\$0.00	\$0.00	\$157.00	\$157.00
07215903	CON 15 PT LOT 5 RP 51R3667	5.91	2.39	Tenax Limited,	\$0.00	\$0.00	\$273.00	\$273.00
07215910	CON 15 PT LOT 6 RP 51R24049	2.20	0.89	Carra Mary, Carra Carlos A,	\$0.00	\$0.00	\$122.00	\$122.00

Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment	
07215602	CON 15 PT LOT 6 RP RP	0.99	0.40	Fellman Brent Lorne, Fellman Nicole Lydon,	\$0.00	\$0.00	\$91.00	\$91.00
07215700	CON 15 PT LOT 6	0.47	0.19	Bucko John,	\$0.00	\$0.00	\$65.00	\$65.00
07215800	CON 15 E PT LOT 6 RP 51R9368	14.48	5.86	442023 Ontario Limited,	\$0.00	\$0.00	\$670.00	\$670.00
07414900	CON 14 PT LOT 7 CON 15 PT	8.20	3.32	Taurus Cookstown Partners Ltd,	\$0.00	\$0.00	\$400.00	\$400.00
07415000	CON 15 PT LOT 8	19.48	7.88	De Sao Jose Isidro, De Sao Jose Marie,	\$0.00	\$0.00	\$949.00	\$949.00
07415100	CON 15 PT LOT 8 RP 51R1259	2.76	1.12	Carmel (Canada), Sisters Of Our Lady Of Mount,	\$0.00	\$0.00	\$143.00	\$143.00
07415101	CON 15 PT LOT 8	1.76	0.71	Town Of Innisfil,	\$0.00	\$0.00	\$118.00	\$118.00
07415200	CON 15 PT LOT 8 RP 51R1259	5.25	2.12	Carmel (Canada), Sisters Of Our Lady Of Mount,	\$0.00	\$0.00	\$255.00	\$255.00
07415201	CON 15 PT LOT 8 RP 51R1259	5.25	2.12	Giomo Fabio,	\$0.00	\$0.00	\$255.00	\$255.00
07415300	CON 15 E PT LOT 9	11.50	4.65	Groombridge Helen E,	\$0.00	\$0.00	\$560.00	\$560.00
07415400	CON 15 W PT LOT 9	25.20	10.20	Brash Alan, Mitchell James David, Brash Donna,	\$0.00	\$0.00	\$1,229.00	\$1,229.00
07415700	CON 15 PT LOT 10	2.99	1.21	Kingsly Thomas,	\$0.00	\$0.00	\$146.00	\$146.00
07415800	CON 15 PT LOT 10 RP 51R14343	4.00	1.62	Le Coche Franco, Le Coche Teresa,	\$0.00	\$0.00	\$195.00	\$195.00
07415900	CON 15 PT LOT 10 RP 51R14343	4.70	1.90	Esposito Raffaele & Le Coche Francesca Lucia, Le Coche Flora	\$0.00	\$0.00	\$229.00	\$229.00
07416000	WEST GWILLIMBURY CON 15 PT	4.67	1.89	Esposito Raffaele,	\$0.00	\$0.00	\$228.00	\$228.00
07416100	CON 15 PT LOT 11 RP 51R19888	21.61	8.75	Alam Quazi N, Alam Akhtari B,	\$0.00	\$0.00	\$783.00	\$783.00
07416101	CON 15 PT LOT 11 RP 51R1889	0.58	0.24	Fenech Mary Grace,	\$0.00	\$0.00	\$81.00	\$81.00
07416102	CON 15 PT LOT 11 RP 51R19888	0.66	0.27	Bell Gale Ann,	\$0.00	\$0.00	\$86.00	\$86.00
07416110	CON 15 PT LOT 11 RP 51R19888	0.61	0.25	Kuzmyk Sharon, Kuzmyk Robert	\$0.00	\$0.00	\$83.00	\$83.00
07416200	CON 15 PT LOT 11 RP 51R22346	4.56	1.85	Lombardi Diana, Fava Vince,	\$0.00	\$0.00	\$223.00	\$223.00
07416210	CON 15 PT LOT 11 RP 51R22346	0.64	0.26	Hajdukiewicz Phyllis,	\$0.00	\$0.00	\$85.00	\$85.00
07416300	CON 15 PT LOT 11	5.00	2.02	Nemeth Bill,	\$0.00	\$0.00	\$243.00	\$243.00
07416400	CON 15 PT LOTS 11 & 12	3.61	1.46	Haythome Owen A,	\$0.00	\$0.00	\$176.00	\$176.00
07416401	CON 15 PT LOTS 11 & 12 RP	2.09	0.85	Bondi Barry,	\$0.00	\$0.00	\$125.00	\$125.00
07416500	CON 15 PT LOT 12 RP 51R13335	9.78	3.96	Rautiainen Jorma, Rautiainen Trudy,	\$0.00	\$0.00	\$477.00	\$477.00
07416501	CON 15 PT LOT 12 RP	5.25	2.12	Pereira Fernando, Pereira Helena,	\$0.00	\$0.00	\$255.00	\$255.00
07416520	CON 15 PT LOT 12 RP 51R19937	0.85	0.34	Palazzo Joann, Palazzo Nicola,	\$0.00	\$0.00	\$94.00	\$94.00
07416710	CON 15 PT LOT 13 RP 51R29485	0.68	0.28	Pais Carlos M,	\$0.00	\$0.00	\$88.00	\$88.00
07416720	CON 15 PT LOT 13 RP 51R29485	0.68	0.28	Pagnan-Venroy Donna, Venroy Anthony,	\$0.00	\$0.00	\$88.00	\$88.00
07416701	CON 15 W PT LOT 13 RP	0.96	0.39	Miller Kerri Lee, Miller Aaron William,	\$0.00	\$0.00	\$96.00	\$96.00
07416702	CON 15 PT LOT 13 RP 51R17736	1.94	0.79	Downs Susan,	\$0.00	\$0.00	\$121.00	\$121.00
07416900	CON 15 PT LOTS 13 & 14	0.45	0.18	Ontario Hydro, Assessment And Taxation,	\$0.00	\$0.00	\$65.00	\$65.00
07416801	CON 15 PT LOT 14	0.54	0.22	Harris William, Harris Nadia,	\$0.00	\$0.00	\$77.00	\$77.00
07417001	CON 15 PT LOT 15 51R-2200	0.46	0.19	Goodwin David Earl, Costain	\$0.00	\$0.00	\$69.00	\$69.00
07417040	CON 15 PT LOTS 14 & 15 RP	0.69	0.28	Zielke Lynda Margaret,	\$0.00	\$0.00	\$88.00	\$88.00
07417100	CON 15 PT LOT 15	0.46	0.19	Mccullough Joanne D,	\$0.00	\$0.00	\$69.00	\$69.00
07417300	CON 15 PT LOT 15	0.27	0.11	Innisfil Hydro Distribution Systems Limited, Innisfil Ds - 2255 Highway	\$0.00	\$0.00	\$40.00	\$40.00
07417400	5460 YONGE STREET CON 15 PT	1.28	0.52	Kim Sang-Soon,	\$0.00	\$0.00	\$108.00	\$108.00
07417500	CON 15 PT LOT 15	0.89	0.36	Kim Myung-Hoan, Kim Sang-Soon,	\$0.00	\$0.00	\$95.00	\$95.00
07417600	CON 15 PT LOT 15	0.98	0.40	Ciotti Bernardo, Ciotti Elvira,	\$0.00	\$0.00	\$96.00	\$96.00
07417901	CON 15 PT LOT 15	0.46	0.19	Hughes Anne Matilda,	\$0.00	\$0.00	\$69.00	\$69.00
07414400	CON 14 N PT LOT 8	11.61	4.70	De Sao Jose Martin, De Sao Jose Isidro,	\$0.00	\$0.00	\$566.00	\$566.00
07414500	CON 14 N PT LOT 8	14.33	5.80	Cesta Alberico, Cesta Maria Adua,	\$0.00	\$0.00	\$699.00	\$699.00
07414600	CON 14 N PT LOT 8 RP	7.41	3.00	Taurus Cookstown Partners Ltd,	\$0.00	\$0.00	\$361.00	\$361.00
07414700	CON 14 N PT LOT 8 RP	9.88	4.00	Taurus Cookstown Partners Ltd,	\$0.00	\$0.00	\$482.00	\$482.00
07414100	CON 14 N PT LOT 9	25.00	10.12	Gatti Roberto, Gatti Giovanni, Gatti Giorgio,	\$0.00	\$0.00	\$1,219.00	\$1,219.00
07414200	CON 14 N PT LOT 9	21.99	8.90	Waz Janina Emilia, Waz Janusz,	\$0.00	\$0.00	\$1,072.00	\$1,072.00
07414300	CON 14 N PT LOT 9	16.31	6.60	Galati Lisa & Tony, Granato Anna R & Galati D,	\$0.00	\$0.00	\$795.00	\$795.00
07414000	CON 14 N PT LOT 9 ROW CON 15	25.00	10.12	Schiafone Maria, Schiafone Biagio,	\$0.00	\$0.00	\$1,219.00	\$1,219.00
07336200	CON 14 S PT LOT 9 RP	15.07	6.10	Marques Jorge,	\$0.00	\$0.00	\$735.00	\$735.00
07336300	CON 14 S PT LOT 9 RP	4.20	1.70	2031430 Ontario Ltd,	\$0.00	\$0.00	\$205.00	\$205.00
07413701	CON 14 PT LOT 10 RP 51R16346	1.00	0.40	Leithwood Debra, Wright Lisa, Fenz Paul Eric,	\$0.00	\$0.00	\$96.00	\$96.00
07413700	CON 14 N PT LOT 10	24.01	9.72	Skuljicak Marko, Skuljicak Mirjana, Skuljicak Mijo,	\$0.00	\$0.00	\$1,171.00	\$1,171.00
07413800	CON 14 N PT LOT 10	52.00	21.04	Corbo Vincenzo, Colonna Rocco, Corbo Filomena, Colonna Carmela,	\$0.00	\$0.00	\$2,535.00	\$2,535.00
07336101	CON 14 S PT LOT 10 RP	1.09	0.44	Cole Andrew James, Cole Petra Deanne,	\$0.00	\$0.00	\$102.00	\$102.00
07335901	CON 14 PT LOT 11 RP 51R15161	1.82	0.74	Garvey Timothy John, Garvey Patricia Lynn,	\$0.00	\$0.00	\$119.00	\$119.00
07335700	CON 14 W PT LOT 11	6.12	2.48	Forget Nicole, Forget Dean,	\$0.00	\$0.00	\$299.00	\$299.00
07335601	CON 14 W PT LOT 11 RP	9.56	3.87	Kennedy Gertrude E A,	\$0.00	\$0.00	\$466.00	\$466.00
07413300	CON 14 E PT LOT 11	50.00	20.23	Ostojic Anastazija Nada, Ostojic Dragan,	\$0.00	\$0.00	\$2,438.00	\$2,438.00

Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment	
07413301	CON 14 N PT LOT 11	20.92	4.47	Lind Nelly A, Lind Tonis,	\$0.00	\$0.00	\$1,021.00	\$1,021.00
07413400	CON 14 W PT LOT 11	10.49	4.25	Heinemann Steven Atilla, Kim Chung-Im,	\$0.00	\$0.00	\$512.00	\$512.00
07413500	CON 14 W PT LOT 11	10.55	4.27	Evans Cynthia Anne, Evans John David,	\$0.00	\$0.00	\$515.00	\$515.00
07413600	CON 14 W PT LOT 11	10.57	4.28	Petryna Peter J,	\$0.00	\$0.00	\$516.00	\$516.00
07336000	CON 14 W PT LOT 11	10.49	4.25	Tesic Vlado & Helen, Tesic Zarko & Mary,	\$0.00	\$0.00	\$512.00	\$512.00
07335900	CON 14 W PT LOT 11 LESS	8.59	3.48	Collins Fiona Joy,	\$0.00	\$0.00	\$419.00	\$419.00
07335800	CON 14 W PT LOT 11	10.48	4.24	Markowitz Bette Marlene, Markowitz Myron Joseph,	\$0.00	\$0.00	\$511.00	\$511.00
07335500	CON 14 S PT LOT 11	44.11	17.85	Ibrajev Vladimir, Ibrajev Renate,	\$0.00	\$0.00	\$1,413.00	\$1,413.00
07335600	CON 14 W PT LOT 11	4.67	1.89	Batsch Sherr-Lynn, Batsch Ronald,	\$0.00	\$0.00	\$228.00	\$228.00
07413200	CON 14 N PT LOT 12 RP	1.53	0.62	Wrzala Elzbieta, Wrzala Artur,	\$0.00	\$0.00	\$111.00	\$111.00
07413101	CON 14 N PT LOT 13	0.57	0.23	Kneeshaw Connie Leanne,	\$0.00	\$0.00	\$79.00	\$79.00
07412901	CON 14 N PT LOT 15 RP	0.51	0.20	Parsons Mary Lynn, Parsons Levi Ward,	\$0.00	\$0.00	\$72.00	\$72.00
07412902	CON 14 PT N 1/2 LOT 15 RP	0.53	0.21	Zielke Frederick David Jr, Zielke Kimberly Anne,	\$0.00	\$0.00	\$75.00	\$75.00
07412700	CON 14 N PT LOT 16 RP	3.38	1.37	Kell Roger, Kell John Albert, Kell Stovold Louise, Stovold Christopher,	\$0.00	\$0.00	\$165.00	\$165.00
07412710	CON 14 N PT LOT 16 RP	2.44	0.99		\$0.00	\$0.00	\$136.00	\$136.00
07412400	CON 14 N PT LOT 16	0.35	0.14	Gariffe Nancy, Paige Kenneth James,	\$0.00	\$0.00	\$51.00	\$51.00
07412500	CON 14 N PT LOT 16 51R6341	0.30	0.12	Webster Linda Ann, Becic John Nick,	\$0.00	\$0.00	\$43.00	\$43.00
07412600	CON 14 N PT LOT 16	0.47	0.19	Kneeshaw Bonnie G,	\$0.00	\$0.00	\$69.00	\$69.00
07412601	CON 14 N PT LOT 16 51R-6341	0.46	0.19	Kneeshaw Bonnie G, Kneeshaw James F,	\$0.00	\$0.00	\$69.00	\$69.00
07333401	CON 13 N PT LOT 12	2.47	1.00	Sturgeon Doris, Sturgeon William Robert,	\$0.00	\$0.00	\$136.00	\$136.00
07333501	CON 13 N 1/2 LOT13 51R 13385	2.44	0.99	Mattingley Douglas G, Mattingley Ruth Anne,	\$0.00	\$0.00	\$136.00	\$136.00
	CON 4 LOT 15	59.02	23.88	Village of Churchill Block Assessment No.1 lands	\$0.00	\$0.00	\$11,851.00	\$11,851.00
	CON 4 LOT 15	16.21	6.56	Village of Churchill Block Assessment No.2 lands north of 4th Line	\$0.00	\$0.00	\$3,256.00	\$3,256.00
	CON 3 LOT 15	62.97	25.48	Village of Churchill Block Assessment No.2 lands south of 4th Line	\$0.00	\$0.00	\$12,645.00	\$12,645.00
	CON 4 LOT 16	14.96	6.05	Village of Churchill Block Assessment No.3 lands	\$0.00	\$0.00	\$3,002.00	\$3,002.00
Total on Privately-Owned - Non-Agricultural Lands.....				\$0.00	\$0.00	\$266,034.00	\$266,034.00	

**PRIVATELY-OWNED - AGRICULTURAL LANDS**

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Assessment
01801400	CON 6 S PT LOT 4	51.26	20.74	Robson Julia E,	\$0.00	\$0.00	\$4,236.00	\$4,236.00
01802010	CON 6 N PT LOT 6 RP 51R9053	0.46	0.19	Henry John Frederick, Henry Angus	\$0.00	\$0.00	\$39.00	\$39.00
01801800	CON 6 S PT LOT 6 PL51R-18366	0.57	0.23	Hilverda John, Hilverda Pamela,	\$0.00	\$0.00	\$47.00	\$47.00
01801900	CON 6 S PT LOT 6	89.37	36.17	Hilverda Pamela, Hilverda John,	\$0.00	\$0.00	\$7,387.00	\$7,387.00
01802000	CON 6 N PT LOT 6	32.62	13.20	1665328 Ontario Ltd,	\$0.00	\$0.00	\$2,696.00	\$2,696.00
01801300	CON 6 S PT LOT 4	39.17	15.85	Ruch Ruth Ann, Ruch Terry Ward,	\$0.00	\$0.00	\$3,237.00	\$3,237.00
01800900	CON 6 S PT LOT 3	7.49	3.03	1045990 Ontario Inc,	\$0.00	\$0.00	\$619.00	\$619.00
00325722	PLAN M448 LOT 58	0.49	0.20	Dykie Stephen William, Reta Erica	\$0.00	\$0.00	\$41.00	\$41.00
00325710	PLAN M448 LOT 52	0.42	0.17	Stopyra Agata, Stopyra Dariusz,	\$0.00	\$0.00	\$35.00	\$35.00
00325706	PLAN M448 LOT 50	0.37	0.15	Gogos George,	\$0.00	\$0.00	\$31.00	\$31.00
00325708	PLAN M448 LOT 51	0.44	0.18	Reindi Johanna,	\$0.00	\$0.00	\$37.00	\$37.00
00325704	PLAN M448 LOT 49	0.00	0.00	Savard Huguette,	\$0.00	\$0.00	\$0.00	\$0.00
00325718	PLAN M448 LOT 56	0.51	0.21	Weeks Ronald Stanley,	\$0.00	\$0.00	\$43.00	\$43.00
00325720	PLAN M448 LOT 57	0.50	0.20	Baynham Rosemary Elizabeth,	\$0.00	\$0.00	\$123.00	\$123.00
00325716	PLAN M448 LOT 55	0.52	0.21	Mcinnis Steven Larry, Doyle Marion	\$0.00	\$0.00	\$43.00	\$43.00
02000100	CON 6 LOT 7	105.04	42.51	751518 Ontario Limited,	\$0.00	\$0.00	\$8,682.00	\$8,682.00
02000200	CON 6 S PT LOT 8	19.50	7.89	Sutton Raymond B, Sutton Lois Ann,	\$0.00	\$0.00	\$1,611.00	\$1,611.00
02000300	CON 6 S PT LOT 9	27.40	11.09	Sinagoga Anthony, Sinagoga Maria,	\$0.00	\$0.00	\$2,265.00	\$2,265.00
02000400	CON 6 S PT LOT 10	42.70	17.28	Gemstone Property Ltd,	\$0.00	\$0.00	\$3,529.00	\$3,529.00
02104300	CON 6 S PT LOT 11	10.92	4.42	Hall Catherine Rita,	\$0.00	\$0.00	\$903.00	\$903.00
02105000	CON 6 S PT LOT 14	100.00	40.47	Pratt Winston Ivan,	\$0.00	\$0.00	\$8,265.00	\$8,265.00
02105200	CON 6 S PT LOT 15	45.83	18.55	Cole Elayne, Cole James Guy,	\$0.00	\$0.00	\$3,788.00	\$3,788.00
00115500	CON 5 N PT LOT 5 N PT LOT 4	79.77	32.28	1715573 Ontario Limited,	\$0.00	\$0.00	\$6,592.00	\$6,592.00
00114600	CON 5 PT LOTS 3 AND 4 RP	5.96	2.41	1715573 Ontario Limited,	\$0.00	\$0.00	\$492.00	\$492.00
00114800	CON 5 S PT LOT 5 RP 51R35273	47.44	19.20	1715573 Ontario Limited,	\$0.00	\$0.00	\$3,921.00	\$3,921.00
00114900	CON 5 S PT LOT 6	50.00	20.23	Pearson Evelyn Irene,	\$0.00	\$0.00	\$4,132.00	\$4,132.00
00115000	CON 5 S PT LOT 6 N PT LOT 6	124.00	50.18	1715573 Ontario Limited,	\$0.00	\$0.00	\$10,248.00	\$10,248.00
00127900	CON 5 N PT LOT 7	99.00	40.06	1720121 Ontario Limited,	\$0.00	\$0.00	\$8,181.00	\$8,181.00

Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment	
00126700	CON 5 S PT LOT 7	98.00	39.66	Vandermast Cornelius, Vandermast Maria,	\$0.00	\$0.00	\$8,100.00	\$8,100.00
00127700	CON 5 N PT LOT 8 S PT LOT 8	180.00	72.84	Vandermast Maria Hendrikaa,	\$0.00	\$0.00	\$14,876.00	\$14,876.00
00127000	CON 5 S PT LOT 9	70.00	28.33	Trombley Virginia Ga,	\$0.00	\$0.00	\$5,786.00	\$5,786.00
00127100	CON 5 S PT LOT 10 RP 51R1802	25.12	10.17	Taylor Gary Michael, Wagner Isabelle	\$0.00	\$0.00	\$2,077.00	\$2,077.00
00127200	CON 5 S PT LOT 10 RP 51R1802	25.12	10.17	Troiano Giuseppe, Troiano Filomena,	\$0.00	\$0.00	\$2,077.00	\$2,077.00
00127300	CON 5 S PT LOT 10 RP 51R5438	50.41	20.40	Henniger Paul David,	\$0.00	\$0.00	\$4,166.00	\$4,166.00
00127400	CON 5 N PT LOT 10	100.00	40.47	Sawyer Garry Stanley, Sawyer Sharon Jean,	\$0.00	\$0.00	\$8,265.00	\$8,265.00
00232000	CON 5 N PT LOT 12 S PT LOT	149.28	60.41	Farr James H, Farr Thomas L,	\$0.00	\$0.00	\$12,337.00	\$12,337.00
00232200	CON 5 N PT LOT 11	99.45	40.25	Leonienco Mathilda Ann, Leonienco	\$0.00	\$0.00	\$8,220.00	\$8,220.00
00226900	CON 5 S PT LOT 11	14.31	5.79	Van Kuik Theodore,	\$0.00	\$0.00	\$1,182.00	\$1,182.00
00231900	CON 5 N PT LOTS 13 AND 14 RP	170.00	68.80	1665328 Ontario Ltd,	\$0.00	\$0.00	\$11,943.00	\$11,943.00
00228000	CON 5 PT LOT 14 RP 51R34693	130.00	52.61	1665328 Ontario Ltd,	\$0.00	\$0.00	\$10,744.00	\$10,744.00
00229000	CON 5 PT LOT 15 RP 51R6609	185.84	75.21	Kell Farms Limited,	\$0.00	\$0.00	\$15,360.00	\$15,360.00
00231300	CON 5 N PT LOT 16	98.16	39.72	1589114 Ontario Ltd,	\$0.00	\$0.00	\$8,112.00	\$8,112.00
00229100	CON 5 S PT LOT 16	97.95	39.64	882022 Ontario Limited,	\$0.00	\$0.00	\$8,096.00	\$8,096.00
00229200	CON 5 S PT LOT 17	14.26	5.77	Tse Keith, Hunt Karen,	\$0.00	\$0.00	\$1,178.00	\$1,178.00
00113000	CON 4 N PT LOT 2 RP 51R7189	27.35	11.07	4090 4Th Line Inc,	\$0.00	\$0.00	\$1,368.00	\$1,368.00
00111100	CON 4 S PT LOT 2 RP 51R5549	21.72	8.79	Spataro Lina, Pontieri Joanne, Spataro Manuel, Spataro Joseph,	\$0.00	\$0.00	\$1,086.00	\$1,086.00
00111200	CON 4 S PT LOT 2 RP 51R11548	73.24	29.64	4090 4Th Line Inc,	\$0.00	\$0.00	\$3,662.00	\$3,662.00
00111700	CON 4 PT LOT 3 RP 51R7189	156.74	63.43	4090 4Th Line Inc,	\$0.00	\$0.00	\$7,837.00	\$7,837.00
00112600	CON 4 N PT LOT 4	98.99	40.06	Baker Brian, Baker Margaret Rose,	\$0.00	\$0.00	\$4,950.00	\$4,950.00
00111900	CON 4 S PT LOT 4	100.00	40.47	Marling Barbara Elizabeth, Marling David John Albert,	\$0.00	\$0.00	\$5,000.00	\$5,000.00
00112500	CON 4 N PT LOT 5	98.39	39.82	Jones Sidney Orville, Jones Sandra Louise,	\$0.00	\$0.00	\$5,367.00	\$5,367.00
00112400	CON 4 N PT LOT 6	90.00	36.42	Pearson Evelyn Irene,	\$0.00	\$0.00	\$4,909.00	\$4,909.00
00112100	CON 4 S PT LOT 6	92.45	37.41	1665328 Ontario Ltd,	\$0.00	\$0.00	\$5,043.00	\$5,043.00
00126400	CON 4 N PT LOT 7	92.63	37.49	1665328 Ontario Ltd,	\$0.00	\$0.00	\$6,125.00	\$6,125.00
00125400	CON 4 S PT LOT 7 51R-5140	29.99	12.14	Gdm Terraco Inc,	\$0.00	\$0.00	\$1,983.00	\$1,983.00
00125500	CON 4 S PT LOT 7 RP 51R18261	34.97	14.15	Franline Investments Limited,	\$0.00	\$0.00	\$2,312.00	\$2,312.00
00125600	CON 4 S PT LOT 7 RP 51R2122	25.00	10.12	Del Bel Beiluz N & C, Grillo Frank & Nina,	\$0.00	\$0.00	\$1,653.00	\$1,653.00
00126300	CON 4 N PT LOT 8	100.00	40.47	Eschli Jamie, Eschli Michael,	\$0.00	\$0.00	\$6,612.00	\$6,612.00
00125800	CON 4 PT LOTS 8 AND 9 RP	149.26	60.40	Posius Vytautas, Posius Doris May,	\$0.00	\$0.00	\$9,868.00	\$9,868.00
00125900	CON 4 S PT LOT 9 RP 51R21455	48.77	19.74	S I L Developments Inc, Zaretsky Ruth, Soudack Sigmund,	\$0.00	\$0.00	\$3,225.00	\$3,225.00
00220700	CON 4 S PT LOT 11	50.00	20.23	Kell Farms Limited,	\$0.00	\$0.00	\$3,780.00	\$3,780.00
00220902	CON 4 PT S 1/2 LOT 11 INSTR	5.38	2.18	Tuzi Angelo,	\$0.00	\$0.00	\$407.00	\$407.00
00220904	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Gargaro Antonio,	\$0.00	\$0.00	\$407.00	\$407.00
00220906	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Tuzi Geraldo,	\$0.00	\$0.00	\$407.00	\$407.00
00220908	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Alves Manuela, Alves Manuel Pinto,	\$0.00	\$0.00	\$407.00	\$407.00
00220910	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Rodrigues Jose Luis, Rodrigues Grace,	\$0.00	\$0.00	\$407.00	\$407.00
00220912	CON 4 PT S 1/2 LOT 11 INSTR	5.40	2.19	Tuzi Geraldo,	\$0.00	\$0.00	\$409.00	\$409.00
00220914	CON 4 PT S 1/2 LOT 11 INSTR	5.40	2.19	Rodrigues Grace, Rodrigues Jose Luis,	\$0.00	\$0.00	\$409.00	\$409.00
00220916	CON 4 PT S 1/2 LOT 11 INSTR	5.39	2.18	Fernandes Jose, Fernandes Elvira,	\$0.00	\$0.00	\$407.00	\$407.00
00226300	CON 4 N PT LOT 12	100.00	40.47	1665328 Ontario Ltd,	\$0.00	\$0.00	\$7,790.00	\$7,790.00
00220918	CON 4 PT S 1/2 LOT 12 INSTR	10.08	4.08	Valente Lucy Mkary M, Valente Michael Paul,	\$0.00	\$0.00	\$762.00	\$762.00
00220920	CON 4 PT S 1/2 LOT 12 INSTR	10.09	4.08	Tersigni Maria,	\$0.00	\$0.00	\$762.00	\$762.00
00220922	CON 4 PT S 1/2 LOT 12 INSTR	10.09	4.08	Tuzi Angelo,	\$0.00	\$0.00	\$762.00	\$762.00
00220924	CON 4 PT S 1/2 LOT 12 INSTR	10.09	4.08	De Santis Lisa,	\$0.00	\$0.00	\$762.00	\$762.00
00220926	CON 4 PT S 1/2 LOT 12 INSTR	10.09	4.08	Tuzi Geraldo,	\$0.00	\$0.00	\$762.00	\$762.00
00220928	CON 4 PT S 1/2 LOT 12 INSTR	10.10	4.09	Tersigni Maria,	\$0.00	\$0.00	\$764.00	\$764.00
00220930	CON 4 S PT LOT 12	26.30	10.64	Kerkhof Aubrey,	\$0.00	\$0.00	\$1,988.00	\$1,988.00
00220932	CON 4 PT S 1/2 LOT 12 INSTR	10.23	4.14	Tuzi Angelo, Tuzi Geraldo,	\$0.00	\$0.00	\$774.00	\$774.00
00226100	CON 4 N PT LOT 13 UFFI	100.00	40.47	1665328 Ontario Ltd,	\$0.00	\$0.00	\$7,563.00	\$7,563.00
00221000	CON 4 S PT LOT 13	100.00	40.47	Suite 212, Amaron Investments L,	\$0.00	\$0.00	\$7,563.00	\$7,563.00
00226000	CON 4 N PT LOT 14 PL	103.67	41.95	Favret Chiara Maria, Favret	\$0.00	\$0.00	\$7,839.00	\$7,839.00
00221100	CON 4 S PT LOT 14	94.30	38.16	Amaron Investments L, Suite 212,	\$0.00	\$0.00	\$7,131.00	\$7,131.00
00225700	CON 4 PT LOT 15 RP 51R28045	87.33	35.34	1636574 Ontario Inc,	\$0.00	\$0.00	\$6,604.00	\$6,604.00
00224400	CON 4 N PT LOT 16 RP	60.12	24.33	Barnstable Park Realty Corp,	\$0.00	\$0.00	\$4,547.00	\$4,547.00
00311400	CON 4 S PT LOT 16 PLUS PLAN	41.00	16.59	Sinclair Keith D, Sinclair Ruth E,	\$0.00	\$0.00	\$2,744.00	\$2,744.00
00221600	CON 4 S PT LOT 17	9.88	4.00	Kell Susan Frances, Kell John Albert,	\$0.00	\$0.00	\$662.00	\$662.00
00110100	CON 3 N PT LOT 2	99.90	40.43	848670 Ontario Limited,	\$0.00	\$0.00	\$4,995.00	\$4,995.00
00107600	CON 3 S PT LOT 2 RP 51R7496	13.05	5.28	Wardlaw Paul Wilbert,	\$0.00	\$0.00	\$652.00	\$652.00
00110000	CON 3 N PT LOT 3	100.00	40.47	Klymiuk Maria, Klymiuk William,	\$0.00	\$0.00	\$5,124.00	\$5,124.00
00107700	CON 3 S PT LOT 3	76.36	30.90	Lukovits Joseph, Radocsai Anna,	\$0.00	\$0.00	\$3,818.00	\$3,818.00
00109900	CON 3 N PT LOT 4 S PT LOT 4	148.67	60.16	Wardlaw Paul Wilbert,	\$0.00	\$0.00	\$7,433.00	\$7,433.00
00107900	CON 3 S PT LOT 4 RP 51R4606	26.33	10.66	Evans Charlot Andrea,	\$0.00	\$0.00	\$1,317.00	\$1,317.00
00108000	CON 3 S PT LOT 4 RP 51R4606	26.40	10.68	Chapter Homes Inc,	\$0.00	\$0.00	\$1,320.00	\$1,320.00
00109800	INNISFIL CON 3 N PT LOT 5	102.05	41.30	1665328 Ontario Ltd,	\$0.00	\$0.00	\$5,440.00	\$5,440.00



Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment	
00108100	CON 3 S PT LOT 5	96.50	39.05	Henry Angus Franklin, Henry David John,	\$0.00	\$0.00	\$4,945.00	\$4,945.00
00108400	CON 3 S PT LOT 6 LESS	90.23	36.51	Rainey Eleanor A, Rainey Eric H & Janine M,	\$0.00	\$0.00	\$4,716.00	\$4,716.00
00108500	CON 3 N PT LOT 6	31.29	12.66	Ferrazzo Salvatore/Pasquale, Ferrazzo Michele/Maria,	\$0.00	\$0.00	\$1,706.00	\$1,706.00
00109200	CON 3 PT LOT 6 15.24 AC,	15.24	6.17	Frasca Maria,	\$0.00	\$0.00	\$832.00	\$832.00
00125100	CON 3 N PT LOT 7	38.78	15.69	Mauti Maria Luisa, Mauti Umberto,	\$0.00	\$0.00	\$2,115.00	\$2,115.00
00125000	CON 3 N PT LOT 7	50.65	20.50	Albanese John D, Albanese Maria,	\$0.00	\$0.00	\$2,910.00	\$2,910.00
00122900	CON 3 S PT LOT 7	82.86	33.53	1665328 Ontario Ltd,	\$0.00	\$0.00	\$5,102.00	\$5,102.00
00124900	CON 3 W PT LOT 8 RP 51R19347	96.35	38.99	1665328 Ontario Ltd,	\$0.00	\$0.00	\$6,370.00	\$6,370.00
00124600	CON 3 E PT LOT 8 RP 51R4914	24.89	10.07	Woods Cheryl Lee, Woods Philip Daniel,	\$0.00	\$0.00	\$1,645.00	\$1,645.00
00124800	CON 3 E PT LOT 8 RP 51R4962	79.27	32.08	1665328 Ontario Ltd,	\$0.00	\$0.00	\$5,241.00	\$5,241.00
00124400	CON 3 N PT LOT 9	24.70	10.00	Wilson James A, Wilson Patricia L,	\$0.00	\$0.00	\$1,634.00	\$1,634.00
00123500	CON 3 PT LOT 9 RP 51R12114	56.15	22.72	Desroche Kenneth Michael, Desroche Laura Lee,	\$0.00	\$0.00	\$3,712.00	\$3,712.00
00123600	CON 3 PT LOT 9	50.00	20.23	Collins Gloria J, Collins Kevin M,	\$0.00	\$0.00	\$3,305.00	\$3,305.00
00124200	CON 3 S PT LOT 10	133.59	54.06	Chow Joseph,	\$0.00	\$0.00	\$8,832.00	\$8,832.00
00220600	CON 3 N PT LOT 11	100.00	40.47	Szabo Arpad, Spataro Tony,	\$0.00	\$0.00	\$7,790.00	\$7,790.00
00213700	CON 3 S PT LOT 11 RP 51R3731	10.05	4.07	Efstathiadis Peter & Diana, Martinovski Lubica & Danny,	\$0.00	\$0.00	\$673.00	\$673.00
00214000	CON 3 S PT LOT 11 RP 51R3731	26.60	10.76	1281597 Ontario Inc,	\$0.00	\$0.00	\$1,780.00	\$1,780.00
00220400	CON 3 N PT LOT 12	50.00	20.23	Pylypiak Stefan, Pylypiak Olga,	\$0.00	\$0.00	\$3,512.00	\$3,512.00
00214100	CON 3 PT LOT 12 RP 51R8969	93.30	37.76	Horodynsky John Boris, Horodynsky Erika,	\$0.00	\$0.00	\$6,246.00	\$6,246.00
00220300	CON 3 N PT LOT 13 RP	100.80	40.79	Crestrail Investments Inc,	\$0.00	\$0.00	\$6,831.00	\$6,831.00
00214400	CON 3 S PT LOT 13	100.00	40.47	Yamamoto Haruko & Kerry S, Yamamoto Shigeo,	\$0.00	\$0.00	\$6,695.00	\$6,695.00
00214500	CON 3 S PT LOT 14	100.00	40.47	Kell Emily Anne, Kell Larry E,	\$0.00	\$0.00	\$6,695.00	\$6,695.00
00214600	CON 3 S PT LOT 15	50.00	20.23	Campbell Marjorie A,	\$0.00	\$0.00	\$3,347.00	\$3,347.00
00214700	CON 3 S PT LOT 15	50.00	20.23	Tsui Leung-Cho,	\$0.00	\$0.00	\$3,347.00	\$3,347.00
00220200	CON 3 N PT LOT 14 & 15	129.59	52.44	Top Hill View Estates Inc,	\$0.00	\$0.00	\$8,675.00	\$8,675.00
00300500	CON 3 N PT LOT 16	97.30	39.38	Sinclair Ruth E, Sinclair Keith D,	\$0.00	\$0.00	\$6,514.00	\$6,514.00
00215000	CON 3 S PT LOT 16	97.06	39.28	Campbell Colin R, Todd Sarah Marjorie,	\$0.00	\$0.00	\$6,498.00	\$6,498.00
00220000	CON 3 N PT LOT 17	24.71	10.00	Kell Farms Limited,	\$0.00	\$0.00	\$1,654.00	\$1,654.00
00215300	CON 3 S PT LOT 17 RP 51R3338	21.65	8.76	Kell John Albert,	\$0.00	\$0.00	\$1,449.00	\$1,449.00
00215400	CON 3 S PT LOT 17	24.07	9.74	Kell Donna Jean Chantler,	\$0.00	\$0.00	\$1,611.00	\$1,611.00
00106900	CON 2 N PT LOT 3	34.25	13.86	Farisland Limited,	\$0.00	\$0.00	\$1,713.00	\$1,713.00
00104200	CON 2 S PT LOT 3	32.37	13.10	2088464 Ontario Limited, White Horse Investments Corp, Fresco	\$0.00	\$0.00	\$1,619.00	\$1,619.00
00106800	CON 2 N PT LOT 4	102.47	41.47	Meneguzzi Peter, Meneguzzi Diana,	\$0.00	\$0.00	\$5,124.00	\$5,124.00
00104500	CON 2 S PT LOT 4 RP 51R2576	40.00	16.19	674569 Ontario Limited,	\$0.00	\$0.00	\$2,000.00	\$2,000.00
00106400	CON 2 N PT LOT 5	10.03	4.06	Reilly Grant Norman, Reilly Sarah Beth,	\$0.00	\$0.00	\$502.00	\$502.00
00106600	CON 2 N PT LOT 5 UFFI	12.92	5.23	Wilson Donald Edgar, Wilson Catherine Ann,	\$0.00	\$0.00	\$646.00	\$646.00
00104700	CON 2 S PT LOT 5	98.00	39.66	Yoo Young Nam, Yoo Hung Sun,	\$0.00	\$0.00	\$4,900.00	\$4,900.00
00105200	CON 2 PT LOT 6 RP 51R26611	51.38	20.79	P S K Holdings Inc,	\$0.00	\$0.00	\$2,569.00	\$2,569.00
00105220	CON 2 PT LOT 6 RP 51R26611	48.76	19.73	Limited, The Simpson/Elson Group,	\$0.00	\$0.00	\$2,438.00	\$2,438.00
00119500	CON 2 S PT LOT 7	83.50	33.79	Armstrong James Garry,	\$0.00	\$0.00	\$4,175.00	\$4,175.00
00122100	CON 2 N PT LOT 8	50.00	20.23	Seven Willows Holdings Inc,	\$0.00	\$0.00	\$2,727.00	\$2,727.00
00119600	CON 2 S PT LOT 8 RP 51R3193	25.56	10.34	Mcarthur Sandra Kim,	\$0.00	\$0.00	\$1,341.00	\$1,341.00
00121400	CON 2 N PT LOT 9	25.21	10.20	1409563 Ontario Limited,	\$0.00	\$0.00	\$1,521.00	\$1,521.00
00121500	CON 2 N PT LOT 9	25.21	10.20	Horodynsky Farms Inc,	\$0.00	\$0.00	\$1,521.00	\$1,521.00
00121600	CON 2 N PT LOT 9	25.20	10.20	Cestarc Sanda,	\$0.00	\$0.00	\$1,521.00	\$1,521.00
00121700	CON 2 N PT LOT 9	25.20	10.20	Canton Ines, Trevisan E & L,	\$0.00	\$0.00	\$1,521.00	\$1,521.00
00120400	CON 2 S PT LOT 9	25.28	10.23	Tasca Norma, Tasca Louis Joseph,	\$0.00	\$0.00	\$1,358.00	\$1,358.00
00121100	CON 2 W PT LOT 10 RP	28.00	11.33	Horodynsky Farms Inc,	\$0.00	\$0.00	\$1,689.00	\$1,689.00
00121200	CON 2 N PT LOT 10	22.19	8.98	Sciara Giuseppe & Rosa, Digiantommaso Linda,	\$0.00	\$0.00	\$1,339.00	\$1,339.00
00120500	CON 2 S PT LOT 10	13.00	5.26	Tasca Louis Joseph, Tasca Norma,	\$0.00	\$0.00	\$698.00	\$698.00
00120600	INNISFIL CON 2 W 1/2 PT LOT 10	37.00	14.97	Marques Gardens Ltd, Marques Peter Antonio,	\$0.00	\$0.00	\$1,987.00	\$1,987.00
00120800	CON 2 SE PT LOT 10	50.00	20.23	Marques Gardens Ltd,	\$0.00	\$0.00	\$2,685.00	\$2,685.00
00121000	CON 2 PT LOT 10	25.22	10.21	1409563 Ontario Limited,	\$0.00	\$0.00	\$1,585.00	\$1,585.00
00212700	CON 2 N PT LOT 11	25.29	10.23	Yamamoto Kerry S, Yamamoto Shigeo,	\$0.00	\$0.00	\$1,692.00	\$1,692.00
00212800	CON 2 N PT LOT 11	25.20	10.20	Yamamoto Shigeo, Yamamoto Kerry Shigeru,	\$0.00	\$0.00	\$1,687.00	\$1,687.00
00212900	CON 2 N PT LOT 11	50.00	20.23	1281597 Ontario Inc,	\$0.00	\$0.00	\$3,347.00	\$3,347.00
00206400	CON 2 S PT LOT 11 PARTS 1 &	50.00	20.23	Horodynsky Farms Inc,	\$0.00	\$0.00	\$2,913.00	\$2,913.00
00206600	CON 2 PT LOTS 11 & 12 RP	100.00	40.47	1409563 Ontario Limited,	\$0.00	\$0.00	\$5,827.00	\$5,827.00
00212300	CON 2 N PT LOT 12	10.06	4.07	Horodynsky John Boris,	\$0.00	\$0.00	\$673.00	\$673.00
00212400	CON 2 N PT LOT 12	15.00	6.07	1281597 Ontario Inc,	\$0.00	\$0.00	\$1,004.00	\$1,004.00
00212500	CON 2 N PT LOT 12	25.20	10.20	Horodynsky Farms Inc,	\$0.00	\$0.00	\$1,687.00	\$1,687.00
00212600	CON 2 N PT LOT 12	25.21	10.20	Horodynsky Paul, Horodynsky Kellie	\$0.00	\$0.00	\$1,687.00	\$1,687.00

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00207400	CON 2 S PT LOT 13	50.00	20.23	Kell Keith E,	\$0.00	\$0.00	\$2,685.00	\$2,685.00
00207600	CON 2 LOT 14	200.00	80.94	Innis Properties Limited,	\$0.00	\$0.00	\$12,067.00	\$12,067.00
00211300	CON 2 N PT LOT 15	48.93	19.80	Campbell Ian Todd,	\$0.00	\$0.00	\$3,275.00	\$3,275.00
00207700	YONGE STREET CON 2 S PT LOT	60.91	24.65	Rosenberg Alex & Lily, Rosenberg Eisen Frances R,	\$0.00	\$0.00	\$4,078.00	\$4,078.00
00207800	CON 2 S PT LOT 15	38.88	15.73	Mccathie Rosemarie,	\$0.00	\$0.00	\$2,602.00	\$2,602.00
00210900	CON 2 N PT LOT 15 RP	48.18	19.50	Thompson Margaret Lo, Thompson Gordon Alla,	\$0.00	\$0.00	\$3,226.00	\$3,226.00
00210400	CON 2 N PT LOT 16	82.77	33.50	Campbell Martina P A, Campbell Ian Todd,	\$0.00	\$0.00	\$5,542.00	\$5,542.00
00208500	CON 2 S PT LOT 16	93.90	38.00	Simpson Richard,	\$0.00	\$0.00	\$6,286.00	\$6,286.00
00208700	CON 2 S PT LOT 17	24.71	10.00	Sturgeon Glenda Mary, Sturgeon Neil Burgess,	\$0.00	\$0.00	\$1,654.00	\$1,654.00
00210000	CON 2 PT LOT 17 N PT LOT 18	48.68	19.70	Kell Farms Limited,	\$0.00	\$0.00	\$3,259.00	\$3,259.00
00103300	CON 1 PT LOT 3	4.42	1.79	Faggion John, Faggion Beatrice,	\$0.00	\$0.00	\$205.00	\$205.00
00103200	CON 1 N PT LOT 3 S PT LOT 3	4.42	1.79	Two Cooks Developments Limited,	\$0.00	\$0.00	\$205.00	\$205.00
00100600	CON 1 S PT LOT 3 RP 51R4607	4.42	1.79	Borgo Almerigo,	\$0.00	\$0.00	\$205.00	\$205.00
00100700	CON 1 S PT LOT 3 RP 51R4607	10.00	4.05	Prim Sonia Mary, Prim Pierre Elliott,	\$0.00	\$0.00	\$463.00	\$463.00
00103000	CON 1 N PT LOT 5 RP 51R32751	94.05	38.06	Posius Vytautas, Posius Doris May,	\$0.00	\$0.00	\$4,508.00	\$4,508.00
00103100	CON 1 PT LOT 4 RP 51R33535	98.81	39.99	One Cook Developments Limited,	\$0.00	\$0.00	\$4,737.00	\$4,737.00
00100800	CON 1 S PT LOT 4	100.52	40.68	Sjblom Kaarina,	\$0.00	\$0.00	\$4,652.00	\$4,652.00
00101400	CON 1 S PT LOT 6	90.53	36.64	Rayton Aldora, Minns Heather,	\$0.00	\$0.00	\$4,190.00	\$4,190.00
00102800	CON 1 N PT LOT 6 RP 51R5927	98.56	39.89	Minns Heather, Rayton Aldora,	\$0.00	\$0.00	\$4,644.00	\$4,644.00
00102200	CON 1 W PT LOT 7	2.85	1.15	Minns Heather, Rayton Aldora,	\$0.00	\$0.00	\$136.00	\$136.00
00119100	CON 1 N PT LOT 8	49.00	19.83	Kopec Diane, Walewski John Henry,	\$0.00	\$0.00	\$2,592.00	\$2,592.00
00117000	CON 1 PT LOT 9	60.00	24.28	Kemeny George, Kemeny Michael, Kemeny William,	\$0.00	\$0.00	\$3,050.00	\$3,050.00
00117200	CON 1 PT LOT 9	28.00	11.33	Kemeny George,	\$0.00	\$0.00	\$1,469.00	\$1,469.00
00118800	CON 1 N PT LOT 9	11.00	4.45	Homecko Oksana, Homecko William,	\$0.00	\$0.00	\$582.00	\$582.00
00119000	CON 1 N PT LOT 9	30.69	12.42	Kemeny Michael,	\$0.00	\$0.00	\$1,623.00	\$1,623.00
00117300	CON 1 S PT LOT 9	60.07	24.31	Homecko Katy, Homecko William,	\$0.00	\$0.00	\$3,153.00	\$3,153.00
00117400	CON 1 S PT LOT 9	17.00	6.88	Lee Roy Edward, Young James Richard,	\$0.00	\$0.00	\$892.00	\$892.00
00117600	CON 1 S PT LOT 10	14.00	5.67	Toich Christopher Michael, Toich Sandra,	\$0.00	\$0.00	\$735.00	\$735.00
00117800	INNISFIL CON 1 S PT LOT 10	17.01	6.88	Toich Mary, Toich Anthony,	\$0.00	\$0.00	\$892.00	\$892.00
00118300	CON 1 PT LOT 10	29.30	11.86	2204277 Ontario Ltd,	\$0.00	\$0.00	\$1,550.00	\$1,550.00
00118350	CON 1 PT LOT 10 AND RP;51R1671	3.70	1.50	L & L Gardens Inc	\$0.00	\$0.00	\$196.00	\$196.00
00118400	CON 1 PT LOT 10 RP 51R11089	30.00	12.14	Marques Gardens Ltd,	\$0.00	\$0.00	\$1,587.00	\$1,587.00
00118500	CON 1 N PT LOT 10	29.38	11.89	Radvanyi Leslie Andr,	\$0.00	\$0.00	\$1,554.00	\$1,554.00
00200500	INNISFIL CON 1 S PT LOT 11	42.06	17.02	Zielke Cheryl L, Zielke Glenn R,	\$0.00	\$0.00	\$2,207.00	\$2,207.00
00206000	CON 1 N PT LOT 11	25.00	10.12	Tasca Norman Michael, Tasca Louis Joseph,	\$0.00	\$0.00	\$1,336.00	\$1,336.00
00206100	CON 1 N PT LOT 11	25.00	10.12	Tasca Louis Joseph, Tasca Norman Michael,	\$0.00	\$0.00	\$1,328.00	\$1,328.00
00206300	CON 1 N PT LOT 11	50.00	20.23	L & L Gardens Inc,	\$0.00	\$0.00	\$2,644.00	\$2,644.00
00205900	CON 1 N PT LOT 12	100.00	40.47	Sawyer William Douglas, Sawyer Brian Eben, Sawyer Donald Elmer,	\$0.00	\$0.00	\$5,354.00	\$5,354.00
00201100	CON 1 S PT LOT 12	97.60	39.50	Matchett Joan M, Matchett Kenneth	\$0.00	\$0.00	\$5,104.00	\$5,104.00
00201200	CON 1 S PT LOT 13 RP	99.45	40.25	Kell John Albert, Kell Susan Frances,	\$0.00	\$0.00	\$5,220.00	\$5,220.00
00205800	CON 1 N PT LOT 13 N PT LOT	150.00	60.70	Sawyer Donald Elmer,	\$0.00	\$0.00	\$8,058.00	\$8,058.00
00201600	CON 1 S PT LOT 14	49.54	20.05	Gilmore Earle D, Gilmore Helen L,	\$0.00	\$0.00	\$2,621.00	\$2,621.00
00205600	CON 1 E PT LOT 14	100.00	40.47	Kell Farms Limited,	\$0.00	\$0.00	\$5,372.00	\$5,372.00
00205400	CON 1 N PT LOT 15	95.90	38.81	Kell Farms Limited,	\$0.00	\$0.00	\$5,786.00	\$5,786.00
00201800	CON 1 S PT LOT 15 RP	89.41	36.18	Kell Keith E, Kell Helen M,	\$0.00	\$0.00	\$4,766.00	\$4,766.00
00205200	CON 1 N PT LOT 16	58.05	23.49	Kell Farms Limited,	\$0.00	\$0.00	\$3,886.00	\$3,886.00
00204700	CON 1 N PT LOT 17	39.81	16.11	Drybrough Jeanette Elaine E, Drybrough Robert Wesley,	\$0.00	\$0.00	\$2,665.00	\$2,665.00
07415500	CON 15 PT LOT 10	11.81	4.78	Toich Anthony, Toich Mary,	\$0.00	\$0.00	\$576.00	\$576.00
07415600	CON 15 PT LOT 10	7.90	3.20	Plytnik Tania,	\$0.00	\$0.00	\$386.00	\$386.00
07416600	CON 15 PT LOT 12	18.57	7.52	Zielke Glenn, Zielke Ron,	\$0.00	\$0.00	\$906.00	\$906.00
07416700	CON 15 PT LOT 13 RP 51R17736	25.07	10.15	Constable Sharon P, Constable Alexander John,	\$0.00	\$0.00	\$1,223.00	\$1,223.00
07416800	CON 15 PT LOTS 13 & 14	24.00	9.71	Kell Emily Anne, Kell Larry E,	\$0.00	\$0.00	\$1,170.00	\$1,170.00
07417000	CON 15 PT LOTS 14 & 15	20.35	8.24	Zielke Lynda M, Zielke Ronald R,	\$0.00	\$0.00	\$993.00	\$993.00
07417200	CON 15 PT LOT 15	19.30	7.81	Kell Keith E, Kell Helen M,	\$0.00	\$0.00	\$941.00	\$941.00
07413900	CON 14 N PT LOT 10	25.00	10.12	Spina Francesco, Spina Rosetta,	\$0.00	\$0.00	\$1,219.00	\$1,219.00
07336100	CON 14 S PT LOT 10 LESS	84.26	34.10	Jebb Barry Murphy, Jebb Douglas Barry,	\$0.00	\$0.00	\$4,109.00	\$4,109.00
07413201	CON 14 N PT LOT 12 RP	98.47	39.85	Steimle Wilfred,	\$0.00	\$0.00	\$4,802.00	\$4,802.00
07335400	CON 14 S PT LOT 12	94.27	38.15	Nunes Honorina,	\$0.00	\$0.00	\$3,693.00	\$3,693.00
07413100	CON 14 N PT LOT 13	99.50	40.27	Kell Larry E, Kell Emily Anne,	\$0.00	\$0.00	\$4,852.00	\$4,852.00
07335300	CON 14 S PT LOT 13	100.00	40.47	Sturgeon Timothy Neil,	\$0.00	\$0.00	\$4,876.00	\$4,876.00
07413000	CON 14 N PT LOT 14	100.00	40.47	Zielke Daniel Richard,	\$0.00	\$0.00	\$4,876.00	\$4,876.00
07334901	CON 14 S PT LOT 14 RP	21.67	8.77	Excavating & Grading Ltd, P & A Timbers & Sons,	\$0.00	\$0.00	\$1,057.00	\$1,057.00
07412900	CON 14 N PT LOT 15 RP	101.71	41.16	1402802 Ontario Inc,	\$0.00	\$0.00	\$4,960.00	\$4,960.00
07334400	CON 14 S PT LOT 15 UFFI	18.09	7.32	Procter Carol Glenda, Procter Wayne Herbert,	\$0.00	\$0.00	\$882.00	\$882.00

Description		Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
07412720	CON 14 N PT LOT 16 RP	51.79	20.96	1402802 Ontario Inc,	\$0.00	\$0.00	\$2,526.00	\$2,526.00
07333400	CON 13 N PT LOT 12	9.88	4.00	Sturgeon Dyce Mc Dowell,	\$0.00	\$0.00	\$482.00	\$482.00
07333512	CON 13 N PT LOT 13	16.54	6.69	Hasbrooke Holdings Limited	\$0.00	\$0.00	\$806.00	\$806.00
07333510	CON 13 N PT LOT 13	50.48	20.43	Hasbrooke Holdings Limited,	\$0.00	\$0.00	\$2,462.00	\$2,462.00
07333500	CON 13 N PT LOT 13 RP	8.99	3.64	Hasbrooke Holdings Limited,	\$0.00	\$0.00	\$440.00	\$440.00
Total on Privately-Owned - Agricultural Lands.....					\$0.00	\$0.00	\$758,816.00	\$758,816.00
<b>TOTAL ASSESSMENT - SOUTH INNISFIL CREEK DRAIN (OVERFLOW AREA 3)</b> .....					<b>\$0.00</b>	<b>\$0.00</b>	<b>\$1,304,910.00</b>	<b>\$1,304,910.00</b>
		(Acres)	(Ha.)					
	<b>Total Area:</b>	<b>16,989.14</b>	<b>6,875.32</b>					

**"SCHEDULE B3"**  
**SCHEDULE OF ALLOWANCES**  
**HNYDCZAK OUTLET RELIEF DRAIN**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

Roll No.	Description	Owner	Section 30 Damages	Section 29 Land	Total Allowances
00101400	CON 1 S PT LOT 6	Rayton Aldora, Minns Heather,	\$301.00	\$615.00	\$916.00
00102100	CON 1 PT LOT 6 PT LOT 7	Transportation Ministry,	\$1,610.00	\$204.00	\$1,814.00
<b>TOTAL ALLOWANCES .....</b>			<b>\$1,911.00</b>	<b>\$819.00</b>	<b>\$2,730.00</b>

**"SCHEDULE C3"**  
**SCHEDULE OF ASSESSMENT**  
**HNYDCZAK OUTLET RELIEF DRAIN**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

**ONTARIO LANDS:**

Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
Highway 400	21.70	8.78	Ministry of Transportation	\$8,540.00	\$7,342.00	\$1,440.00	\$17,322.00
Rieve Boulevard			Ministry of Transportation	\$4,270.00	\$0.00	\$0.00	\$4,270.00
00102100 CON 1 PT LOT 6 PT LOT 7	8.15	3.30	Transportation Ministry,	\$0.00	\$3,090.00	\$95.00	\$3,185.00
00102400 CON 1 PT LOT 7 RP 51R8414	3.45	1.40	Transportation Ministry	\$0.00	\$2,838.00	\$41.00	\$2,879.00
Total on Ontario Lands.....				\$12,810.00	\$13,270.00	\$1,576.00	\$27,656.00

**MUNICIPAL LANDS:**

Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
County Road 89	47.94	19.40	Simcoe County	\$0.00	\$0.00	\$3,164.00	\$3,164.00
County Road 4 (Young Street)	58.69	23.75	Simcoe County	\$0.00	\$0.00	\$3,873.00	\$3,873.00
14th Line	12.28	4.97	Town of Innisfil	\$0.00	\$0.00	\$810.00	\$810.00
15th Line	26.86	10.87	Town of Innisfil	\$0.00	\$0.00	\$1,773.00	\$1,773.00
10 Sideroad	11.96	4.84	Simcoe County	\$0.00	\$0.00	\$790.00	\$790.00
Total on Municipal Lands.....				\$0.00	\$0.00	\$10,410.00	\$10,410.00

**PRIVATELY-OWNED - NON-AGRICULTURAL LANDS:**

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
00100900	CON 1 S PT LOT 4	1.09	0.44	Wigle Tonya, Ferguson Brian,	\$0.00	\$0.00	\$27.00	\$27.00
00101200	CON 1 S PT LOT 5	84.62	34.24	1665328 Ontario Ltd,	\$0.00	\$0.00	\$1,117.00	\$1,117.00
00101100	INNISFIL CON 1 S PT LOT 5 RP	15.03	6.08	Government Services, Director Municipal S,	\$0.00	\$0.00	\$198.00	\$198.00
00102600	CON 1 N PT LOT 6 RP 51R9251	0.69	0.28	Little Joseph David, Lemoine Cassidy Julee,	\$0.00	\$0.00	\$24.00	\$24.00
00119400	CON 1 N PT LOT 7	84.00	33.99	Sucession Financial Group Inc,	\$0.00	\$0.00	\$1,108.00	\$1,108.00
00116600	CON 1 S PT LOT 7 RP 51R2415	62.43	25.26	Aqua-Gem Investments Limited,	\$0.00	\$0.00	\$824.00	\$824.00
00116700	CON 1 S PT LOT 7 RP 51R2967	2.28	0.92	1045901 Ontario Ltd,	\$0.00	\$0.00	\$36.00	\$36.00
00116900	CON 1 S PT LOT 8	102.67	41.55	Flammini Maria, Dicarlo Stefano, Vincenzo Carmen,	\$0.00	\$0.00	\$1,355.00	\$1,355.00
07414900	CON 14 PT LOT 7 CON 15 PT	8.20	3.32	Taurus Cookstown Partners Ltd,	\$0.00	\$0.00	\$109.00	\$109.00
07415000	CON 15 PT LOT 8	19.48	7.88	De Sao Jose Isidro, De Sao Jose Marie,	\$0.00	\$0.00	\$257.00	\$257.00
07415100	CON 15 PT LOT 8 RP 51R1259	2.76	1.12	Carmel (Canada), Sisters Of Our Lady Of Mount,	\$0.00	\$0.00	\$39.00	\$39.00
07415101	CON 15 PT LOT 8	1.76	0.71	Town Of Innisfil,	\$0.00	\$0.00	\$32.00	\$32.00
07415200	CON 15 PT LOT 8 RP 51R1259	5.25	2.12	Carmel (Canada), Sisters Of Our Lady Of Mount,	\$0.00	\$0.00	\$70.00	\$70.00
07415201	CON 15 PT LOT 8 RP 51R1259	5.25	2.12	Giorno Fabio,	\$0.00	\$0.00	\$70.00	\$70.00
07415300	CON 15 E PT LOT 9	11.50	4.65	Groombridge Helen E,	\$0.00	\$0.00	\$152.00	\$152.00
07415400	CON 15 W PT LOT 9	25.20	10.20	Brash Alan, Mitchell James David, Brash Donna,	\$0.00	\$0.00	\$332.00	\$332.00
07415700	CON 15 PT LOT 10	2.99	1.21	Kingsly Thomas,	\$0.00	\$0.00	\$39.00	\$39.00
07415800	CON 15 PT LOT 10 RP 51R1434	4.00	1.62	Le Coche Franco, Le Coche	\$0.00	\$0.00	\$53.00	\$53.00
07415900	CON 15 PT LOT 10 RP 51R1434	4.70	1.90	Esposito Raffaele & Le Coche Francesca Lucia, Le Coche Flora	\$0.00	\$0.00	\$62.00	\$62.00
07416000	WEST GWILLIMBURY CON 15 F	4.67	1.89	Esposito Raffaele,	\$0.00	\$0.00	\$61.00	\$61.00
07416100	CON 15 PT LOT 11 RP 51R1988	21.61	8.75	Alam Quazi N, Alam Akhtari B,	\$0.00	\$0.00	\$286.00	\$286.00
07416101	CON 15 PT LOT 11 RP 51R1889	0.58	0.24	Fenech Mary Grace,	\$0.00	\$0.00	\$22.00	\$22.00
07416102	CON 15 PT LOT 11 RP 51R1988	0.66	0.27	Bell Gale Ann,	\$0.00	\$0.00	\$24.00	\$24.00
07416110	CON 15 PT LOT 11 RP 51R1988	0.61	0.25	Kuzmyk Sharon, Kuzmyk Robert Paul,	\$0.00	\$0.00	\$22.00	\$22.00
07416200	CON 15 PT LOT 11 RP 51R2234	4.56	1.85	Lombardi Diana, Fava Vince,	\$0.00	\$0.00	\$60.00	\$60.00
07416210	CON 15 PT LOT 11 RP 51R2234	0.64	0.26	Hajdukiewicz Phyllis,	\$0.00	\$0.00	\$22.00	\$22.00
07416300	CON 15 PT LOT 11	5.00	2.02	Nemeth Bill,	\$0.00	\$0.00	\$66.00	\$66.00
07416400	CON 15 PT LOTS 11 & 12	3.61	1.46	Haythorne Owen A,	\$0.00	\$0.00	\$48.00	\$48.00

Description		Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
07416401	CON 15 PT LOTS 11 & 12 RP	2.09	0.85	Bondi Barry,	\$0.00	\$0.00	\$34.00	\$34.00
07416500	CON 15 PT LOT 12 RP 51R1333	9.78	3.96	Rautiainen Jorma, Rautiainen	\$0.00	\$0.00	\$129.00	\$129.00
07416501	CON 15 PT LOT 12 RP	5.25	2.12	Pereira Fernando, Pereira Helena,	\$0.00	\$0.00	\$70.00	\$70.00
07416520	CON 15 PT LOT 12 RP 51R1993	0.85	0.34	Palazzo Joann, Palazzo Nicola,	\$0.00	\$0.00	\$26.00	\$26.00
07416702	CON 15 PT LOT 13 RP 51R1773	1.94	0.79	Downs Susan,	\$0.00	\$0.00	\$33.00	\$33.00
07416710	CON 15 PT LOT 13 RP 51R2948	0.68	0.28	Pais Carlos M,	\$0.00	\$0.00	\$24.00	\$24.00
07416720	CON 15 PT LOT 13 RP 51R2948	0.68	0.28	Pagnan-Venroy Donna, Venroy Anthony,	\$0.00	\$0.00	\$24.00	\$24.00
07416801	CON 15 PT LOT 14	0.54	0.22	Harris William, Harris Nadia,	\$0.00	\$0.00	\$21.00	\$21.00
07416701	CON 15 W PT LOT 13 RP	0.96	0.39	Miller Kerri Lee, Miller Aaron	\$0.00	\$0.00	\$12.00	\$12.00
07416900	CON 15 PT LOTS 13 & 14	0.45	0.18	Ontario Hydro, Assessment And Taxation,	\$0.00	\$0.00	\$17.00	\$17.00
07417040	CON 15 PT LOTS 14 & 15 RP	0.69	0.28	Zielke Lynda Margaret,	\$0.00	\$0.00	\$24.00	\$24.00
07417100	CON 15 PT LOT 15	0.46	0.19	Mccullough Joanne D,	\$0.00	\$0.00	\$19.00	\$19.00
07417001	CON 15 PT LOT 15 51R-2200	0.46	0.19	Goodwin David Earl, Costain Kimberly Ann,	\$0.00	\$0.00	\$19.00	\$19.00
07417600	CON 15 PT LOT 15	0.98	0.40	Ciotti Bernardo, Ciotti Elvira,	\$0.00	\$0.00	\$26.00	\$26.00
07417700	CON 15 PT LOT 15 RP 51R3248	2.73	1.10	Town Of Innisfil,	\$0.00	\$0.00	\$39.00	\$39.00
07417800	CON 15 PT LOT 15	2.00	0.81	Town Of Innisfil,	\$0.00	\$0.00	\$33.00	\$33.00
07417901	CON 15 PT LOT 15	0.46	0.19	Hughes Anne Matilda,	\$0.00	\$0.00	\$19.00	\$19.00
07417300	CON 15 PT LOT 15	0.27	0.11	Innisfil Hydro Distribution Systems Limited, Innisfil Ds - 2255 Highway	\$0.00	\$0.00	\$10.00	\$10.00
07417400	5460 YONGE STREET CON 15 F	1.28	0.52	Kim Sang-Soon,	\$0.00	\$0.00	\$29.00	\$29.00
07417500	CON 15 PT LOT 15	0.89	0.36	Kim Myung-Hoan, Kim Sang-Soon,	\$0.00	\$0.00	\$26.00	\$26.00
07414400	CON 14 N PT LOT 8	11.61	4.70	De Sao Jose Martin, De Sao Jose Isidro,	\$0.00	\$0.00	\$153.00	\$153.00
07414500	CON 14 N PT LOT 8	14.33	5.80	Cesta Alberico, Cesta Maria Adua,	\$0.00	\$0.00	\$189.00	\$189.00
07414600	CON 14 N PT LOT 8 RP	7.41	3.00	Taurus Cookstown Partners Ltd,	\$0.00	\$0.00	\$97.00	\$97.00
07414700	CON 14 N PT LOT 8 RP	9.88	4.00	Taurus Cookstown Partners Ltd,	\$0.00	\$0.00	\$131.00	\$131.00
07414000	CON 14 N PT LOT 9 ROW CON	25.00	10.12	Schiafone Maria, Schiafone Biagio,	\$0.00	\$0.00	\$330.00	\$330.00
07414100	CON 14 N PT LOT 9	25.00	10.12	Gatti Roberto, Gatti Giovanni, Gatti Giorgio,	\$0.00	\$0.00	\$330.00	\$330.00
07414200	CON 14 N PT LOT 9	21.99	8.90	Waz Janina Emilia, Waz Janusz,	\$0.00	\$0.00	\$290.00	\$290.00
07414300	CON 14 N PT LOT 9	16.31	6.60	Galati Lisa & Tony, Granato Anna R & Galati D,	\$0.00	\$0.00	\$215.00	\$215.00
07336200	CON 14 S PT LOT 9 RP	15.07	6.10	Marques Jorge,	\$0.00	\$0.00	\$199.00	\$199.00
07336300	CON 14 S PT LOT 9 RP	4.20	1.70	2031430 Ontario Ltd,	\$0.00	\$0.00	\$56.00	\$56.00
07336101	CON 14 S PT LOT 10 RP	1.09	0.44	Cole Andrew James, Cole Petra Deanne,	\$0.00	\$0.00	\$27.00	\$27.00
07413700	CON 14 N PT LOT 10	24.01	9.72	Skuljicak Marko, Skuljicak Mirjana, Skuljicak Mijo,	\$0.00	\$0.00	\$317.00	\$317.00
07413701	CON 14 PT LOT 10 RP 51R1634	1.00	0.40	Leithwood Debra, Wright Lisa, Fenz Paul Eric,	\$0.00	\$0.00	\$26.00	\$26.00
07413800	CON 14 N PT LOT 10	52.00	21.04	Corbo Vincenzo, Colonna Rocco, Corbo Filomena, Colonna Carmela,	\$0.00	\$0.00	\$686.00	\$686.00
07413300	CON 14 E PT LOT 11	50.00	20.23	Ostojic Anastazijia Nada, Ostojic Dragan,	\$0.00	\$0.00	\$660.00	\$660.00
07413301	CON 14 N PT LOT 11	20.92	8.47	Lind Nelly A, Lind Tonis,	\$0.00	\$0.00	\$276.00	\$276.00
07413400	CON 14 W PT LOT 11	10.49	4.25	Heinemann Steven Atilla, Kim Chung-Im,	\$0.00	\$0.00	\$138.00	\$138.00
07413500	CON 14 W PT LOT 11	10.55	4.27	Evans Cynthia Anne, Evans John David,	\$0.00	\$0.00	\$139.00	\$139.00
07335600	CON 14 W PT LOT 11	4.67	1.89	Batsch Sherri-Lynn, Batsch Ronald,	\$0.00	\$0.00	\$61.00	\$61.00
07335601	CON 14 W PT LOT 11 RP	9.56	3.87	Kennedy Gertrude E A,	\$0.00	\$0.00	\$126.00	\$126.00
07335700	CON 14 W PT LOT 11	6.12	2.48	Forget Nicole, Forget Dean,	\$0.00	\$0.00	\$81.00	\$81.00
07335800	CON 14 W PT LOT 11	10.48	4.24	Markowitz Bette Marlene, Markowitz Myron Joseph,	\$0.00	\$0.00	\$138.00	\$138.00
07335900	CON 14 W PT LOT 11 LESS	8.59	3.48	Collins Fiona Joy,	\$0.00	\$0.00	\$114.00	\$114.00
07335901	CON 14 PT LOT 11 RP 51R1516	1.82	0.74	Garvey Timothy John, Garvey Patricia Lynn,	\$0.00	\$0.00	\$32.00	\$32.00
07336000	CON 14 W PT LOT 11	10.49	4.25	Tesic Vlado & Helen, Tesic Zarko & Mary,	\$0.00	\$0.00	\$138.00	\$138.00
07413101	CON 14 N PT LOT 13	0.57	0.23	Kneeshaw Connie Leanne,	\$0.00	\$0.00	\$22.00	\$22.00
07413200	CON 14 N PT LOT 12 RP	1.53	0.62	Wrzala Elzbieta, Wrzala Artur,	\$0.00	\$0.00	\$30.00	\$30.00
07412400	CON 14 N PT LOT 16	0.35	0.14	Gariffe Nancy, Paige Kenneth	\$0.00	\$0.00	\$14.00	\$14.00

Description		Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
07412500	CON 14 N PT LOT 16 51R6341	0.30	0.12	Webster Linda Ann, Becic John	\$0.00	\$0.00	\$12.00	\$12.00
07412600	CON 14 N PT LOT 16	0.47	0.19	Kneeshaw Bonnie G,	\$0.00	\$0.00	\$19.00	\$19.00
07412601	CON 14 N PT LOT 16 51R-6341	0.46	0.19	Kneeshaw Bonnie G, Kneeshaw James F,	\$0.00	\$0.00	\$19.00	\$19.00
07412700	CON 14 N PT LOT 16 RP	3.38	1.37	Kell Roger, Kell John Albert, Kell Larry E,	\$0.00	\$0.00	\$44.00	\$44.00
07412710	CON 14 N PT LOT 16 RP	2.44	0.99	Stovold Louise, Stovold	\$0.00	\$0.00	\$37.00	\$37.00
07333401	CON 13 N PT LOT 12	2.47	1.00	Sturgeon Doris, Sturgeon William Robert,	\$0.00	\$0.00	\$37.00	\$37.00
07333501	CON 13 N 1/2 LOT 13 51R 13385	2.44	0.99	Mattingley Douglas G, Mattingley Ruth Anne,	\$0.00	\$0.00	\$37.00	\$37.00
Total on Privately-Owned - Non-Agricultural Lands.....					\$0.00	\$0.00	\$12,369.00	\$12,369.00

**PRIVATELY-OWNED - AGRICULTURAL LANDS**

Roll No.	Description	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
00103000	CON 1 N PT LOT 5 RP 51R3275	94.05	38.06	Posius Vytautas, Posius Doris May,	\$0.00	\$0.00	\$1,241.00	\$1,241.00
00100800	CON 1 S PT LOT 4	100.52	40.68	Sjoblom Kaarina,	\$0.00	\$0.00	\$1,327.00	\$1,327.00
00102800	CON 1 N PT LOT 6 RP 51R5927	98.56	39.89	Minns Heather, Rayton Aldora,	\$0.00	\$0.00	\$1,301.00	\$1,301.00
00101400	CON 1 S PT LOT 6	90.53	36.64	Rayton Aldora, Minns Heather,	\$6,283.00	\$4,485.00	\$1,019.00	\$11,787.00
00102200	CON 1 W PT LOT 7	2.85	1.15	Minns Heather, Rayton Aldora,	\$0.00	\$0.00	\$37.00	\$37.00
00117000	CON 1 PT LOT 9	60.00	24.28	Kemeny George, Kemeny Michael, Kemeny William,	\$0.00	\$0.00	\$792.00	\$792.00
00117200	CON 1 PT LOT 9	28.00	11.33	Kemeny George,	\$0.00	\$0.00	\$369.00	\$369.00
00201100	CON 1 S PT LOT 12	97.60	39.50	Matchett Joan M, Matchett Kenneth	\$0.00	\$0.00	\$1,289.00	\$1,289.00
00201200	CON 1 S PT LOT 13 RP	99.45	40.25	Kell John Albert, Kell Susan	\$0.00	\$0.00	\$1,313.00	\$1,313.00
07415500	CON 15 PT LOT 10	11.81	4.78	Toich Anthony, Toich Mary,	\$0.00	\$0.00	\$156.00	\$156.00
07415600	CON 15 PT LOT 10	7.90	3.20	Plytnik Tania,	\$0.00	\$0.00	\$104.00	\$104.00
07416700	CON 15 PT LOT 13 RP 51R1773	25.07	10.15	Constable Sharon P, Constable Alexander John,	\$0.00	\$0.00	\$331.00	\$331.00
07416800	CON 15 PT LOTS 13 & 14	24.00	9.71	Kell Emily Anne, Kell Larry E,	\$0.00	\$0.00	\$317.00	\$317.00
07417000	CON 15 PT LOTS 14 & 15	20.35	8.24	Zielke Lynda M, Zielke Ronald R,	\$0.00	\$0.00	\$269.00	\$269.00
07417200	CON 15 PT LOT 15	19.30	7.81	Kell Keith E, Kell Helen M,	\$0.00	\$0.00	\$255.00	\$255.00
07336100	CON 14 S PT LOT 10 LESS	84.26	34.10	Jebb Barry Murphy, Jebb Douglas Barry,	\$0.00	\$0.00	\$1,112.00	\$1,112.00
07333400	CON 13 N PT LOT 12	9.88	4.00	Sturgeon Dyce Mc Dowell,	\$0.00	\$0.00	\$131.00	\$131.00
07333500	CON 13 N PT LOT 13 RP	8.99	3.64	Hasbrooke Holdings Limited,	\$0.00	\$0.00	\$119.00	\$119.00
07335300	CON 14 S PT LOT 13	100.00	40.47	Sturgeon Timothy Neil,	\$0.00	\$0.00	\$1,320.00	\$1,320.00
07413201	CON 14 N PT LOT 12 RP	98.47	39.85	Steimle Wilfred,	\$0.00	\$0.00	\$1,299.00	\$1,299.00
07413100	CON 14 N PT LOT 13	99.50	40.27	Kell Larry E, Kell Emily Anne,	\$0.00	\$0.00	\$1,313.00	\$1,313.00
07413000	CON 14 N PT LOT 14	100.00	40.47	Zielke Daniel Richard,	\$0.00	\$0.00	\$1,320.00	\$1,320.00
07334400	CON 14 S PT LOT 15 UFFI	18.09	7.32	Procter Carol Glenda, Procter Wayne Herbert,	\$0.00	\$0.00	\$239.00	\$239.00
07334901	CON 14 S PT LOT 14 RP	21.67	8.77	Excavating & Grading Ltd, P & A Timbers & Sons,	\$0.00	\$0.00	\$286.00	\$286.00
07335202	PLAN 1044 PART LOT 14	39.36	15.93	Samios Effie, Samios John,	\$0.00	\$0.00	\$519.00	\$519.00
07412900	CON 14 N PT LOT 15 RP	101.71	41.16	1402802 Ontario Inc,	\$0.00	\$0.00	\$1,342.00	\$1,342.00
07412720	CON 14 N PT LOT 16 RP	51.79	20.96	1402802 Ontario Inc,	\$0.00	\$0.00	\$683.00	\$683.00
07333510	CON 13 N PT LOT 13	50.48	20.43	Hasbrooke Holdings Limited,	\$0.00	\$0.00	\$662.00	\$662.00
07333512	CON 13 N PT LOT 13	50.48	20.43	Hasbrooke Holdings Limited,	\$0.00	\$0.00	\$662.00	\$662.00
Total on Privately-Owned - Agricultural Lands.....					\$6,283.00	\$4,485.00	\$21,127.00	\$31,895.00

**TOTAL ASSESSMENT - HNYDCZAK OUTLET RELIEF.....** **\$19,093.00** **\$17,755.00** **\$45,482.00** **\$82,330.00**

	(Acres)	(Ha.)
<b>Total Area:</b>	<b>2,712.02</b>	<b>1,097.59</b>

**"SCHEDULE D3"**  
**DETAILS OF SPECIAL BENEFIT**  
**HNYDCZAK OUTLET RELIEF DRAIN**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

**SPECIAL BENEFIT ASSESSMENT**  
**(GENERAL DESCRIPTION OF SPECIAL BENEFIT)**

Roll No.	Owner	Item Description	Estimated Cost	Cost of Report	Special Benefit
00101400	Rayton Aldora, Minns Heather,	25% of farm access culvert costs and engineering	\$5,150.00	\$1,133.00	\$6,283.00
<b>Total Special Benefit Assessment (Excl. Non Pro-Ratable Costs).....</b>			<b>\$5,150.00</b>	<b>\$1,133.00</b>	<b>\$6,283.00</b>

**SPECIAL BENEFIT ASSESSMENT**  
**(SECTION 26 - NON PRO-RATABLE COSTS)**

Roll No.	Owner	Item Description	Estimated Cost	Cost of Report	Special Benefit
Highway 400	Ministry of Transportation	Station 0+518 (Highway 400 off ramp) – clean existing concrete culvert (100%)	\$3,500.00	\$770.00	\$4,270.00
		Station 0+601 (Highway 400) – clean existing 4700 mm x 2600 mm CSP ellipse (100%)	\$3,500.00	\$770.00	\$4,270.00
		Subtotal Highway 400	7,000.00	1,540.00	8,540.00
Rieve Boulevard	Ministry of Transportation	Station 0+633 (Rieve Boulevard) – clean existing 4700 mm x 2600 mm CSP ellipse and concrete culvert (100%)	\$3,500.00	\$770.00	\$4,270.00
<b>Total Special Benefit Assessment (Non Pro-Ratable Costs).....</b>			<b>\$10,500.00</b>	<b>\$2,310.00</b>	<b>\$12,810.00</b>

**OVERALL TOTAL SPECIAL BENEFIT ASSESSMENT ..... \$19,093.00**



**"SCHEDULE B4"**  
**SCHEDULE OF ALLOWANCES**  
**3rd LINE BRANCH DRAIN**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

Roll No.	Description	Owner	Section 29 Land	Section 30 Damages	Total Allowances
00212900	CON 2 N PT LOT 11	1281597 Ontario Inc,	\$1,720.00	\$606.00	\$2,326.00
00212800	CON 2 N PT LOT 11	Yamamoto Shigeo, Yamamoto Kerry Shigeru,	\$1,589.00	\$616.00	\$2,205.00
00212700	CON 2 N PT LOT 11	Yamamoto Kerry S, Yamamoto Shigeo,	\$1,079.00	\$581.00	\$1,660.00
00212600	CON 2 N PT LOT 12	Horodinsky Paul, Horodinsky Kellie An,	\$1,592.00	\$530.00	\$2,122.00
00212500	CON 2 N PT LOT 12	Horodinsky Farms Inc,	\$1,662.00	\$612.00	\$2,274.00
00212400	CON 2 N PT LOT 12	1281597 Ontario Inc,	\$889.00	\$160.00	\$1,049.00
00212300	CON 2 N PT LOT 12	Horodinsky John Boris,	\$672.00	\$0.00	\$672.00
00212200	CON 2 N PT LOT 12	Sharma Sanjeev,	\$2,005.00	\$0.00	\$2,005.00
00212100	CON 2 N PT LOT 12	Boston Mills Investment Holdin,	\$1,446.00	\$0.00	\$1,446.00
00212000	CON 2 N PT LOT 13	Yamamoto Kerry,	\$569.00	\$0.00	\$569.00
00211900	CON 2 N PT LOT 13	Goncalves Olinda, Goncalves Michael,	\$2,039.00	\$0.00	\$2,039.00
00211800	CON 2 N PT LOT 13	Grydsuk James Darryl,	\$1,020.00	\$0.00	\$1,020.00
00211700	CON 2 N PT LOT 13	Risi Tulio,	\$1,098.00	\$0.00	\$1,098.00
00211600	CON 2 N PT LOT 13	Evers Darlene Jane,	\$306.00	\$0.00	\$306.00
00207600	CON 2 LOT 14	Innis Properties Limited,	\$279.00	\$0.00	\$279.00
<b>TOTAL ALLOWANCES</b>			<b>\$17,965.00</b>	<b>\$3,105.00</b>	<b>\$21,070.00</b>

**"SCHEDULE C4"**  
**SCHEDULE OF ASSESSMENT**  
**3rd LINE BRANCH DRAIN**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

**MUNICIPAL LANDS:**

Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
County Road 4	35.26	14.27	Simcoe County	\$0.00	\$0.00	\$25,180.00	\$25,180.00
2nd Line	7.49	3.03	Town of Innisfil	\$0.00	\$0.00	\$5,345.00	\$5,345.00
3rd Line	15.25	6.17	Town of Innisfil	\$0.00	\$7,450.00	\$10,882.00	\$18,332.00
4th Line	4.13	1.67	Town of Innisfil	\$0.00	\$0.00	\$1,426.00	\$1,426.00
Village of Churchill Block Assessment No. 2 Road South of 4th Line	5.66	2.29	Town of Innisfil	\$0.00	\$0.00	\$996.00	\$996.00
Village of Churchill Block Assessment No. 3 Road	2.27	0.92	Town of Innisfil	\$0.00	\$0.00	\$233.00	\$233.00
Total on Municipal Lands.....				\$0.00	\$7,450.00	\$44,062.00	\$51,512.00

**PRIVATELY-OWNED - NON-AGRICULTURAL LANDS:**

Roll No.	Description	Area Affected (Acres)	(Ha.)	Owner	Special Benefit	Benefit	Outlet	Total Assessment
00225000	CON 4 N PT LOT 16	43.24	17.50	Demarco Michele, Demarco Maria,	\$0.00	\$0.00	\$2,992.00	\$2,992.00
00214300	CON 3 S PT LOT 12	10.01	4.05	Xenophontos Theodoro,	\$0.00	\$0.00	\$692.00	\$692.00
00214400	CON 3 S PT LOT 13	100.00	40.47	Xenophontos Christin,				
				Yamamoto Haruko & Kerry S,	\$0.00	\$0.00	\$6,914.00	\$6,914.00
				Yamamoto Shigeo,				
00300600	CON 3 N PT LOT 15	9.81	3.97	Johnson & Ghodiwalla & Modi, Patel & Ferreora & Tamakuwala,	\$0.00	\$0.00	\$677.00	\$677.00
00215200	CON 3 S PT LOT 16	0.30	0.12	Kerr Vanessa, Ledlie Mark Stephen,	\$0.00	\$0.00	\$62.00	\$62.00
00212100	CON 2 N PT LOT 12	15.06	6.09	Boston Mills Investment Holdin,	\$381.50	\$629.00	\$1,301.00	\$2,311.50
00212200	CON 2 N PT LOT 12	10.06	4.07	Sharma Sanjeev,	\$9,889.25	\$402.00	\$863.00	\$11,154.25
00212000	CON 2 N PT LOT 13	37.69	15.25	Yamamoto Kerry,	\$4,545.00	\$1,573.00	\$3,455.00	\$9,573.00
00211600	CON 2 N PT LOT 13	15.00	6.07	Evers Darlene Jane,	\$4,194.50	\$615.00	\$1,995.00	\$6,804.50
00211700	CON 2 N PT LOT 13	10.00	4.05	Risi Tulio,	\$4,155.25	\$411.00	\$1,268.00	\$5,834.25
00211800	CON 2 N PT LOT 13	17.50	7.08	Grydsuk James Darryl,	\$4,560.50	\$720.00	\$2,003.00	\$7,283.50
00211900	CON 2 N PT LOT 13	20.00	8.09	Goncalves Olinda, Goncalves Michael,	\$4,499.50	\$788.00	\$2,027.00	\$7,314.50
00211100	CON 2 PT LOT 15	0.12	0.05	Director Municipal Subsidies, Ministry Of Transportation,	\$0.00	\$0.00	\$52.00	\$52.00
00208000	CON 2 S PT LOT 15	0.58	0.23	Esau Linda Gail, Kalcic Gregory Dougl,	\$0.00	\$0.00	\$230.00	\$230.00
00210901	CON 2 PT LOT 15 RP 51R1538C	0.84	0.34	Kent Kevin,	\$0.00	\$0.00	\$276.00	\$276.00
00211000	CON 2 N PT LOT 15 RP 51R74C	0.48	0.20	Budd Patricia Gail, Budd Alan James,	\$0.00	\$0.00	\$212.00	\$212.00
00210200	CON 2 PT LOT 16 RP51R8537	0.46	0.19	Campbell Martina P A, Campbell Ian Todd,	\$0.00	\$0.00	\$202.00	\$202.00
00210500	CON 2 N PT LOT 16	0.52	0.21	Cuneen Daniel,	\$0.00	\$0.00	\$217.00	\$217.00
00210600	CON 2 N PT LOT 16	14.25	5.77	Zendelek Boguslaw, Zendelek Roberta,	\$0.00	\$0.00	\$2,036.00	\$2,036.00
00208200	CON 2 S PT LOT 16	1.53	0.62	Wood Larry James, Wood Constance Ruth,	\$0.00	\$46.00	\$325.00	\$371.00
00208300	CON 2 S PT LOT 16	1.57	0.64	Bygnes Thorleif, Bygnes Evelyn,	\$0.00	\$0.00	\$330.00	\$330.00
00208520	CON 2 PT LOT 16 RP 51R1849	0.57	0.23	Groves Linda,	\$0.00	\$0.00	\$230.00	\$230.00
00204900	CON 1 N PT LOT 16	0.75	0.30	Clements Cemetery,	\$0.00	\$0.00	\$265.00	\$265.00
	CON 3 LOT 15	155.16	62.79	Village of Churchill Block Assessment No.2 lands south of 4th Line	\$0.00	\$0.00	\$10,726.00	\$10,726.00
	CON 4 LOT 16	36.97	14.96	Village of Churchill Block Assessment No.3 lands	\$0.00	\$0.00	\$2,555.00	\$2,555.00
Total on Privately-Owned - Non-Agricultural Lands.....				\$32,225.50	\$5,184.00	\$41,905.00	\$79,314.50	

**PRIVATELY-OWNED - AGRICULTURAL LANDS**

Roll No.	Description	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
00311400	CON 4 S PT LOT 16 PLUS PLAI	41.00	16.59	Sinclair Keith D, Sinclair Ruth E,	\$0.00	\$0.00	\$2,832.00	\$2,832.00
00220200	CON 3 N PT LOT 14 & 15	129.59	52.44	Top Hill View Estates Inc,	\$0.00	\$0.00	\$8,959.00	\$8,959.00
00214500	CON 3 S PT LOT 14	100.00	40.47	Kell Emily Anne, Kell Larry E,	\$0.00	\$0.00	\$6,914.00	\$6,914.00
00300500	CON 3 N PT LOT 16	97.30	39.38	Sinclair Ruth E, Sinclair Keith D,	\$0.00	\$0.00	\$6,729.00	\$6,729.00
00215000	CON 3 S PT LOT 16	97.06	39.28	Campbell Colin R, Todd Sarah Marjorie,	\$0.00	\$0.00	\$6,711.00	\$6,711.00
00220000	CON 3 N PT LOT 17	24.71	10.00	Kell Farms Limited,	\$0.00	\$0.00	\$1,709.00	\$1,709.00
00215300	CON 3 S PT LOT 17 RP 51R33C	21.65	8.76	Kell John Albert,	\$0.00	\$0.00	\$1,498.00	\$1,498.00
00215400	CON 3 S PT LOT 17	24.07	9.74	Kell Donna Jean Chantler,	\$0.00	\$0.00	\$1,664.00	\$1,664.00
00212500	CON 2 N PT LOT 12	25.20	10.20	Horodynsky Farms Inc,	\$5,795.00	\$1,018.00	\$1,144.00	\$7,957.00
00212700	CON 2 N PT LOT 11	25.29	10.23	Yamamoto Kerry S, Yamamoto Shigeo,	\$5,490.00	\$1,021.00	\$673.00	\$7,184.00
00212800	CON 2 N PT LOT 11	25.20	10.20	Yamamoto Shigeo, Yamamoto Kerry Shigeru,	\$5,856.00	\$1,050.00	\$443.00	\$7,349.00
00212900	CON 2 N PT LOT 11	50.00	20.23	1281597 Ontario Inc,	\$6,649.00	\$1,540.00	\$756.00	\$8,945.00
00212600	CON 2 N PT LOT 12	25.21	10.20	Horodynsky Paul, Horodynsky Kellie	\$8,205.00	\$975.00	\$843.00	\$10,023.00
00212300	CON 2 N PT LOT 12	10.06	4.07	Horodynsky John Boris,	\$5,589.25	\$415.00	\$648.00	\$6,652.25
00212400	CON 2 N PT LOT 12	15.00	6.07	1281597 Ontario Inc,	\$35,235.25	\$584.00	\$917.00	\$36,736.25
00207600	CON 2 LOT 14	200.00	80.94	Innis Properties Limited,	\$0.00	\$4,315.00	\$28,554.00	\$32,869.00
00211300	CON 2 N PT LOT 15	48.93	19.80	Campbell Ian Todd,	\$0.00	\$0.00	\$6,985.00	\$6,985.00
00207700	YONGE STREET CON 2 S PT L	60.91	24.65	Rosenberg Alex & Lily, Rosenberg Eisen Frances R,	\$0.00	\$0.00	\$8,696.00	\$8,696.00
00207800	CON 2 S PT LOT 15	38.88	15.73	Mccathie Rosemarie,	\$0.00	\$0.00	\$5,550.00	\$5,550.00
00210900	CON 2 N PT LOT 15 RP	48.18	19.50	Thompson Margaret Lo, Thompson Gordon Alla,	\$0.00	\$0.00	\$6,879.00	\$6,879.00
00210400	CON 2 N PT LOT 16	82.77	33.50	Campbell Martina P A, Campbell Ian Todd,	\$0.00	\$0.00	\$11,819.00	\$11,819.00
00208500	CON 2 S PT LOT 16	93.90	38.00	Simpson Richard,	\$0.00	\$0.00	\$13,405.00	\$13,405.00
00208700	CON 2 S PT LOT 17	24.71	10.00	Sturgeon Glenda Mary, Sturgeon Neil Burgess,	\$0.00	\$0.00	\$3,529.00	\$3,529.00
00210000	CON 2 PT LOT 17 N PT LOT 18	48.68	19.70	Kell Farms Limited,	\$0.00	\$0.00	\$6,949.00	\$6,949.00
00205200	CON 1 N PT LOT 16	58.05	23.49	Kell Farms Limited,	\$0.00	\$0.00	\$8,285.00	\$8,285.00
00204700	CON 1 N PT LOT 17	39.81	16.11	Drybrough Jeanette Elaine E, Drybrough Robert Wesley,	\$0.00	\$0.00	\$5,685.00	\$5,685.00
Total on Privately-Owned - Agricultural Lands.....					\$72,819.50	\$10,918.00	\$148,776.00	\$232,513.50
<b>TOTAL ASSESSMENT - 3RD LINE BRANCH DRAIN.....</b>					<b>\$105,045.00</b>	<b>\$23,552.00</b>	<b>\$234,743.00</b>	<b>\$363,340.00</b>
		(Acres)	(Ha.)					
<b>Total Area:</b>		<b>2,028.69</b>	<b>820.97</b>					

**"SCHEDULE D4"**  
**DETAILS OF SPECIAL BENEFIT**  
**3rd LINE BRANCH DRAIN**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

**SPECIAL BENEFIT ASSESSMENT**  
**(GENERAL DESCRIPTION OF SPECIAL BENEFIT)**

Roll No.	Owner	Item Description	Estimated Cost	Cost of Report	Special Benefit
00212200	Director Municipal Subsidies, N	Station 0+906 (Roll No. 002-12200) – Replace existing 7 m long, 1200 mm diameter CSP with a new 12 m long, 1500 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls. (25%)	\$5,450.00	\$1,199.00	\$6,649.00
		Station 0+921 (Roll No. 002-12200) – Remove existing 7 m long, 1200 mm diameter CSP and restore the drain and banks including grading and seeding. (100%)	\$2,500.00	\$550.00	\$3,050.00
		Trucking of excavated materials (100%)	\$156.25	\$34.00	\$190.25
		Subtotal Roll No. 00212200	\$8,106.25	\$1,783.00	\$9,889.25
00212400	Evers Darlene Jane,	Station 0+760 (Roll No. 002-12400) – Replace existing 9 m long, 1500 mm diameter CSP with a new 14 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls (25%)	\$5,325.00	\$1,172.00	\$6,497.00
		Station 0+819 (Roll No. 002-12400) – Replace existing 8.6 m long, 1300 mm x 1000 mm CSP ellipse with a new 16 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls (100%)	\$23,400.00	\$5,148.00	\$28,548.00
		Trucking of excavated materials (100%)	\$156.25	\$34.00	\$190.25
		Subtotal Roll No. 00212400	\$28,881.25	\$6,354.00	\$35,235.25
00212600	Grydsuk James Darryl,	Station 0+567 (Roll No. 002-12600) – Replace existing 25 m long, 1650 mm x 1350 mm CSP ellipse with a new 25 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls (25%)	\$6,725.00	\$1,480.00	\$8,205.00
00212900	Boston Mills Investment Holdin	Station 0+034 (Roll No. 002-12900) – Replace existing 9 m long, 1500 mm diameter CSP with a new 15 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls. (25%)	\$5,450.00	\$1,199.00	\$6,649.00
00212800	Yamamoto Kerry,	Station 0+255 (Roll No. 002-12800) – Replace existing 9 m long, 1500 mm diameter CSP with a new 14 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls. (25%)	\$4,800.00	\$1,056.00	\$5,856.00
00212700	Goncalves Olinda, Goncalves Michael,	Station 0+379 (Roll No. 002-12700) – Replace existing 7.7 m long, 1500 mm diameter CSP with a new 14 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls (25%)	\$4,500.00	\$990.00	\$5,490.00
00212500	Risi Tulio,	Station 0+709 (Roll No. 002-12500) – Extend existing 5 m long, 2400 mm diameter corrugated steel pipe (CSP) with a new 10 m long, 2400 mm diameter CSP c/w sloping stone endwalls (25%)	\$4,750.00	\$1,045.00	\$5,795.00

Roll No.	Owner	Item Description	Estimated Cost	Cost of Report	Special Benefit
00212300	Campbell Ian Todd,	Station 0+866 (Roll No. 002-12300) – Extend existing 5 m long, 2400 mm diameter CSP with a new 10 m long, 2400 mm diameter corrugated steel pipe (CSP) c/w sloping stone endwalls. (25%)	\$4,425.00	\$974.00	\$5,399.00
		Trucking of excavated materials (100%)	\$156.25	\$34.00	\$190.25
		Subtotal Roll No. 00212300	\$4,581.25	\$1,008.00	\$5,589.25
00212100	Budd Patricia Gail, Budd Alan James,	Trucking of excavated materials (100%)	\$312.50	\$69.00	\$381.50
00212000	Kent Kevin,	Station 1+162 (Roll No. 002-12000) – Replace existing 6 m long, 1800 mm x 1100 mm CSP arch with a new 12 m long, 1500 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls (25%)	\$3,100.00	\$682.00	\$3,782.00
		Trucking of excavated materials (100%)	\$625.00	\$138.00	\$763.00
		Subtotal Roll No. 00212000	\$3,725.00	\$820.00	\$4,545.00
00211900	Thompson Margaret Lo, Thompson Gordon Alla,	Station 1+351 (Roll No. 002-11900) – Replace existing 7 m long, 1200 mm diameter CSP with a new 12 m long, 1500 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls (25%)	\$3,375.00	\$743.00	\$4,118.00
		Trucking of excavated materials (100%)	\$312.50	\$69.00	\$381.50
		Subtotal Roll No. 00211900	\$3,687.50	\$812.00	\$4,499.50
00211800	Zendelek Boguslaw, Zendelek	Station 1+448 (Roll No. 002-11800) – Replace existing 6 m long, 1200 mm diameter CSP with a new 12 m long, 1500 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls. (25%)	\$3,425.00	\$754.00	\$4,179.00
		Trucking of excavated materials (100%)	\$312.50	\$69.00	\$381.50
		Subtotal Roll No. 00211800	\$3,737.50	\$823.00	\$4,560.50
00211700	Cuneen Daniel,	Station 1+531 (Roll No. 002-11700) – Replace existing two (2) 900 mm diameter CSP with a new 12 m long, 1520 mm x 1200 mm spiral rib galvanized steel pipe (SRP) arch c/w sloping stone endwalls (25%)	\$3,250.00	\$715.00	\$3,965.00
		Trucking of excavated materials (100%)	\$156.25	\$34.00	\$190.25
		Subtotal Roll No. 00211700	\$3,406.25	\$749.00	\$4,155.25
00211600	Campbell Martina P A, Campbr	Station 1+647 (Roll No. 002-11600) – Replace existing timber bridge with a new 12 m long, 1520 mm x 1200 mm spiral rib galvanized steel pipe (SRP) arch c/w sloping stone endwalls (25%)	\$3,125.00	\$688.00	\$3,813.00
		Trucking of excavated materials (100%)	\$312.50	\$69.00	\$381.50
		Subtotal Roll No. 00211600	\$3,437.50	\$757.00	\$4,194.50
<b>Total Special Benefit Assessment (Excl. Non Pro-Ratable Costs).....</b>			<b>\$86,100.00</b>	<b>\$18,945.00</b>	<b>\$105,045.00</b>
<b>OVERALL TOTAL SPECIAL BENEFIT ASSESSMENT .....</b>					<b>\$105,045.00</b>

**"SCHEDULE C5"  
SCHEDULE OF ASSESSMENT  
3rd LINE SPUR DRAIN  
COUNTY OF SIMCOE (TOWN OF INNISFIL)**

**MUNICIPAL LANDS:**

Description	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
	(Acres)	(Ha.)					
County Road 4	66.32	26.84	Simcoe County	\$0.00	\$0.00	\$2,695.00	\$2,695.00
3rd Line	40.13	16.24	Town of Innisfil	\$0.00	\$577.00	\$1,631.00	\$2,208.00
4th Line	40.23	16.28	Town of Innisfil	\$0.00	\$0.00	\$1,635.00	\$1,635.00
Village of Churchill Block Assessment No. 2 Roads South of 4th Line	14.41	5.83	Town of Innisfil	\$0.00	\$0.00	\$117.00	\$117.00
Village of Churchill Block Assessment No. 3 Roads	3.39	1.37	Town of Innisfil	\$0.00	\$0.00	\$27.00	\$27.00
<b>Total on Municipal Lands.....</b>				<b>\$0.00</b>	<b>\$577.00</b>	<b>\$6,105.00</b>	<b>\$6,682.00</b>

**PRIVATELY-OWNED - NON-AGRICULTURAL LANDS:**

Roll No.	Description	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
00225000	CON 4 N PT LOT 16	43.24	17.50	Demarco Michele, Demarco Maria,	\$0.00	\$0.00	\$352.00	\$352.00
00300600	CON 3 N PT LOT 15	9.81	3.97	Johnson & Ghodiwalla & Modi, Patel & Ferreora & Tamakuwala,	\$0.00	\$0.00	\$80.00	\$80.00
00300700	CON 3 N PT LOT 15 RP	28.32	11.46	861945 Ontario Ltd,	\$0.00	\$0.00	\$230.00	\$230.00
00302200	CON 3 N PT LOT 15	0.69	0.28	Zarei Pierre,	\$0.00	\$0.00	\$15.00	\$15.00
00215200	CON 3 S PT LOT 16	0.30	0.12	Kerr Vanessa, Ledlie Mark Stephen,	\$0.00	\$0.00	\$8.00	\$8.00
00214300	CON 3 S PT LOT 12	10.01	4.05	Xenophontos Theodoro,	\$0.00	\$97.00	\$79.00	\$176.00
	CON 3 LOT 15	155.16	62.79	Village of Churchill Block Assessment No.2 lands south of 4th Line	\$0.00	\$0.00	\$1,262.00	\$1,262.00
	CON 4 LOT 16	36.97	14.96	Village of Churchill Block Assessment No.3 lands	\$0.00	\$0.00	\$300.00	\$300.00
<b>Total on Privately-Owned - Non-Agricultural Lands.....</b>					<b>\$0.00</b>	<b>\$97.00</b>	<b>\$2,326.00</b>	<b>\$2,423.00</b>

**PRIVATELY-OWNED - AGRICULTURAL LANDS**

Roll No.	Description	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
00214400	CON 3 S PT LOT 13	100.00	40.47	Yamamoto Haruko & Kerry S, Yamamoto Shigeo,	\$6,363.00	\$387.00	\$802.00	\$7,552.00
00311400	CON 4 S PT LOT 16 PLUS	41.00	16.59	Sinclair Keith D, Sinclair Ruth E,	\$0.00	\$0.00	\$334.00	\$334.00
00220200	CON 3 N PT LOT 14 & 15	129.59	52.44	Top Hill View Estates Inc,	\$0.00	\$0.00	\$1,053.00	\$1,053.00
00214500	CON 3 S PT LOT 14	100.00	40.47	Kell Emily Anne, Kell Larry E,	\$0.00	\$0.00	\$813.00	\$813.00
00214600	CON 3 S PT LOT 15	50.00	20.23	Campbell Marjorie A,	\$0.00	\$0.00	\$406.00	\$406.00
00214700	CON 3 S PT LOT 15	50.00	20.23	Tsui Leung-Cho,	\$0.00	\$0.00	\$406.00	\$406.00
00300500	CON 3 N PT LOT 16	97.30	39.38	Sinclair Ruth E, Sinclair Keith D,	\$0.00	\$0.00	\$792.00	\$792.00
00215000	CON 3 S PT LOT 16	97.06	39.28	Campbell Colin R, Todd Sarah Marjorie,	\$0.00	\$0.00	\$790.00	\$790.00
00220000	CON 3 N PT LOT 17	24.71	10.00	Kell Farms Limited,	\$0.00	\$0.00	\$201.00	\$201.00
00215300	CON 3 S PT LOT 17 RP 51	21.65	8.76	Kell John Albert,	\$0.00	\$0.00	\$176.00	\$176.00
00215400	CON 3 S PT LOT 17	24.07	9.74	Kell Donna Jean Chantler,	\$0.00	\$0.00	\$196.00	\$196.00
00221600	CON 4 S PT LOT 17	9.88	4.00	Kell Susan Frances, Kell John Albert,	\$0.00	\$0.00	\$80.00	\$80.00
<b>Total on Privately-Owned - Agricultural Lands.....</b>					<b>\$6,363.00</b>	<b>\$387.00</b>	<b>\$6,049.00</b>	<b>\$12,799.00</b>

**SECTION 26 INCREASED COSTS - NON PRO-RATABLE**

Description	Owner	Special Benefit	Benefit	Outlet	Total Assessment
3rd Line	Town of Innisfil	\$37,296.00	\$0.00	\$0.00	\$37,296.00
<b>Total Section 26 Increased Costs (Non Pro-ratable).....</b>		<b>\$37,296.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$37,296.00</b>

<b>TOTAL ASSESSMENT - 3RD LINE SPUR DRAIN.....</b>		<b>\$43,659.00</b>	<b>\$1,061.00</b>	<b>\$14,480.00</b>	<b>\$59,200.00</b>
	(Acres)	(Ha.)			
<b>Total Area:</b>	<b>1,194.24</b>	<b>483.28</b>			

**"SCHEDULE D5"**  
**DETAILS OF SPECIAL BENEFIT**  
**3rd LINE SPUR DRAIN**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

**SPECIAL BENEFIT ASSESSMENT**  
**(GENERAL DESCRIPTION OF SPECIAL BENEFIT)**

Roll No.	Owner	Item Description	Estimated Cost	Cost of Report	Special Benefit
00214400	Mccarthy Michael J, Mccarthy Brenda J,	Station 0+598 (Roll No. 002-14400) – Replace existing 7.8 m long, 1500 mm diameter CSP with a new 12 m long, 1500 mm diameter spiral rib SRP c/w sloping stone endwalls (25%)	\$3,550.00	\$923.00	\$4,473.00
		Station 0+172 (Roll No. 002-14400) - Remove collapsed footbridge from drain (100%)	\$500.00	\$130.00	\$630.00
		Supply and place stone erosion protection at tributary drain inlets - 10 tonnes approx. (100%)	\$1,000.00	\$260.00	\$1,260.00
		Subtotal Roll No. 00214400	\$5,050.00	\$1,313.00	\$6,363.00
<b>Total Special Benefit Assessment (Excl. Non Pro-Ratable Costs).....</b>			\$5,050.00	\$1,313.00	\$6,363.00

**SPECIAL BENEFIT ASSESSMENT**  
**(SECTION 26 - NON PRO-RATABLE COSTS)**

Roll No.	Owner	Item Description	Estimated Cost	Cost of Report	Special Benefit
3rd Line	Town of Innisfil	Supply and place stone erosion protection at tributary drain inlets - 10 tonnes approx. (100%)	\$1,000.00	\$260.00	\$1,260.00
		Station 0+012 – Replace existing 17 m long, 1800mm x 1100mm CSPA with a new 25 m long, 2010mm x 1530mm CSPA c/w sloping stone endwalls (100%)	\$28,600.00	\$7,436.00	\$36,036.00
		Subtotal 3rd Line	\$29,600.00	\$7,696.00	\$37,296.00
<b>Total Special Benefit Assessment (Non Pro-Ratable Costs).....</b>			\$29,600.00	\$7,696.00	\$37,296.00

**OVERALL TOTAL SPECIAL BENEFIT ASSESSMENT ..... \$43,659.00**

**"SCHEDULE B6"**  
**SCHEDULE OF ALLOWANCES**  
**10 SIDEROAD DRAIN**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

Roll No.	Description	Owner	Section 30 Damages	Section 29 Land	Total Allowances
00123800	CON 3 PT LOT 10	Bryan Adam,	\$0.00	\$9,042.00	\$9,042.00
00123900	CON 3 S PT LOT 10	Leal Fernanda Maria,	\$605.00	\$1,452.00	\$2,057.00
00124100	CON 3 S PT LOT 10	Nelson Michael Andrew, Nelson Melissa Ellen,	\$638.00	\$3,424.00	\$4,062.00
00124200	CON 3 PT LOT 10	Chow Joseph,	\$6,131.00	\$14,658.00	\$20,789.00
00126000	CON 4 S PT LOT 10 RP	Pillitteri Pasquale,	\$304.00	\$594.00	\$898.00
<b>TOTAL ALLOWANCES .....</b>			<b>\$7,678.00</b>	<b>\$29,170.00</b>	<b>\$36,848.00</b>



**"SCHEDULE C6"**  
**SCHEDULE OF ASSESSMENT**  
**10 SIDEROAD DRAIN**  
**COUNTY OF SIMCOE (TOWN OF INNISFIL)**

**MUNICIPAL LANDS:**

Description	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
	(Acres)	(Ha.)					
3rd Line	40.13	16.24	Town of Innisfil	\$0.00	\$5,798.00	\$4,499.00	\$10,297.00
4th Line	40.23	16.28	Town of Innisfil	\$0.00	\$5,811.00	\$8,692.00	\$14,503.00
5th Line	38.57	15.61	Town of Innisfil	\$0.00	\$5,427.00	\$4,274.00	\$9,701.00
10 Sideroad	48.51	19.63	Simcoe County	\$0.00	\$17,833.00	\$10,750.00	\$28,583.00
Total on Municipal Lands.....				\$0.00	\$34,869.00	\$28,215.00	\$63,084.00

**PRIVATELY-OWNED - NON-AGRICULTURAL LANDS:**

Roll No.	Description	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
00126201	CON 4 N PT LOT 9 RP 51R12167	0.46	0.19	Winslow Daryl, Winslow Linda,	\$0.00	\$0.00	\$129.00	\$129.00
00125910	CON 4 S PT LOT 9 RP 51R25573	1.00	0.40	Thew James, Thew Doris,	\$0.00	\$0.00	\$183.00	\$183.00
00126100	CON 4 N PT LOT 10 RP	97.57	39.49	Pillitteri Pasquale,	\$0.00	\$0.00	\$9,023.00	\$9,023.00
00126110	CON 4 N PT LOT 10 RP	0.59	0.24	Hillock Jean C,	\$0.00	\$0.00	\$155.00	\$155.00
00126000	CON 4 S PT LOT 10 RP	99.56	40.29	Pillitteri Pasquale,	\$0.00	\$3,194.00	\$9,206.00	\$12,400.00
00123000	CON 3 S PT LOT 8	2.00	0.81	Petropoulos Peter,	\$0.00	\$0.00	\$56.00	\$56.00
				Petropoulos Jean,				
00123001	CON 3 W PT LOT 8 RP 51R17195	0.93	0.38	Allen Robert James,	\$0.00	\$0.00	\$44.00	\$44.00
00123200	CON 3 S PT LOT 8 RP 51R8351	0.46	0.19	Dermott Gwen Ellen,	\$0.00	\$0.00	\$31.00	\$31.00
00124801	CON 3 PT LOT 8 RP 51R27991	2.47	1.00	Reynolds Glenn Thomas,	\$0.00	\$0.00	\$236.00	\$236.00
				Reynolds Michealle Edith,				
00124500	CON 3 N PT LOT 9	24.78	10.03	1765448 Ontario Inc,	\$0.00	\$0.00	\$2,098.00	\$2,098.00
00123400	CON 3 PT LOT 9	52.58	21.28	Petrolo Elizabeth,	\$0.00	\$0.00	\$1,547.00	\$1,547.00
00123600	CON 3 PT LOT 9	50.00	20.23	Collins Gloria J, Collins Kevin	\$0.00	\$0.00	\$1,470.00	\$1,470.00
00124300	CON 3 N PT LOT 10 51R18321	2.97	1.20	Perkins Donna Sue, Perkins Harry James,	\$0.00	\$0.00	\$263.00	\$263.00
00124301	CON 3 PT LOT 10 51R 18321	20.76	8.40	Squibb Harry G,	\$0.00	\$0.00	\$1,658.00	\$1,658.00
00123700	CON 3 S PT LOT 10	10.00	4.05	Levy Kevin Arnold,	\$0.00	\$0.00	\$223.00	\$223.00
00123800	CON 3 PT LOT 10	11.00	4.45	Bryan Adam,	\$7,582.00	\$1,365.00	\$306.00	\$9,253.00
00123900	CON 3 S PT LOT 10	14.94	6.05	Leal Fernanda Maria,	\$5,723.00	\$1,227.00	\$715.00	\$7,665.00
00124100	CON 3 S PT LOT 10	14.94	6.05	Nelson Michael Andrew, Nelson Melissa Ellen,	\$2,360.00	\$1,205.00	\$929.00	\$4,494.00
Total on Privately-Owned - Non-Agricultural Lands.....				\$15,665.00	\$6,991.00	\$28,272.00	\$50,928.00	

**PRIVATELY-OWNED - AGRICULTURAL LANDS**

Roll No.	Description	Area Affected		Owner	Special Benefit	Benefit	Outlet	Total Assessment
		(Acres)	(Ha.)					
00126400	CON 4 N PT LOT 7	92.63	37.49	1665328 Ontario Ltd,	\$0.00	\$0.00	\$8,473.00	\$8,473.00
00125500	CON 4 S PT LOT 7 RP 51R18261	34.97	14.15	Franline Investments Limited,	\$0.00	\$0.00	\$4,378.00	\$4,378.00
00125600	CON 4 S PT LOT 7 RP 51R2122	25.00	10.12	Del Bel Belluz N & C, Grillo Frank & Nina,	\$0.00	\$0.00	\$3,669.00	\$3,669.00
00125800	CON 4 PT LOTS 8 AND 9 RP	149.26	60.40	Posius Vytautas, Posius Doris	\$0.00	\$0.00	\$11,177.00	\$11,177.00
00126300	CON 4 N PT LOT 8	100.00	40.47	Eschli Jamie, Eschli Michael,	\$0.00	\$0.00	\$6,877.00	\$6,877.00
00125801	CON 4 PT LOT 8 RP 51R16304	0.57	0.23	Coutts Reta M,	\$0.00	\$0.00	\$49.00	\$49.00
00126200	CON 4 N PT LOT 9	99.50	40.27	Lucas William G, Lucas Ruth Adeline,	\$0.00	\$0.00	\$9,200.00	\$9,200.00
00125900	CON 4 S PT LOT 9 RP 51R21455	48.77	19.74	S I L Developments Inc, Zaretsky Ruth, Soudack	\$0.00	\$0.00	\$4,510.00	\$4,510.00
00125000	CON 3 N PT LOT 7	12.35	5.00	Albanese John D, Albanese	\$0.00	\$0.00	\$1,047.00	\$1,047.00
00122900	CON 3 S PT LOT 7	7.42	3.00	1665328 Ontario Ltd,	\$0.00	\$0.00	\$165.00	\$165.00
00124900	CON 3 W PT LOT 8 RP 51R19347	96.35	38.99	1665328 Ontario Ltd,	\$0.00	\$0.00	\$4,060.00	\$4,060.00
00124600	CON 3 E PT LOT 8 RP 51R4914	24.89	10.07	Woods Cheryl Lee, Woods Philip Daniel,	\$0.00	\$0.00	\$1,490.00	\$1,490.00

Roll No.	Description	Area Affected (Acres) (Ha.)		Owner	Special Benefit	Benefit	Outlet	Total Assessment
00124800	CON 3 E PT LOT 8 RP 51R4962	79.27	32.08	1665328 Ontario Ltd,	\$0.00	\$0.00	\$3,341.00	\$3,341.00
00124400	CON 3 N PT LOT 9	24.70	10.00	Wilson James A, Wilson	\$0.00	\$0.00	\$2,093.00	\$2,093.00
00123500	CON 3 PT LOT 9 RP 51R12114	56.15	22.72	Desroche Kenneth Michael, Desroche Laura Lee,	\$0.00	\$0.00	\$1,652.00	\$1,652.00
00124200	CON 3 PT LOT 10	133.59	54.06	Chow Joseph,	\$47,082.00	\$10,258.00	\$10,396.00	\$67,736.00
Total on Privately-Owned - Agricultural Lands.....					\$47,082.00	\$10,258.00	\$72,577.00	\$129,917.00

**SECTION 26 INCREASED COSTS - NON PRO-RATABLE**

Description	Owner	Special Benefit	Benefit	Outlet	Total Assessment
10th Sideroad	Simcoe County	\$16,284.00	\$0.00	\$0.00	\$16,284.00
3rd Line	Town of Innisfil	\$28,851.00	\$0.00	\$0.00	\$28,851.00
4th Line	Town of Innisfil	\$16,284.00	\$0.00	\$0.00	\$16,284.00
Total Section 26 Increased Costs (Non Pro-ratable).....		\$61,419.00	\$0.00	\$0.00	\$61,419.00

<b>TOTAL ASSESSMENT - 10 SIDEROAD DRAIN.</b> .....		<b>\$124,166.00</b>	<b>\$52,118.00</b>	<b>\$129,064.00</b>	<b>\$305,348.00</b>
	(Acres) (Ha.)				
<b>Total Area:</b>	<b>1,559.87 631.28</b>				

**"SCHEDULE D6"  
 DETAILS OF SPECIAL BENEFIT  
 10 SIDEROAD DRAIN  
 COUNTY OF SIMCOE (TOWN OF INNISFIL)**

**SPECIAL BENEFIT ASSESSMENT  
(GENERAL DESCRIPTION OF SPECIAL BENEFIT)**

Roll No.	Owner	Item Description	Estimated Cost	Cost of Report	Special Benefit
00123800	Allen Robert James,	Station 0+142 (Roll No. 001-23800) – Replace existing 10 m long, 900 mm diameter CSP with a new 13 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls (25%)	\$4,925.00	\$887.00	\$5,812.00
		Trucking of additional materials, where specified (Property Roll No. 001-23800) (100%)	\$1,500.00	\$270.00	\$1,770.00
		Subtotal Roll No. 00123800	6,425.00	1,157.00	7,582.00
00123900	Dermott Gwen Ellen,	Station 0+267 (Roll No. 001-23900) – Replace existing 15 m long, 900 mm diameter CSP with a new 17 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls. (25%)	\$4,850.00	\$873.00	\$5,723.00
00124100	Petrolo Elizabeth,	Supply and place stone erosion protection at tributary drain inlets. (100%)	\$1,000.00	\$180.00	\$1,180.00
		Supply and place stone erosion protection at tributary drain inlets.(100%)	\$1,000.00	\$180.00	\$1,180.00
		Subtotal Roll No. 00124100	2,000.00	360.00	2,360.00
00124200	Desroche Kenneth Michael, Desroche	Station 0+411 (Roll No. 001-24200) – Replace existing 7.8 m long, 1200 mm diameter steel boiler plate culvert with a new 14 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls (100%)	\$18,400.00	\$3,312.00	\$21,712.00
		Station 0+658 (Roll No. 001-24200) – Replace existing 7.8 m long, 1200 mm diameter steel boiler plate culvert with a new 14 m long, 1800 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls (25%)	\$4,600.00	\$828.00	\$5,428.00
		Station 1+227 (Roll No. 001-24200) – Replace existing 6.1 m long, 900 mm diameter CSP with a new 13 m long, 1500 mm diameter spiral rib galvanized steel pipe (SRP) c/w sloping stone endwalls (100%)	\$15,900.00	\$2,862.00	\$18,762.00
		Supply and place stone erosion protection at tributary drain inlets.(100%)	\$1,000.00	\$180.00	\$1,180.00
		Subtotal Roll No. 00124200	39,900.00	7,182.00	47,082.00
<b>Total Special Benefit Assessment (Excl. Non Pro-Ratable Costs).....</b>			<b>\$53,175.00</b>	<b>\$9,572.00</b>	<b>\$62,747.00</b>

**SPECIAL BENEFIT ASSESSMENT  
(SECTION 26 - NON PRO-RATABLE COSTS)**

Roll No.	Owner	Item Description	Estimated Cost	Cost of Report	Special Benefit
3rd Line	Town of Innisfil	Station 0+017 (3 <sup>rd</sup> Line) – Replace existing 12.5 m long, 1800 mm x 1150 mm CSP arch with a new 15 m long, 2000 mm diameter spiral rib polymer laminated corrugated steel (SRP) c/w sloping stone endwalls (100%)	\$22,450.00	\$4,041.00	\$26,491.00
3rd Line	Town of Innisfil	Supply and place stone erosion protection at tributary drain inlets - 10 tonnes approx. (100%)	\$1,000.00	\$180.00	\$1,180.00
3rd Line	Town of Innisfil	Supply and place stone erosion protection at tributary drain inlets - 10 tonnes approx. (100%)	\$1,000.00	\$180.00	\$1,180.00
4th Line	Town of Innisfil	Station 1+438 (4 <sup>th</sup> Line) – Replace existing 17.6 m long, 900 mm diameter CSP with a new 18 m long, 1200 mm diameter galvanized corrugated steel pipe (CSP) c/w sloping stone endwalls (100%)	\$12,800.00	\$2,304.00	\$15,104.00
4th Line	Town of Innisfil	Supply and place stone erosion protection at tributary drain inlets - 10 tonnes approx. (100%)	\$1,000.00	\$180.00	\$1,180.00
10 Sideroad	Simcoe County	Station 1+463 (10 Sideroad) – Replace existing 15.7 m long, 450 mm diameter CSP with a new 16 m long, 600mm diameter polymer laminated corrugated steel pipe CSP c/w sloping stone endwalls (100%)	\$8,000.00	\$1,440.00	\$9,440.00
10 Sideroad	Simcoe County	Station 0+028 (3 <sup>rd</sup> Line north road ditch west side) - Supply and install 900 mm diameter corrugated steel pipe (CSP), 6.0 m long c/w flap gate on outlet end and stone erosion protection (100%)	\$5,800.00	\$1,044.00	\$6,844.00
<b>Total Special Benefit Assessment (Non Pro-Ratable Costs).....</b>			<b>\$52,050.00</b>	<b>\$9,369.00</b>	<b>\$61,419.00</b>
<b>OVERALL TOTAL SPECIAL BENEFIT ASSESSMENT .....</b>					<b>\$124,166.00</b>

”SCHEDULE F”  
DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN & BRANCHES**  
TOWN OF INNISFIL  
COUNTY OF SIMCOE

**SPECIAL PROVISIONS**

**1.0 GENERAL SPECIFICATIONS**

The General Specifications attached hereto is part of “Schedule F”. It also forms part of this specification and is to be read with it, but where there is a difference between the requirements of the General Specifications and those of the Special Provisions which follow refer to the sections within these Special Provisions.

**2.0 DESCRIPTION OF WORK**

The work to be carried out under this Contract includes, but is not limited to, the supply of all **labour and materials** to complete the tasks listed under the estimated costs of recommended works, contained within this report.

**3.0 ACCESS TO THE WORK & WORKING AREA**

**SOUTH INNISFIL CREEK MAIN DRAIN**

Due to the length of the drain and extent of the recommended drainage improvements, access to the drain will be required from several points. All road areas, grass lawn areas and natural swales disturbed shall be restored to original conditions at the Contractor’s expense.

FROM STA.	TO STA.	ACCESS LOCATION
-0+570	0+000	15 <sup>th</sup> Line
0+023	0+624	5 Sideroad
0+649	1+060	5 Sideroad
1+060	1+589	5 Sideroad
1+693	2+774	2 <sup>nd</sup> Line
2+794	4+900	2 <sup>nd</sup> Line or 3 <sup>rd</sup> Line
4+900	5+555	3 <sup>rd</sup> Line – Private access culvert located on property Roll 001-20900
5+576	5+753	3 <sup>rd</sup> Line – Private access culvert located on property Roll 002-12900
5+775	7+332	3 <sup>rd</sup> Line
7+368	9+304	5 <sup>th</sup> Line
Overflow Area 1		15 <sup>th</sup> Line
Overflow Area 3		5 <sup>th</sup> Line

The majority of the working area required for the recommended improvements shall be within the working corridor on private lands. A 9 m wide working corridor is recommended for the placement of excess drain spoils not utilized in the construction of the berms. This corridor will also provide access for equipment and temporary placement of construction materials. For the replacement of the South Innisfil Drain road culvert under 4<sup>th</sup> Line, between approximately Station 7+333 and Station 7+369, the working corridor shall be within the 4<sup>th</sup> Line right-of-way. At least one lane of 4<sup>th</sup> Line Road shall remain open during the construction period and traffic control (found in General Specifications) maintained at all times. Any damages to lands and/or roads from the Contractor's work within the working area for the bridge site or drain access points shall be repaired to pre-existing conditions at his expense.

The Contractor shall restrict his equipment to the working corridors as specified in this section. Any damage resulting from non-compliance with this section shall be borne by the Contractor. The working corridor shall be measured from the top of the drain bank and shall be as follows:

<b>FROM STA.</b>	<b>TO STA.</b>	<b>PRIMARY (See Note 1)</b>	<b>SECONDARY (See Note 2)</b>
-0+570	0+000	9.0 m wide on south side of drain*	9.0 m wide on north side of drain
0+023	0+624	9.0 m wide on both sides of drain*	None
0+649	1+060	9.0 m wide on south side of drain*	9.0 m wide on north side of drain
1+060	1+589	9.0 m wide on both sides of drain*	None
1+693	2+774	9.0 m wide on both sides of drain*	None
2+794	4+900	9.0 m wide on both sides of drain*	None
4+900	5+555	9.0 m wide on west side of drain*	10 <sup>th</sup> Sideroad road allowance
5+576	5+753	9.0 m wide on south side of drain*	3 <sup>rd</sup> Line road allowance
5+775	7+332	9.0 m wide on east side of drain*	9.0 m wide on west side of drain
7+368	9+304	9.0 m wide on both sides of drain*	None

#### HNYDCZAK OUTLET RELIEF DRAIN

Access to the drain shall be from the Highway 400 off ramp located on the east property limit of property Roll 001-02200. The Contractor shall make his/her own arrangements for any additional access for his/her convenience. All road areas and grass lawn areas disturbed shall be restored to original conditions at the Contractor's expense. Through traffic must be maintained at all times along the road with the required traffic control as per Section 13.0 in the General Specifications. Any damage resulting from the Contractor's access to site shall be rectified to pre-existing conditions at his expense.

For the cleaning of the Hnydczak Outlet Relief Drain road culvert under Rieve Blvd. and Highway 400 between approximately Station 0+500 and Station 0+680, the working corridor shall be within Rieve Blvd. right-of-way. At least one lane of Rieve Blvd. shall remain open during the construction period and traffic control (found in General Specifications) maintained at all times. The working area at the bridge site shall be restricted to a radius of 20.0 m from the proposed centre of the new culvert.

The Contractor shall restrict his equipment to the working corridors as specified in this section. Any damage resulting from non-compliance with this section shall be borne by the Contractor. The working corridor shall be measured from the top of the drain bank and shall be as follows:

<b>FROM STA.</b>	<b>TO STA.</b>	<b>PRIMARY (See Note 1)</b>	<b>SECONDARY (See Note 2)</b>
0+000	0+240	9.0 m wide on east side of drain*	9.0 m wide on west side of drain
0+240	0+500	9.0 m wide on north side of drain*	9.0 m wide on south side of drain

### 10 SIDEROAD BRANCH DRAIN

Access to the drain shall be from 10 Sideroad at the existing farm accesses. The Contractor shall make his/her own arrangements for any additional access for his/her convenience. All road areas and grass lawn areas disturbed shall be restored to original conditions at the Contractor's expense.

For the replacement of the 10 Sideroad Branch Drain road culvert under 3<sup>rd</sup> Line, between approximately Station 0+010 and Station 0+028, the working corridor shall be restricted to a radius of 20.0 m from the proposed centre of the new culvert within 3<sup>rd</sup> Line right-of-way. The road culvert under 4<sup>th</sup> Line, between approximately Station 1+429 and Station 1+448, the working corridor shall be restricted to a radius of 20.0 m from the proposed centre of the new culvert within the 4<sup>th</sup> Line right-of-way. At least one lane of 3<sup>rd</sup> and 4<sup>th</sup> Line shall remain open during the construction period and traffic control (found in General Specifications) maintained at all times. Any damages to lands and/or roads from the Contractor's work within the working area for the bridge site or drain access points shall be repaired to pre-existing conditions at his expense.

The Contractor shall restrict his equipment to the working corridors as specified in this section. Any damage resulting from non-compliance with this section shall be borne by the Contractor. The working corridor shall be measured from the top of the drain bank and shall be as follows:

<b>FROM STA.</b>	<b>TO STA.</b>	<b>PRIMARY (See Note 1)</b>	<b>SECONDARY (See Note 2)</b>
0+025	0+168	10 <sup>th</sup> Sideroad road allowance	9.0 m wide on west side of drain
0+168	1+500	9.0 m wide on west side of drain*	10 <sup>th</sup> Sideroad road allowance

### 3<sup>RD</sup> LINE BRANCH DRAIN

Access to the drain shall be from 3<sup>rd</sup> Line at the existing farm accesses. The Contractor shall make his/her own arrangements for any additional access for his/her convenience. All road areas and grass lawn areas disturbed shall be restored to original conditions at the Contractor's expense.

For the replacement of the private access culverts, the working corridor shall be restricted to a radius of 20.0 m from the proposed centre of the new culvert. Any damages to lands and/or roads from the Contractor's work within the working area for the bridge site or drain access points shall be repaired to pre-existing conditions at his expense.

The Contractor shall restrict his equipment to the working corridors as specified in this section. Any damage resulting from non-compliance with this section shall be borne by the Contractor. The working corridor shall be measured from the top of the drain bank and shall be as follows:

FROM STA.	TO STA.	PRIMARY (See Note 1)	SECONDARY (See Note 2)
0+000	0+800	9.0 m wide on south side of drain*	3 <sup>rd</sup> Line road allowance
0+800	1+733	3 <sup>rd</sup> Line road allowance	9.0 m wide on south side of drain

### 3<sup>RD</sup> LINE SPUR DRAIN

Access to the drain shall be from 3<sup>rd</sup> Line at the existing farm accesses. The Contractor shall make his/her own arrangements for any additional access for his/her convenience. All road areas and grass lawn areas disturbed shall be restored to original conditions at the Contractor's expense.

For the replacement of the private access culverts, the working corridor shall be restricted to a radius of 20.0 m from the proposed centre of the new culvert. For the replacement road culvert under 3<sup>rd</sup> Line, between approximately Station 0+002 and Station 0+023, the working corridor shall be restricted to a radius of 20.0 m from the proposed centre of the new culvert within 3<sup>rd</sup> Line right-of-way. Any damages to lands and/or roads from the Contractor's work within the working area for the bridge site or drain access points shall be repaired to pre-existing conditions at his expense.

The Contractor shall restrict his equipment to the working corridors as specified in this section. Any damage resulting from non-compliance with this section shall be borne by the Contractor. The working corridor shall be measured from the top of the drain bank and shall be as follows:

FROM STA.	TO STA.	PRIMARY (See Note 1)	SECONDARY (See Note 2)
0+024	0+775	3 <sup>rd</sup> Line road allowance	9.0 m wide on north side of drain

Note 1: *Primary working corridor* indicates the access corridor along the side of the drain where excavation and levelling is recommended (unless noted otherwise below and/or in the Specifications, as well as all purposes listed for Secondary Working Corridors).

Note 2: *Secondary working corridor* indicates the access corridor along side the drain where construction equipment may travel for the purpose of trucking, drain bank repairs, tile inlet repairs, surface water inlet repairs, grass buffer strips and other miscellaneous works. **No disposal of fill or levelling of materials shall be permitted within a secondary working corridor. As further specified, use of this secondary working corridor may be further restricted due to site condition. Read all Specifications, drawings and/or notes before completing works.**

**\*Note:** *For future works of maintenance on the drain and in the event that a landowner owns the property on both sides of the drain, the landowner can choose which side of the drain to place the spoil. The landowner should advise the Drainage Superintendent of their preference of spoil placement before improvements to the drain are made so that the Drainage Superintendent can notify the Contractor in advance.*



## SPECIAL PROVISIONS – OPEN DRAIN

### 4.0 BRUSHING

Brushing shall be carried out on the entire drain within the above identified sections of the drain where required and as specified herein. **All** brush and trees located within the drain side slopes shall be cut parallel to the side slopes, as close to the ground as practicable. Tree branches that overhang the drain shall be trimmed. Small branches and limbs are to be disposed of by the Contractor along with the other brush. Tree stumps where removed to facilitate the drain excavation and reshaping of the drain banks may be burned by the Contractor where permitted; otherwise, they shall be disposed of, off the site. The Contractor shall make every effort to preserve mature trees which are beyond the drain side slopes, and the working corridors. If requested to do so by the Drainage Superintendent, the Contractor shall preserve certain mature trees within the designated working corridors (see Section 4.0).

Except as specified herein, all brush and trees shall be stockpiled adjacent to the drain within the working corridors. Stockpiles shall not be less than 100 m apart and shall be a minimum of 2.0 m from the edge of the drain bank. All brush, timber, logs, stumps, large stones or other obstructions and deleterious materials that interfere with the construction of the drain, as encountered along the course of the drain are to be removed from the drain by the Contractor. Large stones and other similar material shall be disposed of by the Contractor off the site.

Following completion of the work, the Contractor is to trim up any broken or damaged limbs on trees which remain standing, disposing of the branches cut off along with other brush and leaving the trees in a neat and tidy condition. Brush and trees removed from the working area are to be put into piles by the Contractor, in locations where they can be safely burned, and to be burned by the Contractor after obtaining the necessary permits, as required. If, in the opinion of the Drainage Superintendent, any of the piles are too wet or green to be burned, he shall so advise the Contractor to haul away the unburned materials to an approved dump site. Prior to, and during the course of burning operations, the Contractor shall comply with the current guidelines prepared by the Air Quality Branch of the Ontario Ministry of Environment and shall ensure that the Environmental Protection Act is not violated. Since the trees and brush that are cut off flush with the earth surface may sprout new growth later, it is strongly recommended that the Municipality make arrangements for spraying this new growth at the appropriate time so as to kill the trees and brush.

As part of this work, the Contractor shall remove any loose timber, logs, stumps, large stones or other debris from the drain bottom and from the side slopes. **Timber, logs, stumps, large stones or other debris shall be disposed of off-site.**

### 5.0 EXCAVATION AND LEVELLING OF EXCAVATED MATERIALS

#### 5.1 Excavation of Existing Drain Channel

In all cases, the Contractor shall use the benchmarks to establish the proposed grade. However, for convenience, the drawings provide the approximate depth from the surface of the ground and from the existing drain bottom to the proposed grades. **THE CONTRACTOR SHALL NOT EXCAVATE DEEPER THAN THE GRADELINES SHOWN ON THE DRAWINGS.** Should over-excavation of the drain bank occur, the Contractor will **not** be permitted to repair with native material packed into place by the excavator and reshaped. Should over-excavation occur, the Contractor will be required to have a bank repair detail engineered by a Professional Engineer (hired by the Contractor), to ensure long term stability of the bank is maintained. Such repairs shall be subject to approval by the Engineer and will be at no extra cost to the item.

All excavated material shall be handled as specified in Section 6.2. Materials deposited on the farmlands shall be within the working corridors, at least 3.0 m (3m wide Buffer Strip) from the top of the drain bank, or as specified on the drawings. Upon allowing drying of excavated materials (if necessary) and as approved by the Drainage Superintendent, the Contractor shall level excavated materials in accordance with Section 6.2. Excavated material shall not be placed on dykes, in ditches, tiles or depressions intended to conduct water into the drain.

Seeding of the disturbed drain banks shall be completed immediately following drain construction and as specified in Section 17.

All excavation work shall be done in such a manner as to not harm any vegetation or trees, not identified in this report or by the Drainage Superintendent for clearing. Any damages to trees or vegetation caused by the Contractors work shall be rectified to the satisfaction of the Drainage Superintendent.

The Contractor shall exercise caution around existing tile inlets and shall confirm with the property owners that all tiles have been located and tile ends repaired as specified.

## **5.2 Levelling of Excavated Materials**

Excavation of the drain bottom shall be completed as specified in Section 6.1, above and also as specified below and as shown on the drawings.

Excavated drain materials shall be spread to a depth not to exceed 300 mm, unless specified otherwise on the drawings. The material shall be sufficiently levelled to allow further working by agricultural implements. All stones and other debris removed from the drain, which may interfere with agricultural implements, shall be disposed of off-site. Excavated material shall not be placed on dykes, in ditches, tiles or depressions intended to conduct water into the drain.

## **6.0 STONE EROSION PROTECTION (SEP)**

The Contractor shall supply and install the required quantities of graded stone rip-rap erosion protection materials where specified. All stone to be used for erosion protection shall be 125 - 250 mm clear **quarried rock** or OPSS 1001 placed over a non-woven filter fabric Terrafix 270R or approved equivalent. **Concrete rip-rap will not be permitted.**

The minimum thickness requirement of the erosion stone layer is 300 mm with no portion of the filter fabric to be exposed.

## **7.0 HYDRAULIC SEEDING OF DRAIN BANKS**

All existing grassed areas disturbed by construction shall be hydraulic mulch seeded as specified herein. The existing ground surface to be seeded shall be loosened to a depth of 25 mm and shall be rendered uniformly loose for that 25 mm depth. The surface shall be predominantly fine and free from weeds and other unwanted vegetation. All other loose surface litter shall be removed and disposed of.

Hydraulic mulch shall consist of finely ground cellulose pulp derived from recycled newsprint and shall be dyed green. Its fiber consistency shall be approximately 60% fine fiber with the balance being paper particles, 40% of which shall be a diameter of 3 mm minimum and 6 mm maximum. Hydraulic mulch shall be applied at 2,000 kg per 10,000 m<sup>2</sup>. Clean water shall be applied at 42,700 liters per 10,000 m<sup>2</sup>.

Seeding and mulching shall be a one step process in which the seed, fertilizer and hydraulic mulch are applied simultaneously in a water slurry via the hydraulic seeder/mulcher. The materials shall be added to the supply tank while it is being loaded with water. The materials shall be thoroughly mixed into a homogeneous water slurry and shall be distributed uniformly over the prepared surface. The materials shall be measured by mass or by a mass-calibrated volume measurement, acceptable to the Drainage Superintendent.

The hydraulic seeder/mulcher shall be equipped with mechanical agitation equipment capable of mixing the materials into a homogenous state until applied. The discharge pumps and gun nozzles shall be capable of applying the material uniformly.

Grass seed shall be Canada No. 1 grass seed mixture meeting the requirements of a Waterway Slough Mixture as supplied by Growmark or approved equal, as follows:

<i>Creeping Red Fescue</i>	20%
<i>Meadow Fescue</i>	30%
<i>Tall Fescue</i>	30%
<i>Timothy</i>	10%
<i>White Clover</i>	10%

Bags shall bear the label of the supplier indicating the content by species, grade and mass. Seed shall be applied at a rate of 200 kg per 10,000 m<sup>2</sup>.

Fertilizer shall be 8-32-16 applied at 350 kg per 10,000 m<sup>2</sup>. It shall be in granular form, dry, free from lumps and in bags bearing the label of the manufacturer, indicating mass and analysis.

**The hydraulic seeding shall be deemed "Completed by the Contractor" when the seed has established in all areas to the satisfaction of the Engineer. Re-seeding and/or other methods required to establish the grass will be given consideration to achieve the end result and the costs shall be incidental to the works.**

## 8.0 SEEDING GRASS BUFFER STRIPS

Grass buffers shall be established and preserved immediately adjacent to both banks of the new open channel. Grass buffer strips are to be established as indicated in Section 2.0 'Description of Work'. Establishment of grass buffer strips shall be executed using the same seeding methods as described in Section 18.0 of the General Specifications

All existing grassed areas disturbed by construction or as identified as new or existing grass buffers shall be seeded as specified herein. The existing ground surface to be seeded shall be loosened to a depth of 25 mm and shall be rendered uniformly loose for that 25 mm depth. The surface shall be predominantly fine and free from weeds and other unwanted vegetation. All other loose surface litter shall be removed and disposed of. If mulching is required, it shall be carried out by the contractor as part of the item's tendered price.

Grass seed shall be Canada No. 1 grass seed mixture meeting the requirements of a Waterway Slough Mixture as supplied by Growmark or approved equal, as follows:

<i>Creeping Red Fescue</i>	20%
<i>Meadow Fescue</i>	30%
<i>Tall Fescue</i>	30%
<i>Timothy</i>	10%
<i>White Clover</i>	10%

Bags shall bear the label of the supplier indicating the content by species, grade and mass. Seed shall be applied at a rate of 200 kg per 10,000 m<sup>2</sup>.

Fertilizer shall be 8-32-16 applied at 350 kg per 10,000 m<sup>2</sup>. It shall be in granular form, dry, free from lumps and in bags bearing the label of the manufacturer, indicating mass and analysis.

**The seeding shall be deemed "Completed by the Contractor" when the seed has established in all areas to the satisfaction of the Engineer. Re-seeding and/or other methods required to establish the grass will be given consideration to achieve the end result and the costs shall be incidental to the works.**

## 9.0 CLEANING OF PRIVATE ACCESS CULVERTS AND ROAD BRIDGES

At the locations listed below, the Contractor shall clean the existing pipes or culverts to their full capacity and cross section or width. The operation may be carried out by mechanical means or by flushing. Any damage resulting from the Contractor's operation shall be rectified at his expense. All material removed from the pipes or culverts shall be transported to a dump site arranged by the Contractor. The Contractor shall be solely responsible for acquiring all permits required for the dump site. The Contractor shall take precautions during the construction period to avoid re-sedimentation of the pipes and culverts. Any sediment deposited as a result of construction activities shall be removed at the Contractor's expense.

- Culvert Number 2 - Station 0+120.7, 12.2 m long, 600 mm diameter corrugated steel pipe (CSP) culvert.
- Culvert Number 3 – Station 0+150, 9.8 m long, 600 mm diameter corrugated steel pipe (CSP) culvert.
- Culvert Number 4 – Station 0+231.5, 12.2 m long, 600 mm diameter corrugated steel pipe (CSP) culvert.

## 10.0 ACCESS BRIDGE WORK

### 10.1 Location of New Culvert

The new culverts shall be installed as shown on the drawings attached hereto. The centerline of the new culvert shall be located in the center of the existing laneway unless otherwise noted.

### 10.2 Removal of Existing Culverts

The Contractor shall exercise caution when removing these materials as to minimize damage to the drain banks. Any damage to the drain shall be restored to original conditions at the expense of the Contractor. The removed materials (existing culvert debris and end wall materials) shall be hauled away off-site.

#### *Culvert Pipe*

***Galvanized corrugated steel pipe (CSP) wall thickness of 2.8 mm and 125 mm x 25 mm corrugation. New culvert shall be joined with annular galvanized corrugated wide bolt and angle couplers (minimum of 8 corrugation overlap and 2.8 mm wall thickness) and no single pipe less than 6.0 m in length. All pipes connected with couplers shall abut to each other with no more than a 25 mm gap between pipes prior to installation of the coupler.***

***Galvanized corrugated steel pipe arch (CSPA) wall thickness of 2.8 mm and 125 mm x 25 mm corrugation. New culvert shall be joined with annular galvanized corrugated wide bolt and angle couplers (minimum of 8 corrugation overlap and 2.8 mm wall thickness) and no single pipe less than 6.0 m in length. All pipes connected with couplers shall abut to each other with no more than a 25 mm gap between pipes prior to installation of the coupler.***

**Galvanized spiral rib steel pipe (SRP)** wall thickness of 2.8 mm and 19 mm x 19 mm spiral ribs at 190 mm spacing. New culvert shall be joined with band type galvanized couplers and no single pipe less than 6.0 m in length. All pipes connected with couplers shall abut to each other with no more than a 25 mm gap between pipes prior to installation of the coupler.

**Galvanized spiral rib steel pipe arch (SRPA)** wall thickness of 2.8 mm and 19 mm x 19 mm spiral ribs at 190 mm spacing. New culvert shall be joined with band type galvanized couplers and no single pipe less than 6.0 m in length. All pipes connected with couplers shall abut to each other with no more than a 25 mm gap between pipes prior to installation of the coupler.

**Structural steel plate corrugated bridge** with 381 mm x 140 mm corrugations and 8.0 mm thickness (AIL Super-Cor box culvert or approved equivalent), complete with sheet steel end walls (to be designed by Contractor). Reference notes on Drawing Page 58 (details 9 & 10).

<i>Pipe Bedding Below Pipe, Including Under Haunches</i>	<i>20-25 mm clear stone conforming to OPSS Division 10.</i>
<i>Backfill up to Pipe Culvert Springline</i>	<i>Granular 'B' conforming to OPSS Division 10.</i>
<i>Backfill Above Pipe Springline up to Bottom of Driveway Surface Materials</i>	<i>Granular 'B' conforming to OPSS Division 10.</i>
<i>Driveway Surface</i>	<i>Granular 'A' made from crushed limestone conforming to OPSS Division 10. Minimum 200 mm thickness.</i>
<i>Erosion Stone</i>	<i>All stone to be used for erosion protection shall be 125 - 250 mm clear quarried rock or OPSS 1004, minimum 300 mm thickness.</i>
<i>Buffer Strips</i>	<i>Dry native material free of topsoil, organic matter, broken concrete, steel, wood and deleterious substances.</i>
<i>Filter Fabric</i>	<i>"Non-Woven" geotextile filter fabric with a minimum strength equal to or greater than Terrafix 270R, Amoco 4546, Mirafi 140NC or approved equivalent.</i>

### **10.3 Culvert Installation**

Suitable dykes shall be constructed in the drain so that the installation of the pipe can be accomplished in the dry. The drain bottom shall be cleaned, prepared, shaped and compacted to suit the new culvert configuration, as shown on the drawings. Granular materials shall be compacted to 100% of their maximum dry density; imported clean native materials shall be supplied, placed and compacted to 95% of their maximum dry density.

#### **10.4 Sloping Stone End Walls**

End walls shall be constructed of quarry stone rip-rap, as specified herein. Each end wall shall extend from the invert of the new culvert to the top of the proposed lane. The end walls shall be sloped 1 vertical to 1.5 horizontal with a filter fabric underlay surrounding the pipe and spanning across the entire width of the drain and wrapping around the drain banks to align with the ends of the new pipe culvert. The minimum thickness requirement of the erosion stone layer is 300 mm with no portion of the filter fabric to be exposed to sunlight.

#### **10.5 Granular 'A' Driveway**

The Contractor shall construct the driveway with a maximum 3% longitudinal grade approach over the new culvert providing a minimum 600 mm cover. This work includes the installation of a minimum 200 mm thickness of compacted Granular 'A' (crushed limestone) surface. The minimum top width of the driveway shall be as shown on the drawings.

#### **10.6 Native Materials**

Native materials suitable for use as backfill, as defined under Section 10.2, shall be salvaged from the existing bridge site, as required to complete the work as shown on the drawings, **(Native Backfill Zone only)**. Where there is an insufficient amount of native fill materials for backfilling the culvert, the Contractor may elect to import additional dry native materials or alternatively use Granular 'B' at his/her own expense.

#### **10.7 Lateral Tile Drains**

Should the Contractor encounter any lateral tiles within the proposed culvert limits not shown on attached drawings, the Contractor shall re-route the outlet tile drain(s) in consultation with the Drainage Superintendent, as required, to accommodate the new culvert. **Tile drain outlets through the wall of the new culvert pipe will not be permitted.** All costs associated with re-routing lateral tile drains (if any) shall be at the Contractor's expense.

Care must be taken in handling plastic drain pipe in cold weather to avoid causing damage.

Plastic drain pipe shall be held in position on planned grade immediately after installation by careful placement of backfill material.

## GENERAL SPECIFICATIONS

### **1.0 AGREEMENT AND GENERAL CONDITIONS**

The part of the Specifications headed "Special Provisions" which is attached hereto forms part of this Specification and is to be read with it. Where there is any difference between the requirements of this General Specification and those of the Special Provisions, the Special Provisions shall govern.

Where the word "Drainage Superintendent" is used in this specification, it shall mean the person or persons appointed by the Council of the Municipality having jurisdiction to superintend the work.

Tenders will be received and contracts awarded only in the form of a lump sum contract for the completion of the whole work or of specified sections thereof. The Tenderer agrees to enter into a formal contract with the Municipality upon acceptance of the tender. The General Conditions of the contract and Form of Agreement shall be those of the Stipulated Price Contract CCDC2-Engineers, 1994 or the most recent revision of this document.

### **2.0 EXAMINATION OF SITE, PLANS AND SPECIFICATIONS**

Each tenderer must visit the site and review the plans and specifications before submitting his/her tender and must satisfy himself/herself as to the extent of the work and local conditions to be met during the construction. Claims made at any time after submission of his/her tender that there was any misunderstanding of the terms and conditions of the contract relating to site conditions, will not be allowed. The Contractor will be at liberty, before bidding, to examine any data in the possession of the Municipality or of the Engineer.

The quantities shown or indicated on the drawings or in the report are estimates only and are for the sole purpose of indicating to the tenderers the general magnitude of the work. The tenderer is responsible for checking the quantities for accuracy prior to submitting his/her tender.

### **3.0 MAINTENANCE PERIOD**

The successful Tenderer shall guarantee the work for a period of one (1) year from the date of acceptance thereof from deficiencies that, in the opinion of the Engineer, were caused by faulty workmanship or materials. The successful Tenderer shall, at his/her own expense, make good and repair deficiencies and every part thereof, all to the satisfaction of the Engineer. Should the successful Tenderer for any cause, fail to do so, then the Municipality may do so and employ such other person or persons as the Engineer may deem proper to make such repairs or do such work, and the whole costs, charges and expense so incurred may be deducted from any amount due to the Tenderer or may be collected otherwise by the Municipality from the Tenderer.

### **4.0 GENERAL CO-ORDINATION**

The Contractor shall be responsible for the coordination between the working forces of other organizations and utility companies in connection with this work. The Contractor shall have no cause of action against the Municipality or the Engineer for delays based on the allegation that the site of the work was not made available to him by the Municipality or the Engineer by reason of the acts, omissions, misfeasance or non-feasance of other organizations or utility companies engaged in other work.

## **5.0 RESPONSIBILITY FOR DAMAGES TO UTILITIES**

The Contractor shall note that overhead and underground utilities such as hydro, gas, telephone and water are not necessarily shown on the drawings. It is the Contractor's responsibility to contact utility companies for information regarding utilities, to exercise the necessary care in construction operations and to take other precautions to safeguard the utilities from damage. All work on or adjacent to any utility, pipeline, railway, etc., is to be carried out in accordance with the requirements of the utility, pipeline, railway, or other, as the case may be, and its specifications for such work are to be followed as if they were part of this specification. The Contractor will be liable for any damage to utilities.

## **6.0 CONTRACTOR'S LIABILITY**

The Contractor, his/her agents and all workmen or persons under his/her control including sub-contractors, shall use due care that no person or property is injured and that no rights are infringed in the prosecution of the work. The Contractor shall be solely responsible for all damages, by whomsoever claimable, in respect to any injury to persons or property of whatever description and in respect of any infringement of any right, privilege or easement whatever, occasioned in the carrying on of the work, or by any neglect on the Contractor's part.

The Contractor, shall indemnify and hold harmless the Municipality and the Engineer, their agents and employees from and against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of or attributable to the Contractor's performance of the contract.

## **7.0 PROPERTY BARS AND SURVEY MONUMENTS**

The Contractor shall be responsible for marking and protecting all property bars and survey monuments during construction. All missing, disturbed or damaged property bars and survey monuments shall be replaced at the Contractor's expense, by an Ontario Land Surveyor.

## **8.0 MAINTENANCE OF FLOW**

The Contractor shall, at his/her own cost and expense, permanently provide for and maintain the flow of all drains, ditches and water courses that may be encountered during the progress of the work.

## **9.0 ONTARIO PROVINCIAL STANDARDS**

Ontario Provincial Standard Specifications (OPSS) and Ontario Provincial Standard Drawings (OPSD) shall apply and govern at all times unless otherwise amended or extended in these specifications or on the drawing. Access to the electronic version of the Ontario Provincial Standards is available online through the MTO website, free of charge to all users. To access the electronic standards on the Web go to <http://www.mto.gov.on.ca/english/transrd/>. Under the title Technical Manuals is a link to the Ontario Provincial Standards. Users require Adobe Acrobat to view all pdf files.

## **10.0 APPROVALS, PERMITS AND NOTICES**

The construction of the works and all operations connected therewith are subject to the approval, inspection, by-laws and regulations of all Municipal, Provincial, Federal and other authorities having jurisdiction in respect to any matters embraced in this Contract. The Contractor shall obtain all approvals and permits and notify the affected authorities when carrying out work in the vicinity of any public utility, power, underground cables, railways, etc.



### **11.0 SUBLETTING**

The Contractor shall keep the work under his/her personal control, and shall not assign, transfer, or sublet any portion without first obtaining the written consent of the Municipality.

### **12.0 TIME OF COMPLETION**

The Contractor shall complete all work on or before the date fixed at the time of tendering. The Contractor will be held liable for any damages or expenses occasioned by his/her failure to complete the work on time and for any expenses of inspection, superintending, re-tendering or re-surveying, due to their neglect or failure to carry out the work in a timely manner.

### **13.0 TRAFFIC CONTROL**

The Contractor will be required to control vehicular and pedestrian traffic along roads at all times and shall, at his/her own expense, provide for placing and maintaining such barricades, signs, flags, lights and flag persons as may be required to ensure public safety. The Contractor will be solely responsible for controlling traffic and shall appoint a representative to maintain the signs and warning lights at night, on weekends and holidays and at all other times that work is not in progress. All traffic control during construction shall be strictly in accordance with the **Occupational Health and Safety Act** and the current version of the **Ontario Traffic Manuals**. Access to the electronic version of the **Ontario Traffic Manual** is available online through the MTO website, free of charge to all users. To access the electronic standards on the Web go to <http://www.mto.gov.on.ca/english/transrd/>, click on "Library Catalogue," under the "Title," enter "Ontario Traffic Manual" as the search. Open the applicable "Manual(s)" by choosing the "Access Key," once open look for the "Attachment," click the pdf file. Users require Adobe Acrobat to view all pdf files.

**Contractors are reminded of the requirements of the Occupational Health and Safety Act pertaining to Traffic Protection Plans for workers and Traffic Control Plan for Public Safety.**

### **14.0 SITE CLEANUP AND RESTORATION**

As part of the work and upon completion, the Contractor shall remove and dispose of, off-site any loose timber, logs, stumps, large stones, rubber tires, cinder blocks or other debris from the drain bottom and from the side slopes. Where the construction works cross a lawn, the Contractor shall take extreme care to avoid damaging the lawn, shrubs and trees encountered. Upon completion of the work, the Contractor shall completely restore the area by the placement and fine grading of topsoil and seeding or sodding the area as specified by the Engineer or Drainage Superintendent.

### **15.0 UTILITY RELOCATION WORKS**

In accordance with Section 26 of the Drainage Act, if utilities are encountered during the installation of the drainage works that conflict with the placement of the new culvert, the operating utility company shall relocate the utility at their own costs. The Contractor however will be responsible to co-ordinate these required relocations (if any) and their co-ordination work shall be considered incidental to the drainage works.

## **16.0 FINAL INSPECTION**

All work shall be carried out to the satisfaction of the Drainage Superintendent for the Municipality, in compliance with the Specifications, Drawings and the Drainage Act. Upon completion of the project, the work will be inspected by the Engineer and the Drainage Superintendent. Any deficiencies noted during the final inspection shall be immediately rectified by the Contractor.

Final inspection will be made by the Engineer within 20 days after the Drainage Superintendent has received notice in writing from the Contractor that the work is completed, or as soon thereafter as weather conditions permit.

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**GEOTECHNICAL INVESTIGATION  
SOUTH INNISFIL CREEK DRAINAGE  
IMPROVEMENTS  
TOWN OF INNISFIL, COUNTY OF SIMCOE,  
ONTARIO**

Submitted to:

Dillon Consulting Limited  
440 Park Avenue West  
Chatham, Ontario  
N7M 1X2

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February 2007

06-1189-519



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February 19, 2007

06-1189-519

Dillon Consulting Limited  
440 Park Avenue West  
Chatham, Ontario  
N7M 1X2

Attention: Mr. Tim Oliver, P.Eng.  
Project Manager

**RE: GEOTECHNICAL INVESTIGATION  
PROPOSED SOUTH INNISFIL CREEK DRAINAGE IMPROVEMENTS  
TOWN OF INNISFIL, COUNTY OF SIMCOE, ONTARIO**

This report presents the results of a geotechnical investigation carried out at three separate sites, as shown on the Key Plan, Figure 1, as part of the above referenced project. The purpose of the investigation was to determine the subsurface soil and shallow groundwater conditions at the three sites by means of a limited number of shallow boreholes. Based on our interpretation of the borehole data, this report provides geotechnical input for use in the design of the containment berms and the farm crossings of the creeks proposed at these sites.

The scope of the geotechnical investigation was outlined in our Proposal No. P61-8936 dated December 8, 2006. Authorization to proceed with this investigation was given by Mr. Tim Oliver of Dillon Consulting Limited (Dillon) in our sign back letter on December 13, 2006.

The factual data, interpretations and recommendations contained in this report pertain to a specific project as described in the report and are not applicable to any other project or site location. If the project is modified in concept, location or elevation, or if the project is not initiated within twelve months of the date of the report, Golder Associates Ltd. (Golder) should be given an opportunity to confirm that the recommendations are still valid.



This report should be read in conjunction with the “Important Information and Limitations of This Report” included in Appendix A. The reader’s attention is specifically drawn to this information, as it is essential for the proper use and interpretation of this report.

## **PROJECT AND SITE DESCRIPTIONS**

The project involves modifications to the existing South Innisfil Creek/Drain channel and/or floodplain areas at three sites (designated as Site Nos. 1 to 3) in the Town of Innisfil, Ontario. The approximate locations of these sites are displayed on Figure 1. The proposed works at Site Nos. 1 and 3 consist of the excavation of soils from within the existing floodplain areas and the construction of berms around the perimeter of portions of the sites to provide for increased water storage during creek/drain overflow/flood events. Based on preliminary information provided to us by Dillon, the berm at Site No. 1 will typically be less than 1 m in height while the proposed berm at Site No. 3 is understood to have a crest elevation of approximately 237 m requiring a maximum berm height of about 4 m. We further understand that if deemed suitable, the berms will be constructed out of on-site materials and the berms will have minimum crest-to-crest widths of 6 m to allow for vehicular access on top of the berms. The creek will outlet through culverts constructed through the berms and spillways will be provided for emergency overflow.

A total of four (4) farm bridges are proposed to be constructed over an approximately 700 m long length of the creek/drain at Site No. 2. Based on preliminary information, each crossing structure is planned to be a low profile 8350 mm span x 3300 mm rise corrugated steel pipe bottomless arch that would be supported on a concrete slab extending 600 mm wider than the culvert spans. The culverts are to be set within a 0.45 m thick reinforced poured concrete slab which is approximately 8.9 m wide by 9 m long. The culvert base slab is proposed to be embedded a minimum of 600 mm below the creek/drain bottom and will impose an unfactored bearing pressure of about 21 kPa on the supporting soil.

Site No. 1 comprises approximately 5 hectares of undeveloped land. The site is located at the northwest corner of Simcoe Road 89 and 5<sup>th</sup> Sideroad approximately 1 km west of Highway 400. The site is bounded to the north by an existing residential property, to the west by a highway works maintenance yard, to the east by 5<sup>th</sup> Sideroad and to the south by Simcoe Road 89. A creek/drainage channel area traverses through this site in an approximate northeast to southwest direction.

Site No. 2 is located on the north side of 2<sup>nd</sup> Line in Lots 8 and 9 approximately 1 km east of Highway 400. The site is bounded to the east, west and north by primarily undeveloped agricultural land and to the south by 2<sup>nd</sup> Line. The majority of the site is currently utilized as agricultural land. A creek/drainage channel area cuts through this site in an east/west direction.

Site No. 3 comprises approximately 26 hectares of undeveloped land. The site is located on the south side of 5<sup>th</sup> Line, approximately 800 m east of 10<sup>th</sup> Sideroad. The site is bounded to the east, west and south by primarily undeveloped land, used partially for agricultural purposes, and by 5<sup>th</sup> Line to the north. A hydro transmission corridor is located immediately east of the site. At the time of drilling, an abandoned residence was situated along the northern portion of the site. A drainage channel area cuts through the middle of this site in an approximate north/south direction. The existing ground surface slopes gently towards the creek with an overall slope towards the south.

## **INVESTIGATION PROCEDURE**

The field work for this investigation was carried out on January 15<sup>th</sup> and 16<sup>th</sup>, 2006, at which time 13 boreholes, designated as Boreholes 06-1 to 06-13 were advanced at the three sites at the locations shown on the Borehole Location Plans, Figures 2 to 4, for Site Nos. 1 to 3, respectively. The borehole locations were selected by Dillon personnel.

The boreholes were drilled using a track mounted drill rig supplied and operated by Walker Drilling Ltd., under our supervision. Standard Penetration Testing (SPT) and sampling were carried out at regular intervals of depth in each of these boreholes using conventional 35 mm internal diameter split spoon sampling equipment. All of the soil samples obtained during this investigation were brought to our Barrie and Mississauga laboratories for examination, natural water content testing and selective classification testing.

The shallow groundwater conditions were noted in the open boreholes during drilling. Standpipe piezometers were installed in Boreholes 06-1, 06-3, 06-4, 06-6, 06-8, 06-9, 06-12 and 06-13 to allow for further monitoring of the groundwater levels at those locations. All of the boreholes were sealed with bentonite upon completion of drilling and/or installation of the piezometers.

The field work for this investigation was monitored by a member of our engineering staff who also logged the subsurface conditions encountered in the boreholes and cared for the samples obtained. The elevations and locations of stakes located at the boreholes drilled as part of the preliminary investigation were surveyed by Dillon personnel. Due to the presence of ice and snow at ground surface at the time of drilling, the exact distance between the top of stakes and ground surface was not determined. Therefore, the borehole elevations contained on the Record of Borehole sheets and discussed in the text of this report are considered accurate only to about the nearest 0.1 m.

## **SUBSURFACE CONDITIONS**

The subsurface soil and shallow groundwater conditions encountered in the boreholes, as well as the results of the field and laboratory testing, are shown in detail on the Record of Borehole sheets and Figures 5 to 10 following the text of this report. Lists of abbreviations and symbols are provided to assist in the interpretation of the borehole records.

It should be noted that the boundaries between the strata have been inferred from drilling observations and non-continuous samples. They generally represent a transition from one soil type to another and should not be inferred to represent an exact plane of geological change. Further, conditions will vary between and beyond the boreholes. The following is a summarized account of the subsurface conditions encountered in the boreholes drilled during this investigation, followed by more detailed descriptions of the major soil strata and shallow groundwater conditions.

### **Overview Of Subsurface Conditions**

Fill materials and possible fill materials comprised of clayey silt and sandy silt/silty sand were encountered at ground surface and extended to a depth of slightly greater than 2 m at the location of Borehole 06-1 drilled at Site No.1. All of the remaining boreholes at Site No. 1 encountered a surficial layer of topsoil extending to depths of about 0.2 m to 0.6 m below ground surface. The topsoil was typically underlain by sandy soils containing varying amounts of silt, except in Borehole 06-2 where a 1.4 m thick layer of organic silt was encountered. The upper portion of the sandy soils often have a dark brown colour inferred to be a result of organic staining and also contain rootlets and pockets of organics. Zones/interlayers of clayey silt were also encountered sporadically within the sand deposits.

Site No. 2 contained a surficial layer of topsoil and/or peat varying from approximately 0.7 m to 1.4 m in thickness at ground surface at all of the borehole locations. The topsoil was generally underlain by interlayered deposits of silty clay and sand/silty sand.

Boreholes 06-9, 06-11 and 06-12 at Site No. 3 encountered a surficial layer of topsoil extending to depths of about 0.3 m to 0.7 m below ground surface. The predominant soil strata at this site is comprised of clayey silt containing varying amounts of sand and gravel which contains zones of sand and pockets of topsoil.

## **SUBSURFACE CONDITIONS – Site No. 1**

### **Topsoil**

A surficial deposit of sandy topsoil with a thickness of approximately 0.2 m to 0.6 m was encountered at ground surface at all of the boreholes, except Borehole 06-1. A Standard Penetration Test (SPT) 'N' value of 3 blows per 0.3 m of penetration was measured in the topsoil materials at the location of Borehole 06-3.

### **Fill and Possible Fill Materials**

Fill materials and possible fill materials comprised of grey to brown clayey silt to sandy silt/silty sand containing varying amounts of sand, clay and organic matter were encountered at ground surface at the location of Borehole 06-1.

Materials varying in composition from clayey silt to silty sand containing pockets of organic matter and trace gravel were encountered in Borehole 06-2 beneath the surficial layer of topsoil. These clayey silt to silty sand materials encountered are inferred to represent either fill materials or reworked native soils.

The reworked native and/or possible fill materials were encountered to depths of approximately 1.4 m and 2.1 m below existing ground surface. SPT 'N' values ranging from 2 to 4 blows per 0.3 m of penetration were measured within the fill/possible fill materials suggesting these materials are soft or very loose.

A gradation of the silty sand fill materials is displayed on Figure 5. Laboratory testing indicates that the natural water content of the reworked native/possible fill samples ranges from 16 to 125 percent, expressed as a percentage of the dry weight of the soil, with the higher water contents associated with samples containing organic matter.

### **Organic Silt**

An approximately 1.4 m thick layer of organic silt was encountered below the fill materials in Borehole 06-2. Standard Penetration Test (SPT) 'N' values measured within the organic soils were 3 blows per 0.3 m of penetration indicating these materials are very loose.

Laboratory testing indicates that the natural water content of these organic soils varies from approximately 37 to 97 percent.



### **Sand to Silty Sand/Sandy Silt**

The topsoil, fill and organic silt materials are typically underlain by native deposits of sand containing variable amounts of silt to sandy silt/silty sand. The upper portion of the sandy soils often have a dark brown colour, inferred to be a result of organic staining, and also contain rootlets and organic matter.

All of the boreholes were terminated within the sandy materials at a depth of approximately 3.5 m below ground surface.

Standard Penetration Test (SPT) 'N' values measured within the sandy soils varied from 3 blows to 55 blows per 0.3 m of penetration indicating these materials are very loose to very dense.

Laboratory testing indicates that the natural water contents of the sandy soils typically range from about 10 to 20 percent although higher natural water contents in the order of 40 percent were measured on some samples. A gradation analyses of a sample of the sandy soils from Borehole 06-5 is displayed on Figure 6.

### **Groundwater Conditions**

Groundwater was encountered during drilling at every borehole at depths typically varying from 1.5 m to 2.4 m below ground surface. Piezometers were installed in Boreholes 06-1, 06-3 and 06-4 to permit monitoring of the groundwater levels at Site No 1. Piezometer installation details and groundwater conditions encountered during drilling are shown on the attached Record of Borehole sheets. Groundwater levels measured in the piezometers are presented in the table below.

<b>Borehole No.</b>	<b>Water Level Measurements (February 1, 2007)</b>	
	<b>Depth</b>	<b>Approximate Elevation (m)</b>
BH06-1	1.0	223.8
BH06-3	1.1	223.9
BH06-4	2.3	223.6

It should be noted that the groundwater levels at the site are anticipated to fluctuate with seasonal variations in precipitation, runoff and variations in the water level in the adjacent creek. Perched groundwater conditions are expected to develop within and above fine-grained materials especially during and following periods of sustained precipitation.

## **SUBSURFACE CONDITIONS – Site No. 2**

### **Topsoil**

A surficial deposit of silty topsoil with a thickness of approximately 0.7 m to 1.4 m was encountered at ground surface at all of the borehole locations. The natural water contents of samples of the topsoil were all greater than 40 percent. SPT 'N' values measured within the topsoil varied from 4 to 12 blows per 0.3 m of penetration.

### **Peat**

An approximately 1.2 m thick layer of black, amorphous peat was encountered beneath the topsoil at the location of Borehole 06-7. The natural water contents of samples of the peat varied from 96 to 340 percent. SPT 'N' values of 2 blows per 0.3 m of penetration were measured within the peat suggesting this material is very loose.

### **Interlayered Silty Clay/Clayey Silt and Sand/Silty Sand/Sandy Silt**

Native deposits consisting of interlayered cohesive silty clay/clayey silt deposits and cohesionless sand to sandy silt deposits were encountered beneath the topsoil and peat at the locations of Boreholes 06-6 and 06-7. The thickness of the silty clay/clayey silt and sand/sandy silt interlayers were highly variable both between borehole locations and at varying depths in individual boreholes.

Standard Penetration Test (SPT) 'N' values of between 3 and 14 blows per 0.3 m of penetration were measured within these soils indicating they are generally very soft to stiff or very loose to compact. Laboratory testing indicates that the natural water contents of samples of these soils range from approximately 15 to 26 percent. A gradation of a sample of one of the silty sand zones is displayed on Figure 7.

### **Clayey Silt/Silty Clay**

Deposits of clayey silt/silty clay containing trace sand were encountered beneath the topsoil in Borehole 06-8 and the interlayered native strata described above in Borehole 06-7. Zones of sand were encountered within the clayey soils at the locations of Boreholes 06-7. These clayey silt/silty clay materials extended to depths of greater than 7 m below ground surface. A deposit of compact silt and sand was encountered beneath the silty clay at the location of Borehole 06-8.

SPT 'N' values ranging from 2 blows to 9 blows per 0.3 m of penetration were measured within these clayey soils suggesting these materials are very soft to stiff. An in situ shear vane test carried out at depth of approximately 3 m in Borehole 06-8 indicates that the clayey soils at that location have an undrained shear strength of about 31 kPa and a remoulded shear strength of approximately 12 kPa.

Laboratory testing indicates that the natural water content of these clayey soils varies from approximately 7 to 10 percent. A gradation of a sample of the silty clay is displayed on Figure 8.

### **Groundwater Conditions**

Groundwater was encountered during drilling in every borehole at depths typically varying from 2.1 m to 3.0 m below ground surface. Piezometers were installed in Boreholes 06-6 and 06-8 to permit monitoring of the groundwater levels. Piezometer installation details and groundwater conditions encountered during drilling are shown on the attached Record of Borehole sheets. Groundwater levels measured in the piezometers are presented in the table below.

<b>Borehole No.</b>	<b>Water Level Measurements (February 1, 2007)</b>	
	<b>Depth</b>	<b>Approximate Elevation (m)</b>
BH06-6	1.1	225.0m
BH06-8	0.7	225.7 m

The water levels measured in the piezometers are above the base of the creek at these locations indicating there is likely an upward hydraulic gradient at this site. The groundwater levels at the site are anticipated to fluctuate with seasonal variations in precipitation and runoff as well as fluctuations in the water level in the adjacent creek. Perched groundwater conditions are expected to develop within and above fine-grained materials especially during and following periods of sustained precipitation.

### **SUBSURFACE CONDITIONS – Site No. 3**

#### **Topsoil**

A surficial deposit of sandy topsoil with a thickness of approximately 0.3 m to 0.7 m was encountered at ground surface at Boreholes 06-9 to 06-12. SPT 'N' values of between 2 and 5 blows per 0.3 m were measured within the topsoil materials.

## **Silty Clay to Clayey Silt with Sand**

Deposits of silty clay to clayey silt with sand were encountered in every borehole advanced at Site No. 3 as part of this investigation. The silty clay/clayey silt soils contain varying amounts of sand as well as trace gravel in some areas. Interlayers of silty sand and silt were encountered within these materials at some of the borehole locations.

SPT 'N' values of between 4 and 23 blows per 0.3 m of penetration were measured within these soils suggesting the consistency of these soils varies from soft to very stiff. The soft portions of the deposits, where encountered, are typically located directly beneath the topsoil and these deposits become firm to very stiff at depth.

An Atterberg Limit test carried out on a sample of the clayey soils from Borehole 06-13 indicates that the sample tested had a Plastic Limit of about 15 and a Liquid Limit of 26. Laboratory testing indicates that the natural water contents of samples of these soils ranged from 13 to 26 percent. The results of gradation analyses of these materials are displayed on Figures 9 and 10.

## **Groundwater Conditions**

Groundwater was encountered during drilling at every borehole at depths typically varying from 0.2 m to 1.8 m below ground surface. Piezometers were installed in Boreholes 06-9, 06-12 and 06-13 to permit monitoring of the groundwater levels at Site # 3. Piezometer installation details and groundwater conditions encountered during drilling are shown on the attached Record of Borehole sheets. Water levels measured in the piezometers are presented in the table below; however, given the fine-grained nature of the site soils, these readings may not represent stabilized water levels.

<b>Borehole No.</b>	<b>Water Level Measurements (February 2, 2007)</b>	
	<b>Depth</b>	<b>Approximate Elevation (m)</b>
BH06-9	1.5	231.5
BH06-12	0.5	233.4
BH06-14	0.2	233.6

It should be noted that groundwater levels at the site are anticipated to fluctuate with seasonal variations in precipitation and runoff and the adjacent creek. Perched groundwater conditions are expected to develop within and above fine-grained materials especially during and following periods of sustained precipitation.

## **GEOTECHNICAL DESIGN COMMENTS**

This section of the report provides preliminary recommendations regarding geotechnical design aspects of the proposed drainage improvements. The geotechnical recommendations provided are based on our interpretation of the available subsurface information and on our understanding of the project requirements. The geotechnical input contained herein will need to be reviewed and, if necessary, revised once additional details on the development (e.g. final site grades, berm geometries, farm crossing locations etc.) become available. Where comments are made on construction, they are provided only in order to highlight aspects of construction which could affect the design of the project.

We note that the investigation has been carried out to provide initial information on the subsurface conditions for use in the design of the proposed works. Additional investigation would be required to provide sufficient information for determining earthworks volumes (e.g. to better define the extent and thickness of topsoil and/or fill materials at the site). In this regard, contractors bidding on or undertaking any work at the site should examine the factual results of the investigation, satisfy themselves as to the adequacy of the information for construction and make their own interpretation of the factual data as it affects their proposed construction techniques, schedule, equipment capabilities, costs, sequencing and the like.

Our professional services for this assignment address only the geotechnical (physical) aspects of the subsurface conditions at this site. The geo-environmental (chemical) aspects, including consequences of possible surface and/or subsurface contamination resulting from previous activities or uses of the site and/or resulting from the introduction onto the site of materials from off-site sources, are outside the terms of reference for this report.

### **Proposed Drainage Improvements - Site No. 1**

The proposed works at Site No. 1 consist of the excavation of soils from within the floodplain of the creek and the construction of a perimeter berm around the site to provide for increased water storage during creek overflow/flood events. Based on preliminary information provided to us by Dillon, the majority of the storage capacity at this site is proposed to be generated by lowering of site grades and, as such, the berm at Site No. 1 will typically be less than 1 m in height.

#### **Impact of Subsurface Conditions on Design**

The surficial soils encountered at boreholes advanced at Site No. 1 consist of topsoil and fill materials varying in composition from clayey silt to silty sand/sandy silt which contain pockets of organic matter. A deposit of organic silt containing trace to some sand and shells was encountered beneath the fill materials in Borehole 06-2. The remainder of the native soils generally vary in composition from sand to silty sand but contain interlayers of clayey silt.

Pockets of peat/organic matter were encountered within the native sandy soils and/or fill materials at the locations of Boreholes 06-2 and 06-3. The water levels measured in the piezometers varied from 1 m to 2.3 m below ground surface corresponding to a groundwater elevation of about 223.5 m to 224 m. This water level is anticipated to rise during/following the spring freshet.

Due to the sandy nature of the site soils, the water level within excavations below the water table will rapidly stabilize with the surrounding groundwater level. In this regard, the maximum depth/amount that the site grade can be lowered to create excess water storage capacity is effectively limited by the depth to the water table.

The organic silt deposit encountered in Borehole 06-2 is considered to be highly compressible when subjected to new loads. Similarly, the native sandy soils in Boreholes 06-3 were noted to contain organic matter and settlement of these soils will also occur following the application of new loads. In this regard, although the berm height at this site is relatively small, construction of the berm over topsoil, organic silt or other organic materials would result in compression of the organic soils and subsequent settlement of the berm. In order to reduce post-construction settlements of the berm, consideration could be given to subexcavating the highly organic soils from beneath the berm and replacing them with engineered fill materials. However, the lateral extent of the highly organic soils (i.e. the organic silt deposit) is not known at this time. Furthermore, given the depth to which the organic soils were encountered in Borehole 06-2, subexcavation of these soils beneath the entire plan area of the proposed berm would require dewatering and may not be practical from a cost perspective. As an alternative, the crest of the berm could be raised above its required design height to provide for an allowance for potential settlements. A settlement allowance equal to 100 mm is recommended for preliminary assessment purposes assuming a maximum berm height of 1 m constructed over the maximum thickness of organic soils encountered in the boreholes. However, the magnitude of settlement of the berm may be highly variable and, therefore, if this option is selected, the crest of the berm should be surveyed the year following construction to identify areas where significant settlements have occurred and provision for future maintenance (e.g. placement of additional fill materials on areas of the berm which have settled) should be allowed for. Complete subexcavation of the organic soils should be carried out if they are encountered beneath localized portions of the berm that are highly sensitive to settlement (e.g. proposed outlet culvert, emergency spillway etc.).

Although portions of the native sandy soils encountered at the site are considered suitable for reuse as engineered fill as described below, these materials have hydraulic conductivities estimated to be in the range of  $1 \times 10^{-3}$  cm/s to  $1 \times 10^{-4}$  cm/s and, as such, will allow for seepage through the berm during the flood/storage events. The quantity of seepage is also dependent on the hydraulic gradient that will develop through the berm during peak storage periods. Given the limited height of the berm/water retained and the proposed width of the berm at this site, the hydraulic gradient is anticipated to be relatively low. Consideration could be given to placing

materials with lower hydraulic conductivities (e.g. clayey soils) within the core of the berm or as an upstream blanket on the berm face in order to reduce the seepage through the berm. Additional details can be provided if this option is considered.

### Re-Use Of Native Soils as Engineered Fill Materials

Based on our understanding, consideration will be given to using the native site soils as engineered fill materials in the berm construction. Topsoil, organic silt and other soils containing significant amounts of organic matter are not considered suitable for the construction of berm. Similarly, materials containing debris or other deleterious materials are also not considered suitable for reuse as engineered fill.

The native sandy soils encountered beneath the topsoil at the locations of Boreholes 06-4 and 06-5 are considered to be suitable for use as engineered fill materials for berm construction. We note that organic soils were encountered sporadically within the subsurface soils encountered at the locations of Boreholes 06-1, 06-2 and 06-3. Where such soils are encountered during construction, segregation/selective excavation under the guidance of experienced geotechnical personnel will be required to generate predominantly organic-free soils for use in the berm construction. If the organic matter is widespread throughout the excavated materials such that segregation is not possible, imported fill materials may be required for berm construction. Alternatively, consideration could be given to reusing portions of soils containing limited amounts of organic matter provided that these materials can be adequately compacted and that long-term settlement of the berm, together with periodic regrading, is considered acceptable.

The water contents of the native sandy soils are considered to be above their optimum water content for compaction. Therefore, some adjustment of the water content of these materials (e.g. drying of the soils, mixing with drier materials) is expected to be required during placement and compaction if these soils are proposed to be used as engineered fills in the berm construction.

Excess materials including peat and organic soils may be generated during stripping/subgrade preparation activities. These materials are not considered suitable for re-use in the construction of the central portion of the berm structure which will support vehicular traffic. However, in order to reduce costs associated with disposal of these materials, consideration could be given to placing such materials on/adjacent to the downstream portion of the berm outside of the area of the spillway discharge provided that the potential for erosion/sloughing of these materials and the associated requirement for maintenance is deemed acceptable. Vegetative cover should also be established above any materials placed in this area to limit erosion.

## Berm Geometry and Construction

Based on our understanding, the proposed berm at Site No. 1 will typically be less than 1 m in height and is proposed have a minimum crest-to-crest width of 6 m. For preliminary planning purposes, we recommend that the overall slope angle of the berm slopes should not be steeper than about 2.5H:1V. Although, it may be possible to construct berms with steeper sideslopes, the use of a 2.5H:1V sideslope angle will help to reduce the potential for erosion and sloughing of the surface of the berm in comparison to steeper berm slope angles.

The surficial topsoil deposits, other soils containing significant amounts of organic matter and/or soft, loose or highly disturbed native soils and/or fill materials that are not considered suitable for the subgrade support of the proposed berm should be stripped from beneath the plan area of the proposed berm prior to fill placement. The prepared subgrade should then proofrolled under the observation of qualified geotechnical personnel. Any soft/loose/disturbed soils or other areas that perform poorly should be subexcavated and replaced with engineered fill materials.

The berm fill should be placed in thin lifts of not more than 300 mm in thickness and uniformly compacted to a minimum of 95% of the materials' Standard Proctor Maximum Dry Density (SPMDD). Full-time monitoring and compaction testing should be carried out during placement of the fill materials. The embankment materials should be adequately benched/keyed into existing subgrade soils to prevent the formation of preferential failure planes.

The native soils encountered at depths greater than about 2 m below ground surface at the majority of the boreholes drilled at the site consist of compact sand, silty sand/sandy silt or silt. These materials are considered to provide suitable subgrade support for the outlet culvert provided that these soils are not disturbed during construction. In order to limit the potential for disturbance of these soils, a temporary dewatering system should be installed to lower the water level to a minimum of 0.5 m below the base of the excavation prior to initiation of excavation. Proper silt control measures will be required to reduce soil erosion and the discharge of silt laden runoff from the construction area. If dewatering at the site results in removal of greater than 50,000 L per day of groundwater, a Permit to Take Water (PTTW) from the Ministry of Environment (MOE) would be required. Obtaining MOE approval for a PTTW can take up to several months; therefore, an allowance for this time should be included for in the overall planning process. As indicated above, if organic or otherwise unsuitable soils are encountered at the base of the proposed culvert, these materials should be subexcavated and replaced with engineered fill materials.



### **Proposed Drainage Improvements - Site No. 3**

The proposed works at Site No. 3 consist of the excavation of soils from within the floodplain of the creek and the construction of a containment berm around the southern portions of the site to provide for increased water storage during creek overflow/flood events. Based on preliminary information provided to us by Dillon, the elevation of the crest of the proposed berm will be approximately 237 m. The ground surface elevation at the south end of the site is in the order of 233 m and therefore a maximum berm height of approximately 4 m is required in this area.

#### **Impact of Subsurface Conditions on Design**

The surficial soils encountered at boreholes advanced at Site No. 3 consist of a surficial layer of topsoil extending to depths of about 0.3 m to 0.7 m below ground surface that are generally underlain by deposits of clayey silt containing varying amounts of sand and gravel. The water levels measured in the piezometers varied from 0.2 m to 1.5 m below ground surface corresponding to a groundwater elevation of about 223.5 m to 224 m. These readings may not represent stabilized water levels due to the fine-grained nature of the site soils. Water levels at the site are anticipated to rise during/following the spring freshet.

As the permeability of the clayey soils is expected to be relatively low, excavating below the water table within these soils can be carried out without the use of an external dewatering system (e.g. well points or eductor wells). Therefore, lowering of the site grades below the water levels measured in the piezometers is considered feasible without dewatering. However, we note that this is expected to result in long-term modifications to the local groundwater regime (i.e. lowering of the water table in the cut area) and that permanent upward seepage through the clayey soils would result. Greater quantities of seepage may occur if zones of coarser soils are encountered. The design of the project should take into account these factors (e.g. an assessment of the potential magnitude of seepage should be carried out) if this option is selected.

The topsoil and any soft or disturbed portions of the clayey soils are not considered suitable for the subgrade support of the proposed berm. The firm to very stiff clayey soils that were generally encountered at depths of less than 1 m below existing ground surface are considered suitable to provide subgrade support for the proposed berms. As described above, the native clayey soils encountered at this site have relatively low hydraulic conductivities. As such, these materials are considered to provide for an effective barrier to seepage below and through the berm, provided the berm is constructed out of these materials, during the flood events.

The construction of the berm will result in compression/consolidation of the underlying clayey soils. Based on their consistency, the site soils are inferred to have been previously overconsolidated to a stress level greater than that which will occur as a result of the construction of the berm. Therefore, settlements of the underlying soils will be primarily be governed by their

recompression characteristics. For preliminary assessment purposes, the design of the berms at this site should take into account a settlement allowance of approximately 75 mm to 100 mm for the maximum berm height.

### Re-Use Of Native Soils as Engineered Fill Materials

Based on our understanding, consideration will be given to using the native site soils as engineered fill materials in the berm construction. Topsoil and other soils containing significant amounts of organic matter are not considered suitable for berm construction. Similarly, materials containing debris or other deleterious materials are also not considered suitable for reuse as engineered fill.

The native clayey soils encountered at the locations of all boreholes advanced at Site No. 3 are considered to be suitable for use as engineered fill materials provided that they are at a suitable water content for compaction. Based on the results of an Atterberg Limit test carried out on a sample of the clayey soils, the optimum water content for compaction of these soils is estimated to be in the range of 13 to 16 percent, although some variation in the optimum water contents of the site soils should be expected. Laboratory testing indicates that the soils present within about 1 m of ground surface have natural water contents that are significantly above their optimum water content for compaction whereas the site soils present at greater depths have water contents that are estimated to be at or slightly above their optimum for compaction. Therefore, adjustment of the water content of the fill materials (e.g. drying of the soils, mixing with drier materials) may be required during placement and compaction, if these soils are proposed to be used as engineered fills in the berm construction. Drying of the site soils is not considered to be practical during periods of sustained precipitation and/or cold weather; therefore, the construction of the berm should be scheduled during the summer months when warmer and drier conditions are more likely to prevail.

The water contents of the site soils tend to decrease slightly with depth. As noted above, only minor groundwater seepage is expected to occur through excavations carried out within the clayey site soils. As such, if the water contents of the near-surface soils are too high at the time of construction, consideration could be given to subexcavating soils from greater depths as a source of fill for berm construction.

### Berm Geometry and Construction

Based on our understanding, the proposed berm at Site No. 3 will have a maximum height in the order of 4 m and is proposed have a minimum crest-to-crest width of 6 m. For preliminary planning purposes, we recommend that the overall slope angle of the berm slopes should not be steeper than about 2.5H:1V provided that the materials can be compacted to a minimum of 95 percent of their SPMDD. If the moisture contents of the clayey materials at the time of

construction are too high (i.e. more than about 3 to 4 percent above their optimum water content for compaction), it will not be possible to achieve this compaction level and the shear strength of these soils will be reduced. Consideration could still be given to using these materials with a reduced compaction level of 90 percent of their SPMDD; however, the berm sideslopes may need to be flattened to reduce the potential for instability of the berm and additional post construction settlement of the berm should be expected. Soils that cannot be compacted to a minimum of 90 percent of their SPMDD should be wasted and drier fill materials used. Additional stability assessments would be required if this option is considered.

The surficial topsoil deposits, soft clayey soils such as those encountered near ground surface in Borehole 06-11, and/or soft, loose or highly disturbed native soils and/or fill materials are not considered suitable for the subgrade support of the proposed berm. In this regard, all unsuitable surficial soils should be stripped from beneath the plan area of the proposed berm prior to fill placement. The prepared subgrade should then heavily proofrolled under the observation of qualified geotechnical personnel. Any soft/loose/disturbed soils or other areas that perform poorly should be subexcavated and replaced with engineered fill materials.

The berm fill should be placed in thin lifts of not more than 300 mm in thickness. The clayey soils at this site should be compacted using a heavy sheepsfoot compactor. Full-time monitoring and compaction testing should be carried out during placement of the fill materials. The embankment materials should be adequately benched/keyed into the existing subgrade soils to prevent the formation of preferential failure planes.

### **Other Design Considerations - Site Nos. 1 and 3**

The materials surrounding the culverts that pass through the berms will be subjected to freezing temperatures. Softening of frost susceptible materials surrounding conduits placed through dams/berms as a result of freeze/thaw cycles can lead to piping problems. Therefore, the culverts should be surrounded on all sides by a minimum thickness of 2.0 m of free-draining granular materials that have a fines content of less than 5 percent. Special attention is required to ensure that these materials are properly compacted. In addition, seepage collars around the culvert or other means of controlling seepage through the granular material should also be provided.

Suitably sized rip rap or other appropriate erosion protection measures should be provided on the spillways and at their outlets to the existing creek(s) and any other areas where high flow velocities will occur. The erosion protection must also be extended over the entire spillway areas including the discharge channels on the downstream face of the berms and a sufficiently long distance downstream of the berms to permit for dissipation of flow energies. The selection of the final spillway configuration and erosion protection measures, including erosion protection requirements downstream of the outlet culverts should be carried out during the detailed design stage of the project, once final berm configurations and flow conditions are determined. At Site

No. 3, the creek parallels the downstream toe of the berm to the west of the outfall structure. Rip rap or other suitable erosion protection should be used to protect the downstream face of the berm in areas where the creek is located in close proximity to the berm.

The sideslopes of the berms are considered to be susceptible to surficial erosion (particularly at Site No.1 given the nature of the silty/sandy soils at that site) as a result of precipitation, freeze-thaw cycles and fluctuations in the water level on the interior of the pond. Therefore, appropriate erosion protection should be provided over all surfaces of the berms. Erosion protection may typically consist of suitable topsoil and vegetation cover. Such cover should be established as soon as practical after construction of the berms and, in this regard, hydroseeding should be considered. Erosion control blankets (e.g. mats typically comprised of straw and/or coconut fibers) can also be installed in areas where hydroseeding will be carried out in order to both promote seed germination and to protect the underlying soils against erosion until the vegetation cover has been established. As indicated above, the sandy soils present at Site No. 1 are highly susceptible to erosion and the use of the erosion control blankets or other suitable temporary erosion control features at that site is recommended. Trees should not be planted or allowed to grow on the berm.

In order to limit potential for blockage of the outlet culvert, all brush and trees present in the base of the storage/reservoir areas at the sites should be removed at the time of construction and a trash screen/guard should be installed immediately upstream of the culvert to block debris from entering the outlet.

Monitoring of the berms by qualified geotechnical personnel (e.g. observing the berms for signs of erosion, cracking, settlement etc.) should be carried out the year following construction. Given the size of the berm at Site No.1, it is recommended that the berm at that site be inspected on an annual basis. In addition, inspections by personnel responsible for maintenance of the facility should be carried out on a more frequent basis (e.g. quarterly and/or following major storm events). The items to be monitored during these inspections should be identified during the detailed design phase once the final configuration of the berms are determined. Provision for maintenance work should be allowed for in preparation of the project budget to ensure the long-term serviceability of the berm structures.

## **Proposed Farm Crossings - Site No. 2**

A total of four (4) farm crossings are proposed to be constructed over an approximately 700 m long length of the creek/drain at Site No. 2. Based on preliminary information provided to us by Dillon, each crossing structure is proposed to consist of a low profile 8350 mm span x 3300 mm rise corrugated steel pipe bottomless arch that would be supported on a concrete slab extending 600 mm wider than the culvert spans. The culverts are to be set within a 0.45 m thick reinforced poured concrete slab which is approximately 8.9 m wide by 9 m long. The culvert base slab is

proposed to be embedded a minimum of 600 mm below the creek/drain bottom and will impose an unfactored bearing pressure of about 21 kPa on the supporting soil. The bottom of the base slabs are proposed to be founded at elevations of approximately 222.9 m to 223.2 m corresponding to depths in the order of 3 m to 3.5 m below existing site grades. We have assumed that the creek/drain will either be temporarily diverted or dammed and pumped in order to permit construction of the proposed farm crossings.

### Foundation Design Considerations

Boreholes 06-6 to 06-8 were drilled at Site No. 2 as part of the current investigation. We note that the boreholes were not advanced at specific structure locations. These boreholes encountered very soft to soft or very loose to loose near-surface soils consisting of topsoil, peat and silty clay. At the locations of Boreholes 06-6 and 06-7, these materials are underlain by interlayered sand to silty sand/sandy silt and silty clay materials. At Borehole 06-8, the underlying materials were comprised primarily of silty clay. At depths of greater than about 3 m to 4 m below ground surface, the native soils typically become firm to stiff or compact. Water levels in piezometers installed at the site were measured to be in the order of 1 m or less below existing ground surface.

The firm to stiff or compact native soils encountered at depths of greater than 3 m to 4 m below ground surface are considered suitable for the subgrade support of the proposed base slabs for culvert crossings designed with allowable bearing pressures of up to 50 kPa. However, the proposed founding elevations for the base slabs are located at or near the interface between these soils and the overlying soft/loose materials. Furthermore, given the composition and interlayered nature of the site soils, these materials are considered to be highly susceptible to softening and disturbance as a result exposure to adverse weather conditions and/or construction equipment and foot traffic. As such, it is recommended that the native materials be subexcavated a minimum of 0.5 m below the proposed founding elevations and replaced with compacted granular fill materials (e.g. 50 mm minus Crusher Run Limestone materials) in order to provide for protection of the subgrade soils. In order to further reduce the potential for disturbance of the subgrade soils, heavy construction equipment should not be used in the base of the excavations.

The placement of the granular fill materials should be carried out immediately following inspection of the subgrade soils by qualified geotechnical personnel. If the soils present at the base of the excavation are soft or disturbed, the depth of subexcavation and thickness of the granular working pad will need to be increased.

## Temporary Excavations and Dewatering Requirements

The subsurface conditions encountered at depth in the boreholes advanced at Site No. 2 are highly variable and often consist of sandy/silty soils interlayered with silty clay soils. Where the sandy/silty soils are present a temporary dewatering system should be installed to lower the water level to a minimum of 0.5 m below the base of the excavation prior to initiation of excavation in order to limit the potential for disturbance of these soils. For preliminary assessment purposes, we recommend that provision for the installation of a dewatering system should be allowed for at each of the proposed crossing locations. As the boreholes were not advanced at the specific structure locations, a 'public dig' should be carried out at each crossing location during the tender stage in order to determine the extent of the granular soil zones at the actual crossing locations so that prospective bidders can assess their method of construction and the type of groundwater control required, consistent with their equipment capabilities and the existing groundwater conditions at that time.

Proper silt control measures will be required to reduce soil erosion and the discharge of silt laden runoff from the construction area(s). If dewatering at the site results in removal of greater than 50,000 L per day of groundwater, a Permit to Take Water (PTTW) from the Ministry of Environment (MOE) would be required. Obtaining MOE approval for a PTTW can take up to several months; therefore, an allowance for this time should be included for in the overall planning process.

Care should be taken to direct surface water away from the open excavations and all temporary excavations should be carried out in accordance with the Occupational Health and Safety Act and Regulations for Construction Projects. The very soft to soft or very loose near-surface soils are classified as "Type 4" soils under the Act. Granular soils present below the water table would also be classified as "Type 4" soils unless appropriate dewatering activities are carried out to lower the water table a minimum of 0.5 m below the base of proposed excavations. Native firm to stiff or loose to compact native soils present above the level that dewatering is carried out would be classified as "Type 3" soils under the Act.

As noted above, the soils present to depths of 3 m or more below the current ground surface at the site are typically very soft and/or very loose. For preliminary assessment purposes, the sideslopes of temporary open cut excavations carried out within these materials above the groundwater table should not be steeper than 1.5 horizontal to 1 vertical (1.5H:1V). However, depending upon the construction and groundwater control procedures adopted by the contractor and weather conditions at the time of construction, the use of flatter sideslopes may be required. Excavated materials should not be stockpiled adjacent to the crest of the excavations.

The majority of the excavated materials are anticipated to consist of topsoil, peat and/or soft to very soft, remoulded clayey materials that are significantly above their water contents for compaction. These materials are not considered suitable for providing support to vehicles traveling over the culverts. Free-draining imported fill materials approved by the geotechnical engineer should be used to backfill around and above the culverts.

### **Decommissioning of Piezometers**

The piezometers installed at the sites have been left functional in order to allow future monitoring of the groundwater level at the site. However, these piezometers may provide a conduit for groundwater flow and should be abandoned as part of the construction of the project or if the project is put on hold. In this regard, abandonment of the piezometers should be included as part of the contract for this project. Ontario Regulation (O. Reg.) 903 amended by O. Reg. 128/03 of the Ontario Water Resources Act identifies required decommissioning procedures and requires that monitoring wells/piezometers are properly abandoned/decommissioned by qualified personnel.

### **Closure**

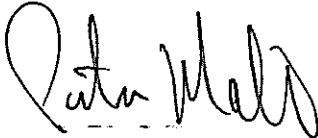
Once additional information on the design of the proposed works including berm geometries and outfall details is available, the geotechnical aspects of the proposed works should be reviewed by this office. Also, prior to tendering, the geotechnical aspects of the final design drawings/specifications and proposed construction methodology should be reviewed by this office to confirm that the intent of this report has been met.

During construction, sufficient subgrade inspections and in-situ and laboratory materials testing should be carried out to confirm that the conditions exposed are consistent with those encountered in the boreholes and to monitor conformance to the pertinent project specifications.

We trust that this report provides sufficient preliminary geotechnical engineering information to aid in determining the overall suitability of the two sites to support the proposed residential developments. If you have any questions regarding the contents of this report or require additional information, please do not hesitate to contact this office.

Yours truly,

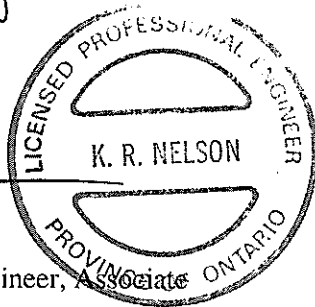
**GOLDER ASSOCIATES LTD.**



Peter Maki, E.I.T.  
Geotechnical Group



Kevin Nelson, P.Eng.  
Senior Geotechnical Engineer, Associate



- Enclosures:
- Important Information and Limitations of the Report
  - List of Abbreviations & List of Symbols
  - Record of Borehole Sheets 06-1 to 06-13
  - Figures 1 to 10

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## **IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT**

**Standard of Care:** Golder Associates Ltd. (Golder) has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the engineering and science professions currently practising under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made.

**Basis and Use of the Report:** This report has been prepared for the specific site, design objective, development and purpose described to Golder by the Client. The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location. Any change of site conditions, purpose, development plans or if the project is not initiated within eighteen months of the date of the report may alter the validity of the report. Golder can not be responsible for use of this report, or portions thereof, unless Golder is requested to review and, if necessary, revise the report.

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without Golder's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the client, Golder may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawings and other documents as well as all electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make available the report or any portion thereof to any other party without the express written permission of Golder. The Client acknowledges that electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client can not rely upon the electronic media versions of Golder's report or other work products.

The report is of a summary nature and is not intended to stand alone without reference to the instructions given to Golder by the Client, communications between Golder and the Client, and to any other reports prepared by Golder for the Client relative to the specific site described in the report. In order to properly understand the suggestions, recommendations and opinions expressed in this report, reference must be made to the whole of the report. Golder can not be responsible for use of portions of the report without reference to the entire report.

Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project. The extent and detail of investigations, including the number of test holes, necessary to determine all of the relevant conditions which may affect construction costs would normally be greater than has been carried out for design purposes. Contractors bidding on, or undertaking the work, should rely on their own investigations, as well as their own interpretations of the factual data presented in the report, as to how subsurface conditions may affect their work, including but not limited to proposed construction techniques, schedule, safety and equipment capabilities.

**Soil, Rock and Groundwater Conditions:** Classification and identification of soils, rocks, and geologic units have been based on commonly accepted methods employed in the practice of geotechnical engineering and related disciplines. Classification and identification of the type and condition of these materials or units involves judgment, and boundaries between different soil, rock or geologic types or units may be transitional rather than abrupt. Accordingly, Golder does not warrant or guarantee the exactness of the descriptions.

## **IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT (cont'd)**

Special risks occur whenever engineering or related disciplines are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain subsurface conditions. The environmental, geologic, geotechnical, geochemical and hydrogeologic conditions that Golder interprets to exist between and beyond sampling points may differ from those that actually exist. In addition to soil variability, fill of variable physical and chemical composition can be present over portions of the site or on adjacent properties. **The professional services retained for this project include only the geotechnical aspects of the subsurface conditions at the site, unless otherwise specifically stated and identified in the report.** The presence or implication(s) of possible surface and/or subsurface contamination resulting from previous activities or uses of the site and/or resulting from the introduction onto the site of materials from off-site sources are outside the terms of reference for this project and have not been investigated or addressed.

Soil and groundwater conditions shown in the factual data and described in the report are the observed conditions at the time of their determination or measurement. Unless otherwise noted, those conditions form the basis of the recommendations in the report. Groundwater conditions may vary between and beyond reported locations and can be affected by annual, seasonal and meteorological conditions. The condition of the soil, rock and groundwater may be significantly altered by construction activities (traffic, excavation, groundwater level lowering, pile driving, blasting, etc.) on the site or on adjacent sites. Excavation may expose the soils to changes due to wetting, drying or frost. Unless otherwise indicated the soil must be protected from these changes during construction.

**Sample Disposal:** Golder will dispose of all uncontaminated soil and/or rock samples 90 days following issue of this report or, upon written request of the Client, will store uncontaminated samples and materials at the Client's expense. In the event that actual contaminated soils, fills or groundwater are encountered or are inferred to be present, all contaminated samples shall remain the property and responsibility of the Client for proper disposal.

**Follow-Up and Construction Services:** All details of the design were not known at the time of submission of Golder's report. Golder should be retained to review the final design, project plans and documents prior to construction, to confirm that they are consistent with the intent of Golder's report.

During construction, Golder should be retained to perform sufficient and timely observations of encountered conditions to confirm and document that the subsurface conditions do not materially differ from those interpreted conditions considered in the preparation of Golder's report and to confirm and document that construction activities do not adversely affect the suggestions, recommendations and opinions contained in Golder's report. Adequate field review, observation and testing during construction are necessary for Golder to be able to provide letters of assurance, in accordance with the requirements of many regulatory authorities. In cases where this recommendation is not followed, Golder's responsibility is limited to interpreting accurately the information encountered at the borehole locations, at the time of their initial determination or measurement during the preparation of the Report.

**Changed Conditions and Drainage:** Where conditions encountered at the site differ significantly from those anticipated in this report, either due to natural variability of subsurface conditions or construction activities, it is a condition of this report that Golder be notified of any changes and be provided with an opportunity to review or revise the recommendations within this report. Recognition of changed soil and rock conditions requires experience and it is recommended that Golder be employed to visit the site with sufficient frequency to detect if conditions have changed significantly.

Drainage of subsurface water is commonly required either for temporary or permanent installations for the project. Improper design or construction of drainage or dewatering can have serious consequences. Golder takes no responsibility for the effects of drainage unless specifically involved in the detailed design and construction monitoring of the system.

## LIST OF ABBREVIATIONS

The abbreviations commonly employed on Records of Boreholes, on figures and in the text of the report are as follows:

<p><b>I SAMPLE TYPE</b></p> <p>AS Auger sample            BS Block sample            CS Chunk sample            DO Drive open            DS Denison type sample            FS Foil sample            RC Rock core            SC Soil core            ST Slotted tube            TO Thin-walled, open            TP Thin-walled, piston            WS Wash sample</p>	<p><b>III SOIL DESCRIPTION</b></p> <p>(a) <b>Cohesionless Soils</b></p> <table border="0"> <thead> <tr> <th style="text-align: left;">Density Index (Relative Density)</th> <th style="text-align: left;">N Blows/300 mm or Blows/ft.</th> </tr> </thead> <tbody> <tr> <td>Very loose</td> <td>0 to 4</td> </tr> <tr> <td>Loose</td> <td>4 to 10</td> </tr> <tr> <td>Compact</td> <td>10 to 30</td> </tr> <tr> <td>Dense</td> <td>30 to 50</td> </tr> <tr> <td>Very dense</td> <td>over 50</td> </tr> </tbody> </table> <p>(b) <b>Cohesive Soils</b></p> <table border="0"> <thead> <tr> <th rowspan="2" style="text-align: left;">Consistency</th> <th colspan="2" style="text-align: center;"><math>c_u, s_u</math></th> </tr> <tr> <th style="text-align: center;">kPa</th> <th style="text-align: center;">psf</th> </tr> </thead> <tbody> <tr> <td>Very soft</td> <td>0 to 12</td> <td>0 to 250</td> </tr> <tr> <td>Soft</td> <td>12 to 25</td> <td>250 to 500</td> </tr> <tr> <td>Firm</td> <td>25 to 50</td> <td>500 to 1,000</td> </tr> <tr> <td>Stiff</td> <td>50 to 100</td> <td>1,000 to 2,000</td> </tr> <tr> <td>Very stiff</td> <td>100 to 200</td> <td>2,000 to 4,000</td> </tr> <tr> <td>Hard</td> <td>over 200</td> <td>over 4,000</td> </tr> </tbody> </table>	Density Index (Relative Density)	N Blows/300 mm or Blows/ft.	Very loose	0 to 4	Loose	4 to 10	Compact	10 to 30	Dense	30 to 50	Very dense	over 50	Consistency	$c_u, s_u$		kPa	psf	Very soft	0 to 12	0 to 250	Soft	12 to 25	250 to 500	Firm	25 to 50	500 to 1,000	Stiff	50 to 100	1,000 to 2,000	Very stiff	100 to 200	2,000 to 4,000	Hard	over 200	over 4,000
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<p><b>II PENETRATION RESISTANCE</b></p> <p><b>Standard Penetration Resistance (SPT), N:</b>            The number of blows by a 63.5 kg. (140 lb.) hammer dropped 760 mm (30 in.) required to drive a 50 mm (2 in.) drive open sampler for a distance of 300 mm (12 in.).</p> <p><b>Dynamic Penetration Resistance; <math>N_d</math>:</b>            The number of blows by a 63.5 kg (140 lb.) hammer dropped 760 mm (30 in.) to drive uncased a 50 mm (2 in.) diameter, 60° cone attached to "A" size drill rods for a distance of 300 mm (12 in.).</p> <p><b>PH:</b> Sampler advanced by hydraulic pressure  <b>PM:</b> Sampler advanced by manual pressure  <b>WH:</b> Sampler advanced by static weight of hammer  <b>WR:</b> Sampler advanced by weight of sampler and rod</p> <p><b>Piezo-Cone Penetration Test (CPT):</b>            An electronic cone penetrometer with a 60° conical tip and a projected end area of 10 cm<sup>2</sup> pushed through ground at a penetration rate of 2 cm/s. Measurements of tip resistance (<math>Q_t</math>), porewater pressure (PWP) and friction along a sleeve are recorded electronically at 25 mm penetration intervals.</p>	<p><b>IV. SOIL TESTS</b></p> <p>w water content  <math>w_p</math> plastic limit  <math>w_l</math> liquid limit            C consolidation (oedometer) test            CHEM chemical analysis (refer to text)            CID consolidated isotropically drained triaxial test<sup>1</sup>            CIU consolidated isotropically undrained triaxial test with porewater pressure measurement<sup>1</sup>  <math>D_R</math> relative density (specific gravity, <math>G_s</math>)            DS direct shear test            M sieve analysis for particle size            MH combined sieve and hydrometer (H) analysis            MPC Modified Proctor compaction test            SPC Standard Proctor compaction test            OC organic content test  <math>SO_4</math> concentration of water-soluble sulphates            UC unconfined compression test            UU unconsolidated undrained triaxial test            V field vane test (LV-laboratory vane test)  <math>\gamma</math> unit weight</p>																																			

Note:

1. Tests which are anisotropically consolidated prior to shear are shown as CAD, CAU.

## LIST OF SYMBOLS

Unless otherwise stated, the symbols employed in the report are as follows:

<b>I.</b>	<b>General</b>	<b>(a) Index Properties (continued)</b>	
$\pi$	3.1416	w	water content
$\ln x$ ,	natural logarithm of x	$w_L$	liquid limit
$\log_{10} x$	x or log x, logarithm of x to base 10	$w_p$	plastic limit
g	acceleration due to gravity	$I_p$	plasticity index = $(w - w_p)$
t	time	$w_s$	shrinkage limit
F	factor of safety	$I_L$	liquidity index = $(w - w_p)/I_p$
V	volume	$I_C$	consistency index = $(w_L - w)/I_p$
W	weight	$e_{max}$	void ratio in loosest state
		$e_{min}$	void ratio in densest state
<b>II.</b>	<b>STRESS AND STRAIN</b>	$I_D$	density index = $(e_{max} - e) / (e_{max} - e_{min})$ (formerly relative density)
$\gamma$	shear strain		<b>(b) Hydraulic Properties</b>
$\Delta$	change in, e.g. in stress: $\Delta \sigma$	h	hydraulic head or potential
$\epsilon$	linear strain	q	rate of flow
$\epsilon_v$	volumetric strain	v	velocity of flow
$\eta$	coefficient of viscosity	i	hydraulic gradient
$\nu$	Poisson's ratio	k	hydraulic conductivity (coefficient of permeability)
$\sigma$	total stress	j	seepage force per unit volume
$\sigma'$	effective stress ( $\sigma' = \sigma - u$ )		<b>(c) Consolidation (one-dimensional)</b>
$\sigma'_{vo}$	initial effective overburden stress	$C_c$	compression index (normally consolidated range)
$\sigma_1, \sigma_2, \sigma_3$	principal stress (major, intermediate, minor)	$C_r$	recompression index (over-consolidated range)
$\sigma_{oct}$	mean stress or octahedral stress = $(\sigma_1 + \sigma_2 + \sigma_3)/3$	$C_s$	swelling index
$\tau$	shear stress	$C_a$	coefficient of secondary consolidation
u	porewater pressure	$m_v$	coefficient of volume change
E	modulus of deformation	$c_v$	coefficient of consolidation
G	shear modulus of deformation	$T_v$	time factor (vertical direction)
K	bulk modulus of compressibility	U	degree of consolidation
<b>III.</b>	<b>SOIL PROPERTIES</b>	$\sigma'_p$	pre-consolidation pressure
	<b>(a) Index Properties</b>	OCR	over-consolidation ratio = $\sigma'_p/\sigma'_{vo}$
$\rho(\gamma)$	bulk density (bulk unit weight*)		<b>(d) Shear Strength</b>
$\rho_d(\gamma_d)$	dry density (dry unit weight)	$\tau_p, \tau_r$	peak and residual shear strength
$\rho_w(\gamma_w)$	density (unit weight) of water	$\phi'$	effective angle of internal friction
$\rho_s(\gamma_s)$	density (unit weight) of solid particles	$\delta$	angle of interface friction
$\gamma'$	unit weight of submerged soil ( $\gamma' = \gamma - \gamma_w$ )	$\mu$	coefficient of friction = $\tan \delta$
$D_R$	relative density (specific gravity) of solid particles ( $D_R = \rho_s/\rho_w$ ) (formerly $G_s$ )	$c'$	effective cohesion
e	void ratio	$c_{u, S_u}$	undrained shear strength ( $\phi = 0$ analysis)
n	porosity	p	mean total stress $(\sigma_1 + \sigma_3)/2$
S	degree of saturation	$p'$	mean effective stress $(\sigma'_1 + \sigma'_3)/2$
*	Density symbol is $\rho$ . Unit weight symbol is $\gamma$ where $\gamma = \rho g$ (i.e. mass density x acceleration due to gravity)	q	$(\sigma_1 + \sigma_3)/2$ or $(\sigma'_1 + \sigma'_3)/2$
		$q_u$	compressive strength $(\sigma_1 + \sigma_3)$
		$S_t$	sensitivity

- Notes:** 1  $\tau = c' + \sigma' \tan \phi'$   
2 Shear strength = (Compressive strength)/2

PROJECT: 06-1189-519

# RECORD OF BOREHOLE 06-1

SHEET 1 OF 1

LOCATION: SEE FIGURE 2

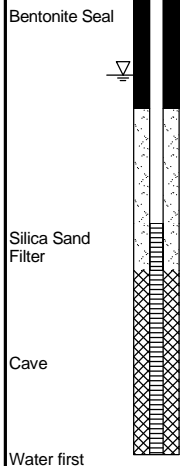
BORING DATE: January 15, 2007

DATUM: GEODETIC

SAMPLER HAMMER, 63.5kg; DROP, 760mm

PENETRATION TEST HAMMER, 63.5kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
									20	40	60	80	nat V. rem V.	+ ⊕	Q - U -			⊙
0	TRACK MOUNTED POWER AUGER 115 mm Dia. Solid Stem Augers	GROUND SURFACE		224.80														
		Soft to firm, grey to brown clayey silt, some sand and organic matter (FILL)	[Cross-hatch pattern]	0.00	1	50 DO	4											
1		Very loose to loose, mixed, grey to brown silty sand to sandy silt, trace clay. Contains pockets of organics (Possible FILL)	[Cross-hatch pattern]	224.19	2	50 DO	3	224										
2		Compact, wet, grey SAND, trace to some silt. Contains zones of clayey silt	[Dotted pattern]	222.67	3	50 DO	4	223										
				2.13	4	50 DO	14											
3		Compact, wet, grey SILTY SAND to SANDY SILT	[Vertical lines pattern]	221.98			222											
			2.82	5	50 DO	14												
		END OF BOREHOLE		221.29														
4		Note: Borehole elevation is approximate only.		3.51														



Water first encountered during drilling at a depth of 1.5 m

Borehole caved to a depth of 2.0 m below ground surface upon completion of drilling, Jan. 15/07

Water level measured in open portion of borehole at a depth of 1.2 m below ground surface upon completion of drilling, Jan. 15/07

Water level measured in piezometer at a depth of 1.0 m below ground surface on Feb. 1/07

LDN\_BHS 06-1189-519.GPJ GLDR\_LDN.GDT 14/2/07 DATA INPUT: PH 02/2007

DEPTH SCALE  
1 : 50



LOGGED: PM  
CHECKED:

PROJECT: 06-1189-519

# RECORD OF BOREHOLE 06-2

SHEET 1 OF 1

LOCATION: SEE FIGURE 2

BORING DATE: January 15, 2007

DATUM: GEODETIC

SAMPLER HAMMER, 63.5kg; DROP, 760mm

PENETRATION TEST HAMMER, 63.5kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
									20	40	60	80	nat V. rem V.	+ ⊕	0 - U -			⊙
0	TRACK MOUNTED POWER AUGER 115 mm Dia. Solid Stem Augers	GROUND SURFACE		224.70														
		TOPSOIL		0.00														
		Soft, brown CLAYEY SILT, trace to some sand, trace organic matter (Possible FILL)		0.30	1	50 DO	2											
		Very loose, brown to grey silty sand, trace clay, gravel and organic matter (Possible FILL)		0.69	2	50 DO	3											
1		Very loose, dark grey to black organic SILT, trace to some sand and shells		1.37	3	50 DO	3										125	
2		Very loose, wet, grey SILTY SAND, trace clay, wood and organic material		2.90	5	50 DO	3										97.6	
3		END OF BOREHOLE		3.51														
4	Note: Borehole elevation is approximate only.																	

Water first encountered during drilling at a depth of 1.5 m

Water level measured in open borehole at a depth of 0.30 m below ground surface upon completion of drilling, Jan. 15/07

LDN\_BHS 06-1189-519.GPJ GLDR\_LDN.GDT 14/2/07 DATA INPUT: PH 02/2007

DEPTH SCALE  
1 : 50



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PROJECT: 06-1189-519

# RECORD OF BOREHOLE 06-3

SHEET 1 OF 1

LOCATION: SEE FIGURE 2

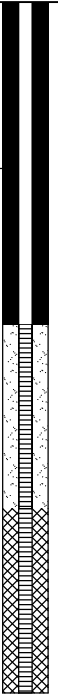
BORING DATE: January 15, 2007

DATUM: GEODETIC

SAMPLER HAMMER, 63.5kg; DROP, 760mm

PENETRATION TEST HAMMER, 63.5kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS
		DESCRIPTION	STRATA PLOT	ELEV.	NUMBER	TYPE	BLOWS/0.3m		SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
				DEPTH (m)					20	40	60	80	10 <sup>-5</sup>	10 <sup>-4</sup>	10 <sup>-3</sup>	10 <sup>-2</sup>		
0	TRACK MOUNTED POWER AUGER 115 mm Dia. Solid Stem Augers	GROUND SURFACE		225.00														
		Dark brown sandy silt. Contains organic matter (TOPSOIL)		0.00	1	50 DO	3											
1		Very loose, wet, brown to grey SAND, trace to some silt, trace shells. Contains pockets of peat/ organic matter.		224.39	2	50 DO	3											
2				0.61	3	50 DO	4											
3		Compact, wet, grey SAND, some silt to SILT, some sand. Contains zones/ interlayers of clayey silt.		222.79	4	50 DO	11											
4	END OF BOREHOLE		221.34	5	50 DO	13												
	Note: Borehole elevation is approximate only.		3.66															



Water first encountered during drilling at a depth of 1.7 m

Borehole caved to a depth of 2.1 m below ground surface upon completion of drilling, Jan. 15/07

Water level measured in open portion of borehole at a depth of 1.68 m below ground surface upon completion of drilling, Jan. 15/07

Water level measured in piezometer at a depth of 1.1 m below ground surface on Feb. 1/07

LDN\_BHS 06-1189-519.GPJ GLDR\_LDN.GDT 14/2/07 DATA INPUT: PH 02/2007

DEPTH SCALE  
1 : 50



LOGGED: PM  
CHECKED:

PROJECT: 06-1189-519

# RECORD OF BOREHOLE 06-4

SHEET 1 OF 1

LOCATION: SEE FIGURE 2

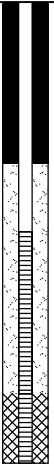
BORING DATE: January 15, 2007

DATUM: GEODETIC

SAMPLER HAMMER, 63.5kg; DROP, 760mm

PENETRATION TEST HAMMER, 63.5kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
									20	40	60	80	nat V. rem V.	+ ⊕	0 - U -			⊙
0	TRACK MOUNTED POWER AUGER 115 mm Dia. Solid Stem Augers	GROUND SURFACE		225.90														
		Sandy TOPSOIL		0.00														
		Compact, brown SAND, some silt. Upper portion fo deposit is organic-stained.		0.15	1	50 DO	4											
1		Compact, moist to wet, grey SAND, some silt to silty sand		0.69	2	50 DO	11	225										
2		Grades to a very dense grey SILTY SAND			3	50 DO	24	224										
3				4	50 DO	21												
3				5	50 DO	55	223											
4		END OF BOREHOLE		3.51														



Bentonite Seal

Silica Sand Filter

Cave

Water first encountered during drilling at a depth of 2.4 m

Borehole caved to a depth of 2.6 m below ground surface upon completion of drilling, Jan. 15/07

Water level measured in piezometer at a depth of 2.3 m below ground surface on Feb. 1/07

Note: Borehole elevation is approximate only.

LDN\_BHS 06-1189-519.GPJ GLDR\_LDN.GDT 14/2/07 DATA INPUT: PH 02/2007





PROJECT: 06-1189-519

# RECORD OF BOREHOLE 06-5

SHEET 1 OF 1

LOCATION: SEE FIGURE 2

BORING DATE: January 15, 2007

DATUM: GEODETIC

SAMPLER HAMMER, 63.5kg; DROP, 760mm

PENETRATION TEST HAMMER, 63.5kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
									20	40	60	80	10 <sup>-6</sup>	10 <sup>-5</sup>	10 <sup>-4</sup>			10 <sup>-3</sup>
0		GROUND SURFACE		226.20														
		TOPSOIL		0.00														
		Compact, moist to wet, brown to grey SAND to SILTY SAND. Contains organic staining in upper portion.		0.20	1	50 DO	3	226										
1	TRACK MOUNTED POWER AUGER 115 mm Dia. Solid Stem Augers				2	50 DO	10	225								MH		
					3	50 DO	18											
2					4	50 DO	23	224										
3					5	50 DO	15	223										
			END OF BOREHOLE		222.69													
4		Note: Borehole elevation is approximate only.		3.51												Water first encountered during drilling at a depth of 2.1 m  Borehole caved to a depth of 2.6 m below ground surface upon completion of drilling, Jan. 15/07  Water level measured in open portion of borehole at a depth of 2.1 m below ground surface upon completion of drilling, Jan. 15/07		

LDN\_BHS 06-1189-519/GPJ GLDR\_LDN.GDT 14/2/07 DATA INPUT: PH 02/2007

DEPTH SCALE

1 : 50



LOGGED: PM

CHECKED:

PROJECT: 06-1189-519

# RECORD OF BOREHOLE 06-6

SHEET 1 OF 1

LOCATION: SEE FIGURE 3

BORING DATE: January 15, 2007

DATUM: GEODETIC

SAMPLER HAMMER, 63.5kg; DROP, 760mm

PENETRATION TEST HAMMER, 63.5kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
									20	40	60	80	10 <sup>-5</sup>	10 <sup>-5</sup>	10 <sup>-4</sup>			10 <sup>-3</sup>
0	TRACK MOUNTED POWER AUGER 115 mm Dia. Solid Stem Augers	GROUND SURFACE		226.10														
0		Dark brown silty TOPSOIL. Contains pockets/ interlayers of soft to firm clayey silt, some sand		0.00	1	50 DO	7											
1					2	50 DO	4											
1		Interlayered, compact, wet, grey SILTY SAND and soft grey SILTY CLAY		224.73	1.37	3	50 DO	13										
2					4	50 DO	6											
3		Compact, wet, grey SILTY SAND, trace to some clay		223.20	2.90	5	50 DO	14										
4					6	50 DO	13											
5		Interlayered, compact, wet grey SILTY SAND and firm to stiff SILTY CLAY		221.93	4.17	7	50 DO	10										
6					8	50 DO	9											
7				9	50 DO	9												
8		Firm to stiff, grey SILTY CLAY. Contains sand interlayers		218.86	7.24													
8				218.02	8.08													
9		END OF BOREHOLE																
10		Note: Borehole elevation is approximate only.																

LDN\_BHS 06-1189-519/GPJ GLDR\_LDN\_GDT 14/2/07 DATA INPUT: PH 02/2007

57.6

Bentonite Seal

MH

Cave

Cave

Borehole caved to a depth of 3.4 m below ground surface upon completion of drilling, Jan. 15/07

Water level measured in open portion of borehole at a depth of 2.13 m below ground surface upon completion of drilling, Jan. 15/07

Water level measured in piezometer at a depth of 1.1 m below ground surface on Feb. 1/07

DEPTH SCALE

1 : 50



LOGGED: PM

CHECKED:

PROJECT: 06-1189-519

# RECORD OF BOREHOLE 06-7

SHEET 1 OF 1

LOCATION: SEE FIGURE 3

BORING DATE: January 16, 2007

DATUM: GEODETIC

SAMPLER HAMMER, 63.5kg; DROP, 760mm

PENETRATION TEST HAMMER, 63.5kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
									20	40	60	80	10 <sup>-5</sup>	10 <sup>-5</sup>	10 <sup>-4</sup>			10 <sup>-3</sup>
0		GROUND SURFACE		226.10														
		Dark brown silty TOPSOIL (frozen)		0.00	1	50 DO	12											
				225.41														
1		Very loose, black amorphous PEAT		0.69	2	50 DO	2									340.7		
				224.17														
2		Soft, grey CLAYEY SILT, some sand		223.97														
		Loose, wet, grey SAND, some silt		2.13	4	50 DO	9											
				223.28														
3		Very loose, wet SANDY SILT. Contains interlayers of SILTY CLAY		2.82	5	50 DO	3											
				221.91														
4		Stiff, grey SILTY CLAY		4.19	6	50 DO	9											
				220.54														
6		Firm, grey SILTY CLAY. Contains zones of sand		5.56	7	50 DO	8											
				218.02														
8		END OF BOREHOLE		8.08	8	50 DO	5											
		Note: Borehole elevation is approximate only.																

Water first encountered during drilling at a depth of 0.3 m

Borehole caved to a depth of 2.4 m below ground surface upon completion of drilling, Jan. 16/07

LDN\_BHS 06-1189-519/GPJ GLDR\_LDN.GDT 14/2/07 DATA INPUT: PH 02/2007

DEPTH SCALE  
1 : 50



LOGGED: PM  
CHECKED:

PROJECT: 06-1189-519

# RECORD OF BOREHOLE 06-8

SHEET 1 OF 1

LOCATION: SEE FIGURE 3

BORING DATE: January 16, 2007

DATUM: GEODETIC

SAMPLER HAMMER, 63.5kg; DROP, 760mm

PENETRATION TEST HAMMER, 63.5kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS		
		DESCRIPTION	STRATA PLOT	ELEV.	NUMBER	TYPE	BLOWS/0.3m		SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT							
				DEPTH (m)					20	40	60	80	10 <sup>-5</sup>	10 <sup>-4</sup>	10 <sup>-3</sup>	10 <sup>-2</sup>				
0		GROUND SURFACE TOPSOIL		226.40 0.00	1	50 DO	7													
1		Very soft, grey SILTY CLAY, trace sand		225.71 0.69	2	50 DO	4													
2		Becoming firm below 3 m depth			3	50 DO	2													
2				4	50 DO	2														
3																				
3																				
4		Stiff, grey SILTY CLAY		222.20 4.20	6	50 DO	9													
5		Compact, wet, grey SILT and fine SAND. Contains interlayers of silty clay.			7	50 DO	13													
6																				
7																				
8		END OF BOREHOLE		218.32 8.08	8	50 DO	17													
9		Note: Borehole elevation is approximate only.																		

LDN\_BHS 06-1189-519.GPJ GLDR\_LDN.GDT 14/2/07 DATA INPUT: PH 02/2007

DEPTH SCALE  
1 : 50



LOGGED: PM  
CHECKED:

57.6

▽

Bentonite Seal

MH

Silica Sand Filter

Cave

Water first encountered during drilling at a depth of 2.4 m

Borehole caved to a depth of 5.2 m below ground surface upon completion of drilling, Jan. 16/07

Water level measured in piezometer at a depth of 0.7 m below ground surface on Feb. 1/07

PROJECT: 06-1189-519

# RECORD OF BOREHOLE 06-9

SHEET 1 OF 1

LOCATION: SEE FIGURE 4

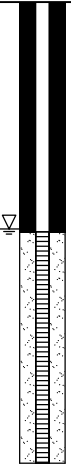
BORING DATE: January 16, 2007

DATUM: GEODETIC

SAMPLER HAMMER, 63.5kg; DROP, 760mm

PENETRATION TEST HAMMER, 63.5kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
									20	40	60	80	10 <sup>-6</sup>	10 <sup>-5</sup>	10 <sup>-4</sup>			10 <sup>-3</sup>
0	TRACK MOUNTED POWER AUGER 115 mm Dia. Solid Stem Augers	GROUND SURFACE		233.00			233											
		TOPSOIL		0.00	1	50 DO	5											
				232.54														
			Loose grey SILTY SAND		0.46													
			Stiff to very stiff, brown CLAYEY SILT, some sand to with sand, trace gravel		232.31													
1				0.69	2	50 DO	9	232								MH		
2				230.87														
		Very stiff, grey SILTY CLAY, trace sand		2.13	3	50 DO	23	231										
					4	50 DO	15											
3																		
				229.49														
		END OF BOREHOLE		3.51	5	50 DO	22	230										
4		Note: Borehole elevation is approximate only.																



Water first encountered during drilling at a depth of 1.8 m

Borehole caved to a depth of 2.1 m below ground surface upon completion of drilling, Jan. 16/07

Water level measured in open portion of borehole at a depth of 1.83 m below ground surface upon completion of drilling, Jan. 16/07

Water level measured in piezometer at a depth of 1.5 m below ground surface on Feb. 1/07

LDN\_BHS 06-1189-519/GPJ GLDR\_LDN.GDT 14/2/07 DATA INPUT: PH 02/2007

DEPTH SCALE  
1 : 50



LOGGED: PM  
CHECKED:

PROJECT: 06-1189-519

# RECORD OF BOREHOLE 06-10

SHEET 1 OF 1

LOCATION: SEE FIGURE 4

BORING DATE: January 16, 2007

DATUM: GEODETIC

SAMPLER HAMMER, 63.5kg; DROP, 760mm

PENETRATION TEST HAMMER, 63.5kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
									20	40	60	80	nat V. rem V.	+ ⊕	Q - U -			⊙
0	TRACK MOUNTED POWER AUGER 115 mm Dia. Solid Stem Augers	GROUND SURFACE		233.80														
		Mixed, very soft/ loose, brown to black TOPSOIL, sand and clayey silt		0.00	1	50 DO	2											
				233.11														
1		Firm, grey to brown CLAYEY SILT with sand. Contains pockets of topsoil to 1.2 m depth		0.69	2	50 DO	4	233										
2				231.59														
		Very stiff, grey SILTY CLAY		2.21	3	50 DO	7	232										
3		No recovery from sample 5			4	50 DO	22	231										
4		END OF BOREHOLE		230.29														
		Note: Borehole elevation is approximate only.		3.51														
5																		
6																		
7																		
8																		
9																		
10																		

Water first encountered during drilling at a depth of 0.2 m  
 Water level measured in open borehole at a depth of 0.15 m below ground surface upon completion of drilling, Jan. 16/07

LDN\_BHS 06-1189-519/GPJ GLDR\_LDN.GDT 14/2/07 DATA INPUT: PH 02/2007

DEPTH SCALE  
1 : 50



LOGGED: PM  
CHECKED:

PROJECT: 06-1189-519

# RECORD OF BOREHOLE 06-11

SHEET 1 OF 1

LOCATION: SEE FIGURE 4

BORING DATE: January 16, 2007

DATUM: GEODETIC

SAMPLER HAMMER, 63.5kg; DROP, 760mm

PENETRATION TEST HAMMER, 63.5kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
									20	40	60	80	10 <sup>-5</sup>	10 <sup>-4</sup>	10 <sup>-3</sup>			10 <sup>-2</sup>
0	TRACK MOUNTED POWER AUGER 115 mm Dia. Solid Stem Augers	GROUND SURFACE		234.70														
		TOPSOIL		0.00														
		Soft brown CLAYEY SILT with sand		0.30	1	50 DO	4											
1								234										
		Stiff, brown CLAYEY SILT, some sand, trace gravel. Contains wet sand interlayers.		1.37	3	50 DO	14	233										
2		Interlayered, stiff grey CLAYEY SILT and compact wet, grey SILT, trace sand and gravel		2.13	4	50 DO	14	232										
3		Firm, grey CLAYEY SILT with sand, trace gravel. Contains wet sand seams.		2.82	5	50 DO	11											
		END OF BOREHOLE		3.51														
4		Note: Borehole elevation is approximate only.																

Water first encountered during drilling at a depth of 0.2 m

Borehole caved to a depth of 1.8 m below ground surface upon completion of drilling, Jan. 16/07

Water level measured in open portion of borehole at a depth of 0.15 m below ground surface upon completion of drilling, Jan. 16/07

LDN\_BHS 06-1189-519.GPJ GLDR\_LDN.GDT 14/2/07 DATA INPUT: PH 02/2007

DEPTH SCALE  
1 : 50



LOGGED: PM  
CHECKED:

PROJECT: 06-1189-519

# RECORD OF BOREHOLE 06-12

SHEET 1 OF 1

LOCATION: SEE FIGURE 4

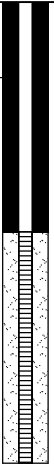
BORING DATE: January 15, 2007

DATUM: GEODETIC

SAMPLER HAMMER, 63.5kg; DROP, 760mm

PENETRATION TEST HAMMER, 63.5kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
									20	40	60	80	nat V. rem V.	+ ⊕	Q - U			⊙
0	TRACK MOUNTED POWER AUGER 115 mm Dia. Solid Stem Augers	GROUND SURFACE		233.90														
		TOPSOIL		0.00	1	50 DO	4											
1		Very stiff, brown CLAYEY SILT, trace to some sand		233.21	2	50 DO	17	233									Bentonite Seal	
2		Becomes grey below 1.5 m depth.			3	50 DO	18	232										
		Firm to stiff, grey SILTY CLAY		231.77	4	50 DO	11	231									Silica Sand Filter	
				230.39	5	50 DO	6											
4		END OF BOREHOLE		3.51												Water first encountered during drilling at a depth of 1.5 m		
5		Note: Borehole elevation is approximate only.														Water level measured in open portion of borehole at a depth of 2.13 m below ground surface upon completion of drilling, Jan. 16/07		
6																Water level measured in piezometer at a depth of 0.5 m below ground surface on Feb. 1/07		



LDN\_BHS 06-1189-519.GPJ GLDR\_LDN.GDT 14/2/07 DATA INPUT: PH 02/2007

DEPTH SCALE  
1 : 50



LOGGED: PM  
CHECKED:



PROJECT: 06-1189-519

# RECORD OF BOREHOLE 06-13

SHEET 1 OF 1

LOCATION: SEE FIGURE 4

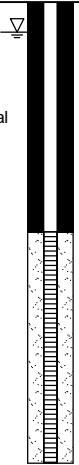
BORING DATE: January 16, 2007

DATUM: GEODETIC

SAMPLER HAMMER, 63.5kg; DROP, 760mm

PENETRATION TEST HAMMER, 63.5kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS		
		DESCRIPTION	STRATA PLOT	ELEV.		NUMBER		TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
				DEPTH (m)						20	40	60	80	nat V. rem V.	+ ⊕			Q - U	⊙
0	TRACK MOUNTED POWER AUGER 115 mm Dia. Solid Stem Augers	GROUND SURFACE		233.80															
		Firm, brown CLAYEY SILT, some sand		0.00	1	50 DO	4												
1		Very stiff, mottled grey and brown CLAYEY SILT, trace to some sand		233.11	2	50 DO	17	233											
2		Becomes grey below 1.5 m depth.		231.67	3	50 DO	17	232											
		Firm, grey CLAYEY SILT, trace sand and gravel		231.67	4	50 DO	6												
3		Very stiff, grey CLAYEY SILT, trace sand		230.98	5	50 DO	20	231											
4		END OF BOREHOLE		230.29															
5		Note: Borehole elevation is approximate only.		3.51															



Water level measured in open borehole at a depth of 2.90 m below ground surface upon completion of drilling, Jan. 15/07

Water level measured in piezometer at a depth of 0.2 m below ground surface on Feb. 1/07

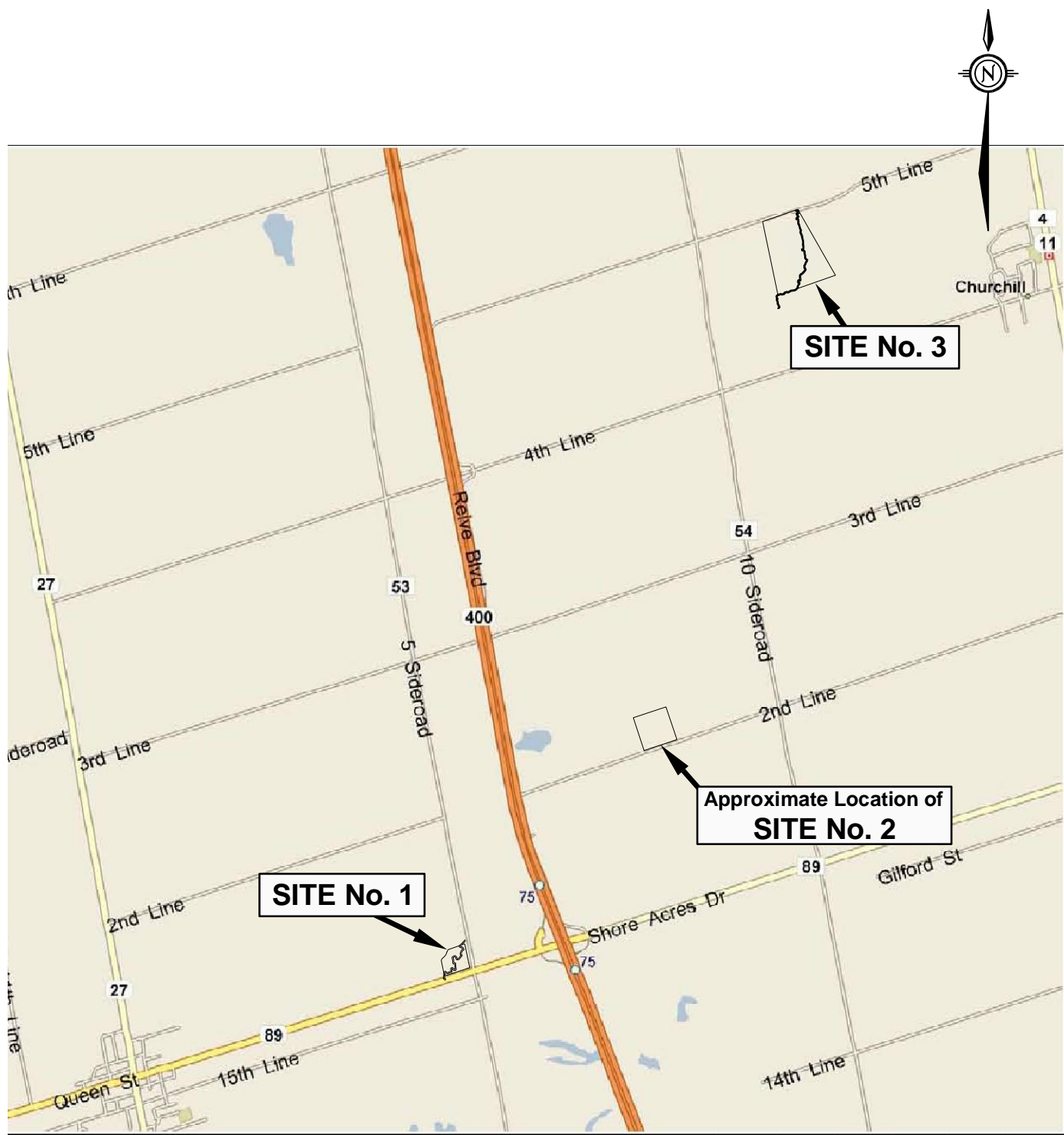
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DEPTH SCALE  
1 : 50



LOGGED: PM  
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Drawing file: N:\CAD\2006\1189\06-1189-519-001 fig 2007'02' - Innisfil Cr-FIG 1 KP.dwg Feb 14, 2007 - 12:22pm

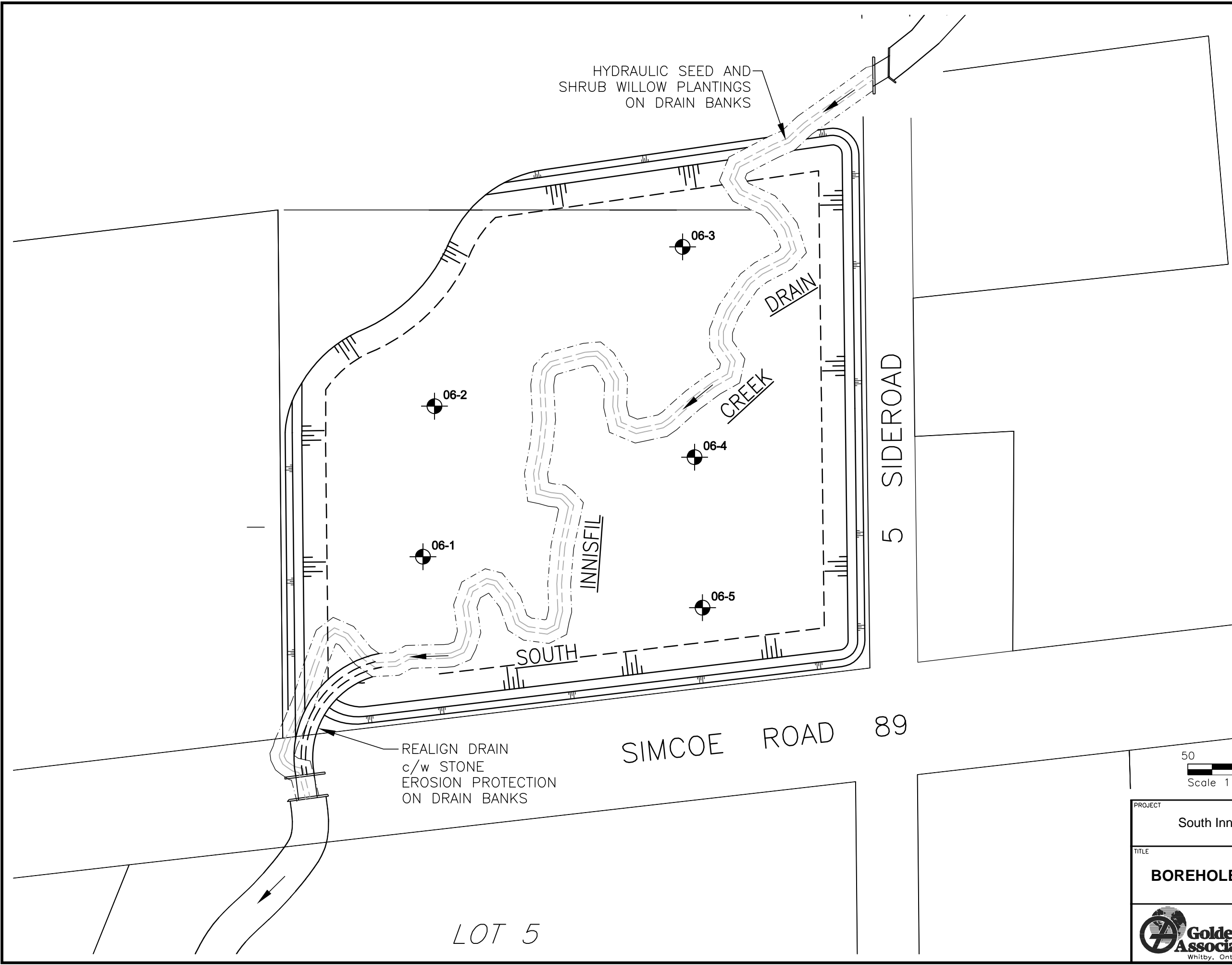


Base map by Microsoft Streets & Trips 2006  
 Microsoft Corp. and/or its suppliers, 1988- 2005;  
 NAVTEQ, 2004; and TeleAtlas North America,  
 Inc., 2004

PROJECT		Dillon Consulting Ltd. South Innisfil Creek Drainage Improvements Town of Innisfil, Ontario	
<b>LOCATION PLAN - SITE Nos. 1 to 3</b>			
PROJECT No. 06-1189-519		FILE No. 001	
DESIGN		SCALE AS SHOWN	
CADD PH Feb. 2006		REV.	
CHECK		<b>FIGURE 1</b>	
REVIEW			



Drawing file: N:\CAD\2006\1189\06-1189-519-002 fig 2007'02' - Innisfil Cr.FIG 2 and 4.dwg Feb 14, 2007 - 12:24pm



**LEGEND**

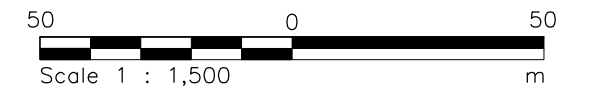
06-1 BOREHOLE LOCATION IN PLAN


**NOTES**

Note: Borehole locations surveyed by Dillon Consulting personnel.

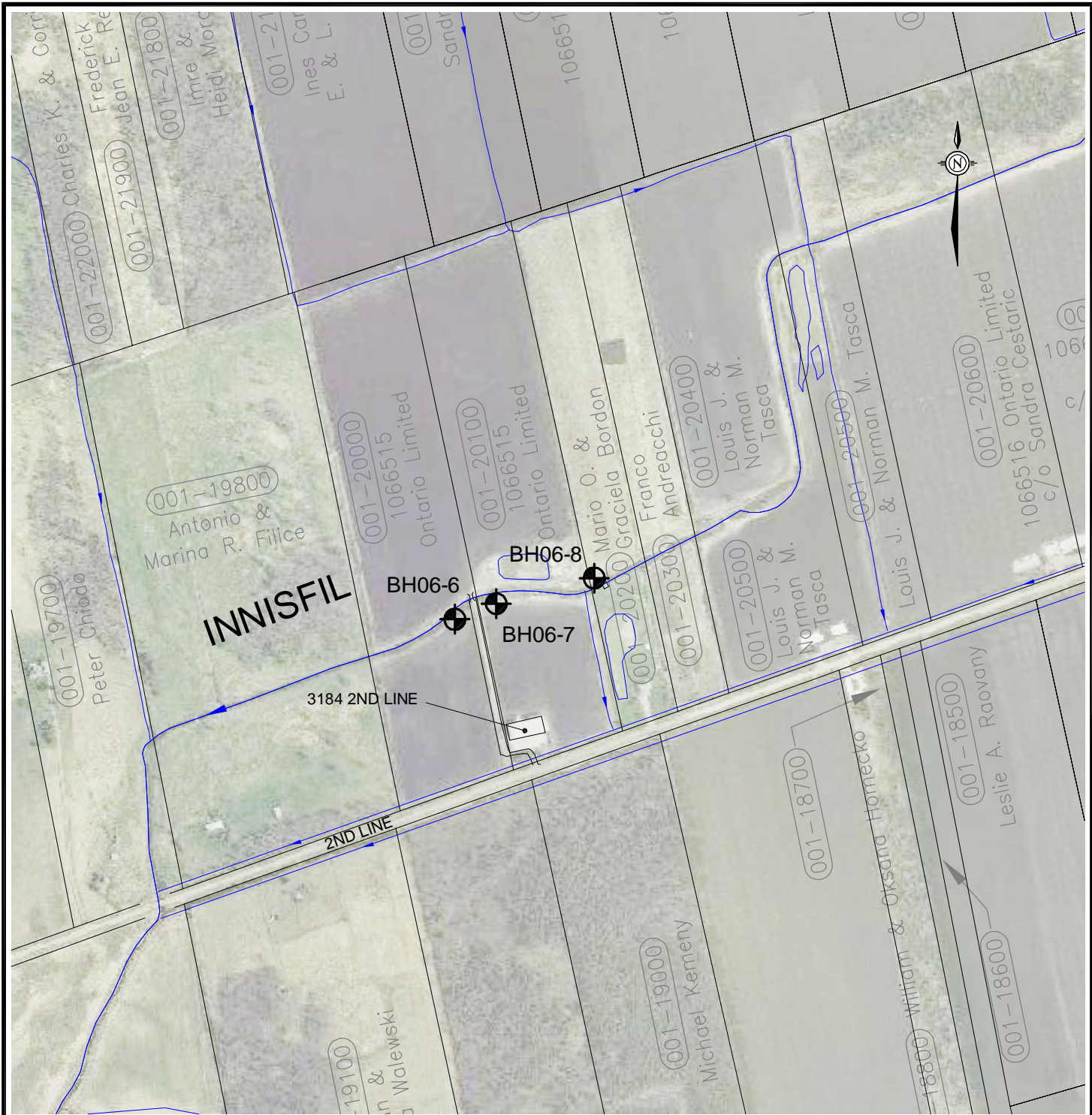
**REFERENCE**

Base plan by Dillon Consulting entitled "Proposed Borehole Locations, South Innisfil Creek Drain and Branches", Project No. 05-4787, Jan. 8/2007




PROJECT		Dillon Consulting Ltd. South Innisfil Creek Drainage Improvements Town of Innisfil, Ontario		
TITLE		<b>BOREHOLE LOCATION PLAN - SITE No. 1</b>		
 Golder Associates Whitby, Ontario	PROJECT No.	06-1189-519	FILE No.	002
	DESIGN		SCALE	AS SHOWN
	CADD	PH	Feb. 2007	REV.
	CHECK			
	REVIEW			
<b>FIGURE 2</b>				

PLOT DATE: February 19, 2007  
 FILENAME: T:\Projects\2006\06-1189-519 (Simcoe)\-AA-061189519AA001.dwg

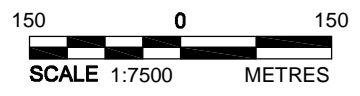



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 **BH06-6**  
 APPROXIMATE BOREHOLE LOCATION

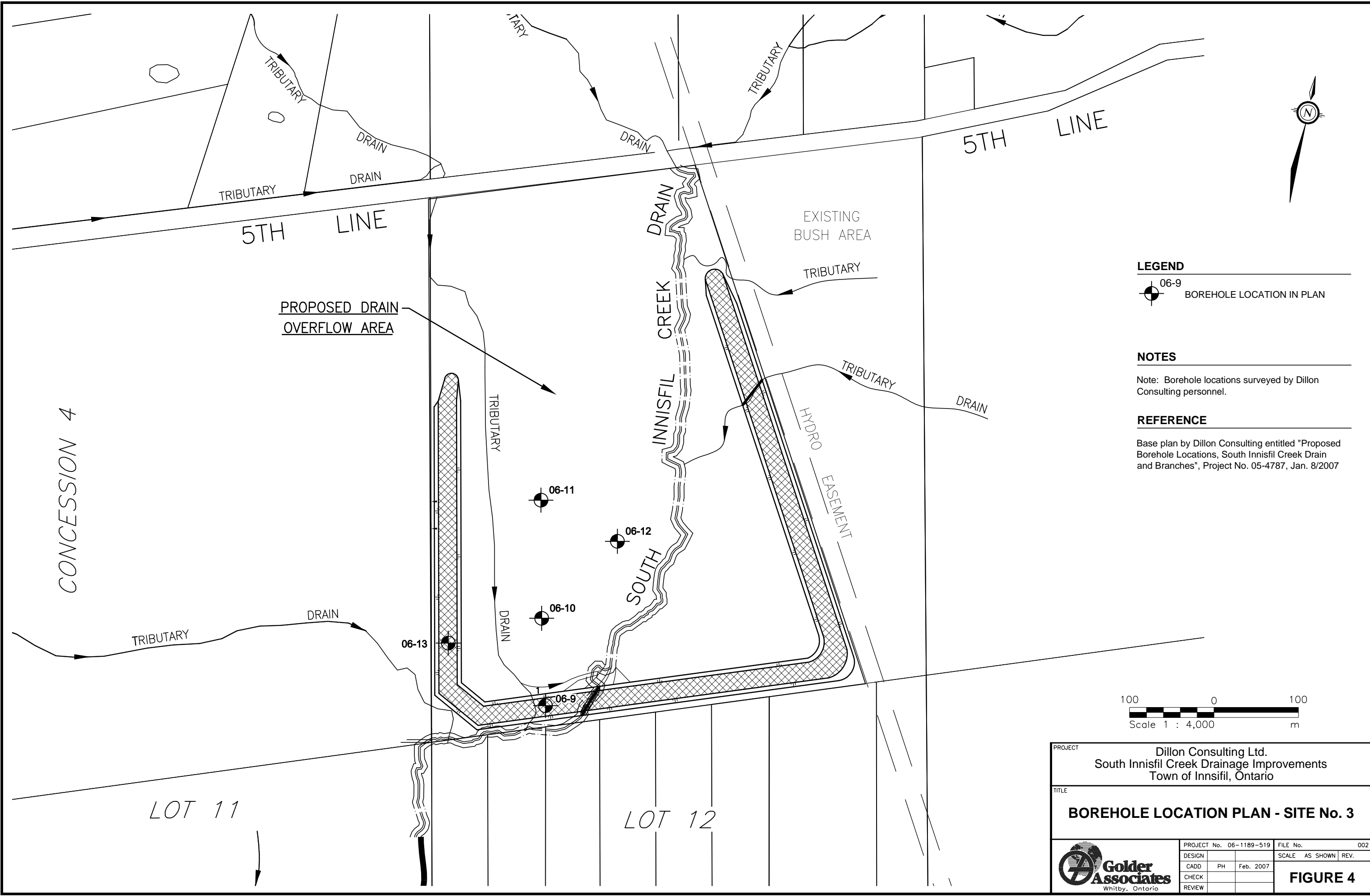
**REFERENCES:**

1. MAPPING BASED ON AUTOCAD FILE NAMED 'OVERFLOW AREAS\_borehole locations.dwg' PROVIDED BY DILLON CONSULTING ON FEB. 6, 2007.



 <b>Golder Associates</b> Mississauga, Ontario, Canada	SCALE	AS SHOWN	<b>TITLE</b>  <b>BOREHOLE LOCATION PLAN - SITE No. 2</b>
	DATE	FEB 2007	
	DESIGN		
	CAD	JDR	
FILE No. <b>061189519AA001.dwg : F3</b>	CHECK	KN	Dillon Consulting Ltd. South Innisfil Creek Drainage Improvements Town of Innisfil, Ontario
PROJECT No. 06-1189-519	REV.	REVIEW	

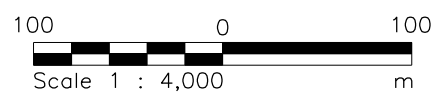
Drawing file: N:\CAD\2006\1189\06-1189-519-002 fig 2007'02' - Innisfil Cr.FIG 2 and 4.dwg Feb 16, 2007 - 4:26pm



**LEGEND**  
 06-9 BOREHOLE LOCATION IN PLAN

**NOTES**  
 Note: Borehole locations surveyed by Dillon Consulting personnel.

**REFERENCE**  
 Base plan by Dillon Consulting entitled "Proposed Borehole Locations, South Innisfil Creek Drain and Branches", Project No. 05-4787, Jan. 8/2007

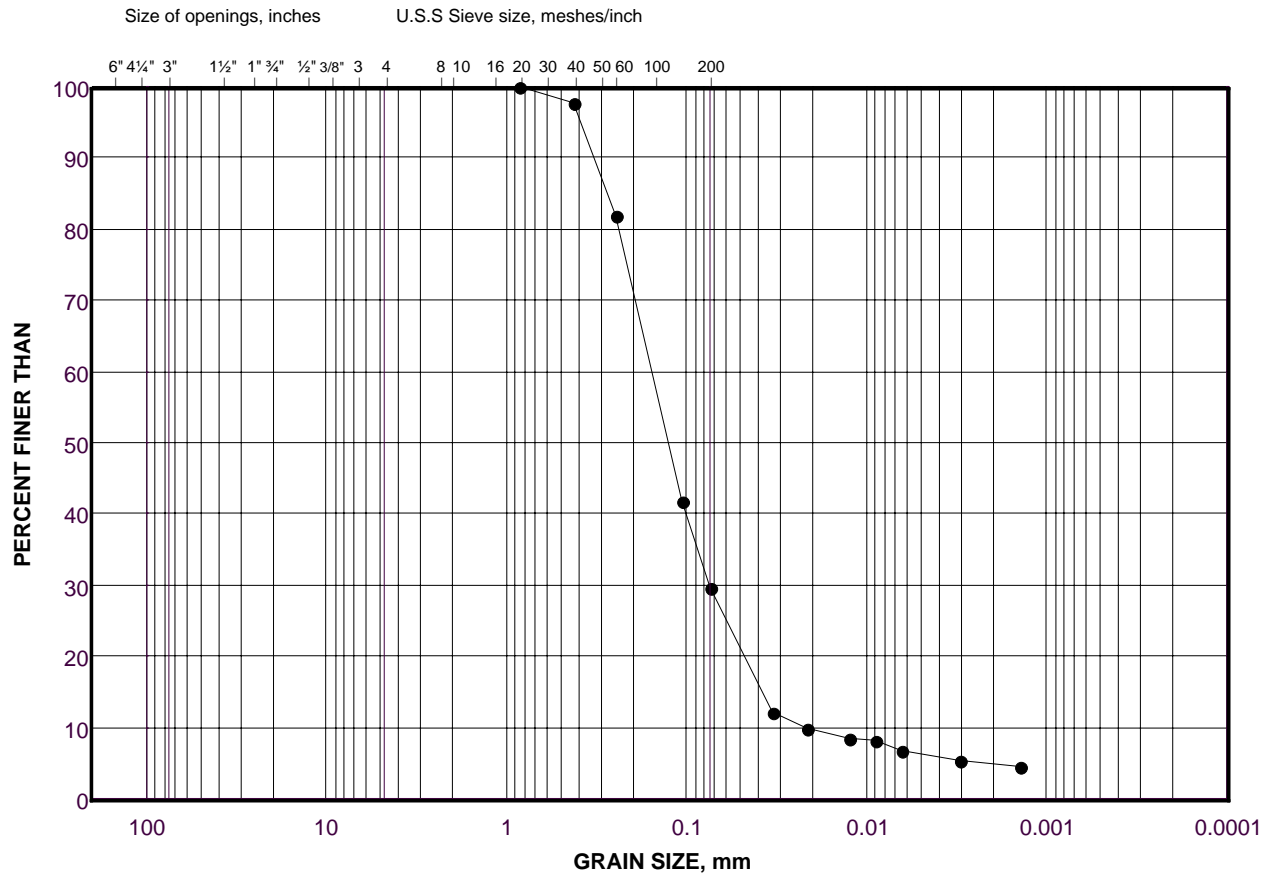


PROJECT		Dillon Consulting Ltd. South Innisfil Creek Drainage Improvements Town of Innisfil, Ontario		
TITLE		<b>BOREHOLE LOCATION PLAN - SITE No. 3</b>		
 Golder Associates Whitby, Ontario	PROJECT No.	06-1189-519	FILE No.	002
	DESIGN		SCALE	AS SHOWN
	CADD	PH	Feb. 2007	REV.
	CHECK			
	REVIEW			
<b>FIGURE 4</b>				

# GRAIN SIZE DISTRIBUTION

Silty Sand (Possible Fill)

FIGURE 5



COBBLE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
	GRAVEL SIZE		SAND SIZE			

## LEGEND

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
●	06-1	2	1.0

Project Number: 06-1189-519

Checked By: \_\_\_\_\_

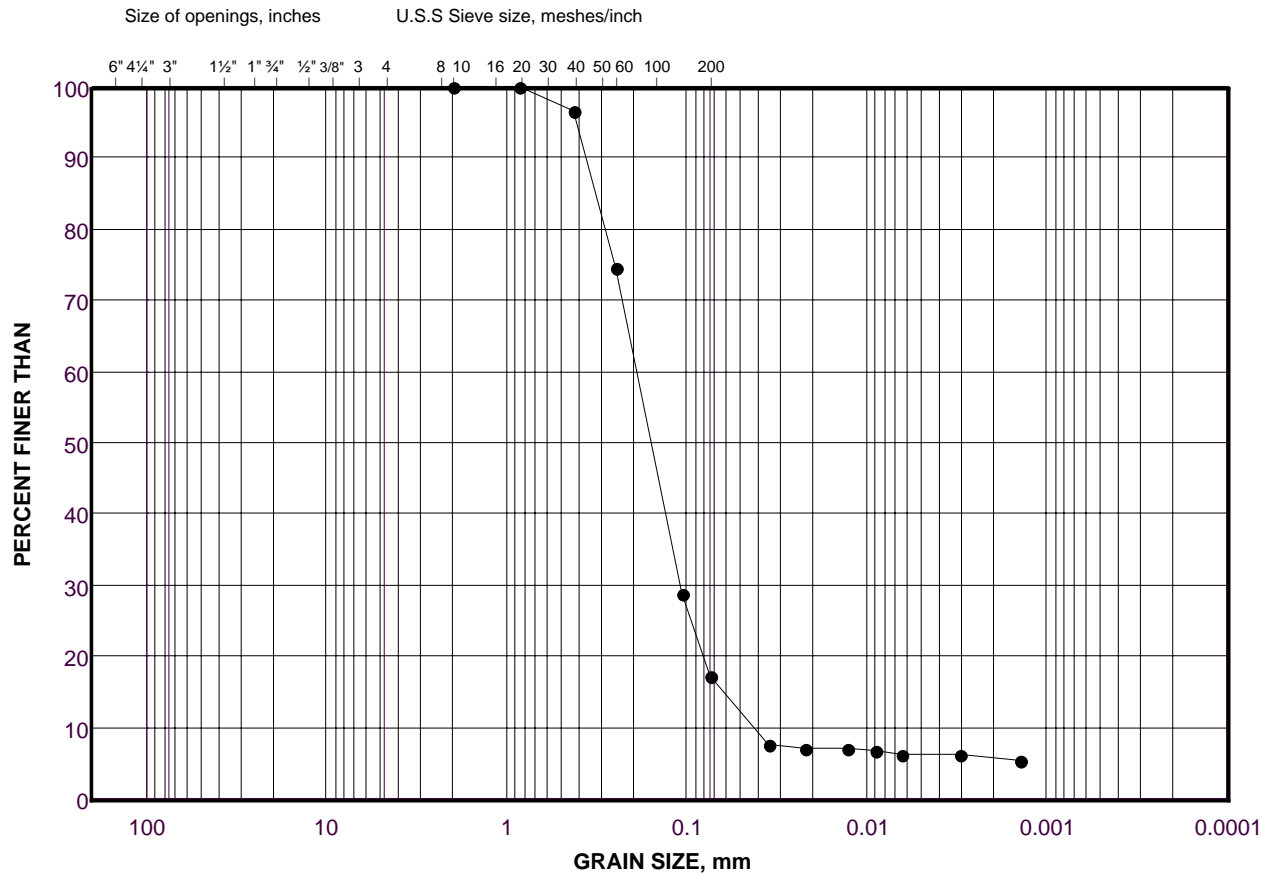
**Golder Associates**

Date: 13-Feb-07

# GRAIN SIZE DISTRIBUTION

Sand, some silt

FIGURE 6



COBBLE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
	GRAVEL SIZE		SAND SIZE			
SIZE						

## LEGEND

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
•	06-5	2	1.0

Project Number: 06-1189-519

Checked By: \_\_\_\_\_

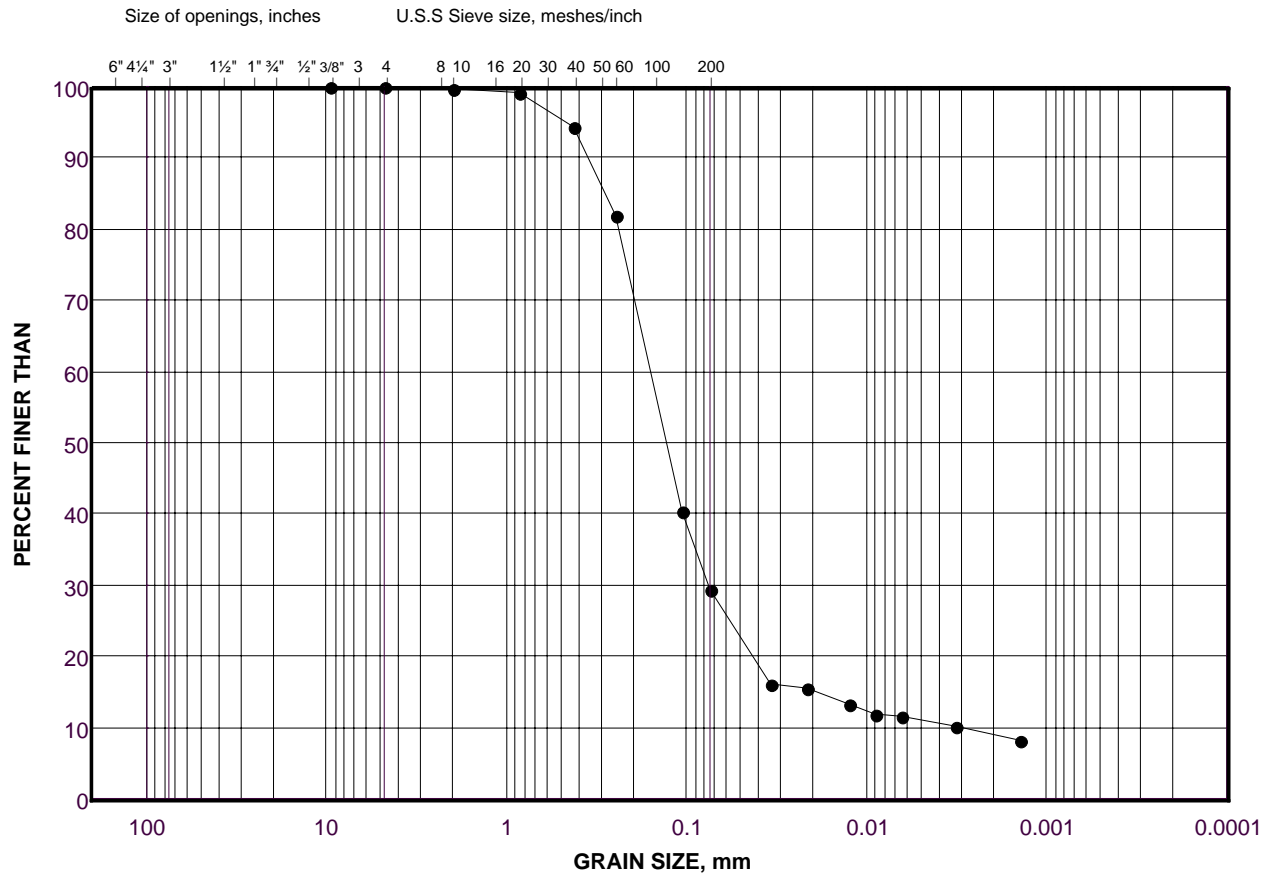
**Golder Associates**

Date: 13-Feb-07

# GRAIN SIZE DISTRIBUTION

Silty Sand

FIGURE 7



COBBLE SIZE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
	GRAVEL SIZE		SAND SIZE			

## LEGEND

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
•	06-6	5	3.3

Project Number: 06-1189-519

Checked By: \_\_\_\_\_

**Golder Associates**

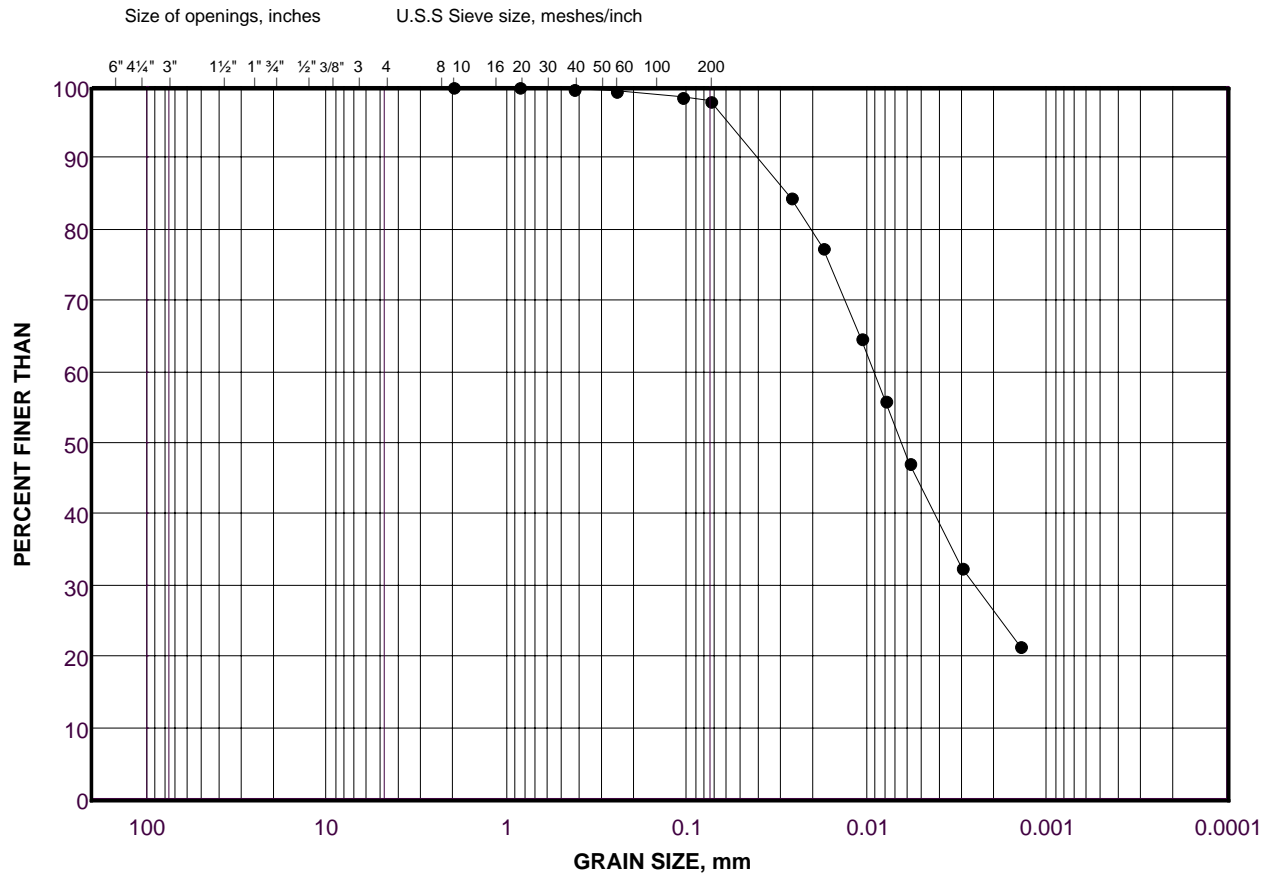
Date: 13-Feb-07



# GRAIN SIZE DISTRIBUTION

Silty Clay

FIGURE 8



<b>COBBLE</b>	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
	<b>GRAVEL SIZE</b>		<b>SAND SIZE</b>			<b>FINE GRAINED</b>
<b>SIZE</b>						

**LEGEND**

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
●	06-8	4	

Project Number: 06-1189-519

Checked By: \_\_\_\_\_

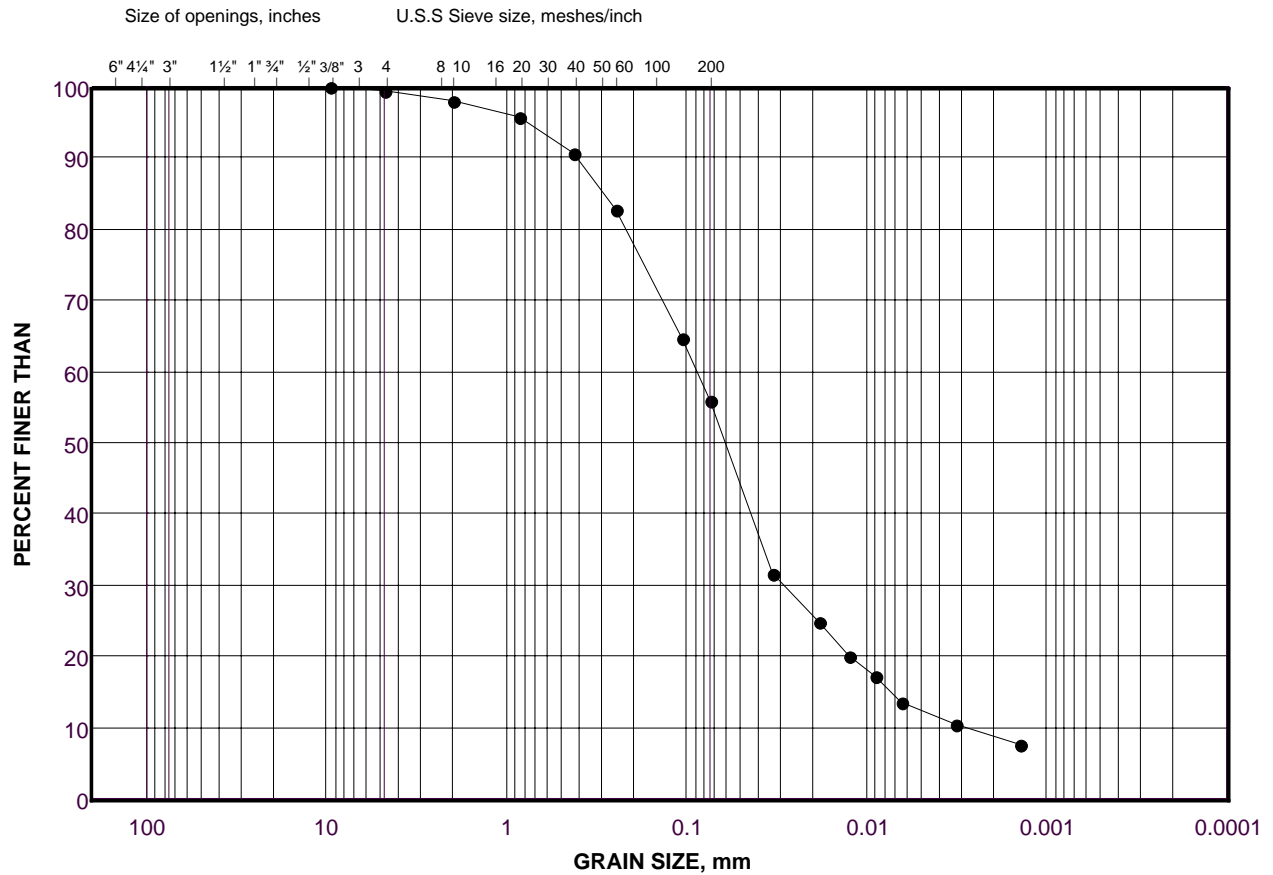
**Golder Associates**

Date: 13-Feb-07

# GRAIN SIZE DISTRIBUTION

Clayey Silt

FIGURE 9



<b>COBBLE</b>	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
<b>SIZE</b>	<b>GRAVEL SIZE</b>		<b>SAND SIZE</b>			<b>FINE GRAINED</b>

## LEGEND

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
●	06-9	2	1.0

Project Number: 06-1189-519

Checked By: \_\_\_\_\_

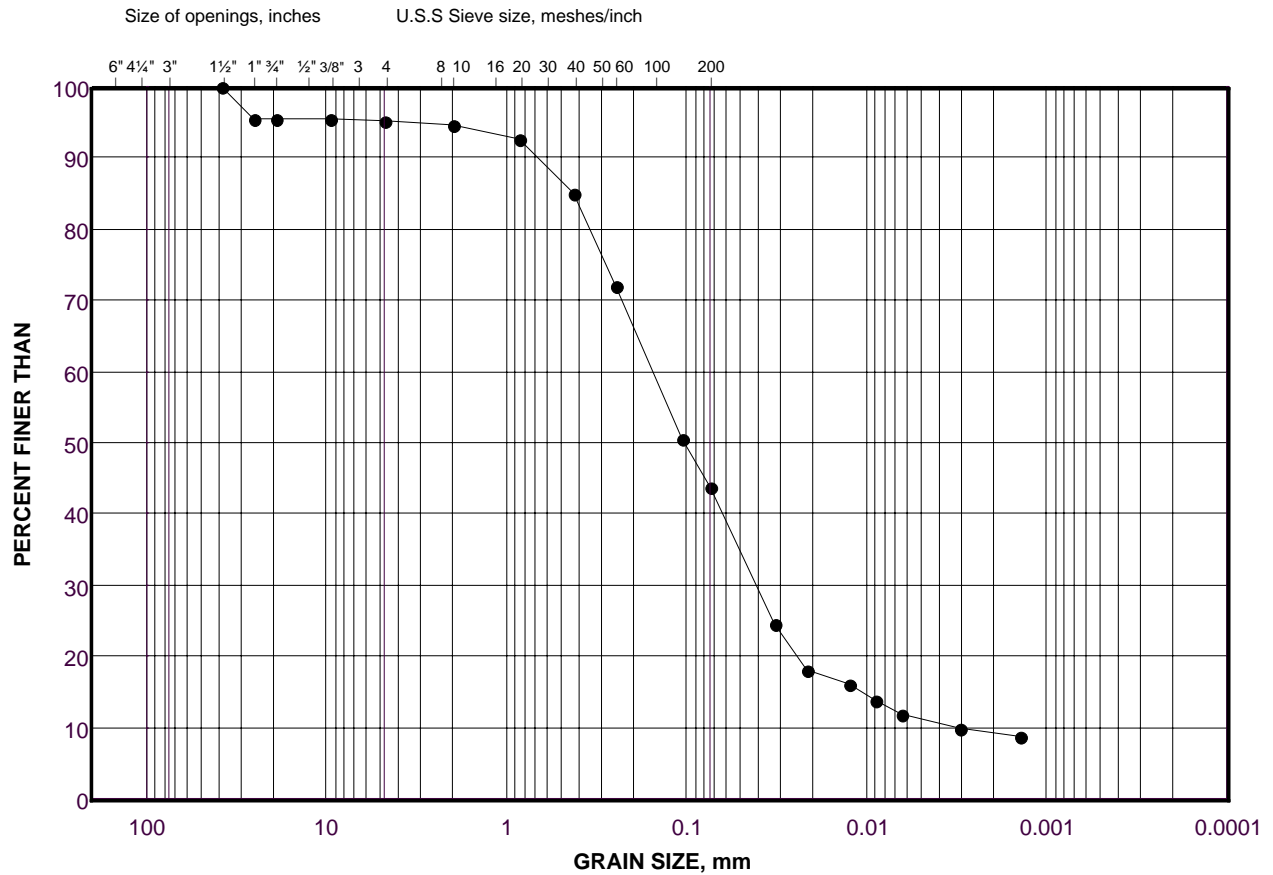
**Golder Associates**

Date: 13-Feb-07

# GRAIN SIZE DISTRIBUTION

Clayey Silt with Sand

FIGURE 10



COBBLE SIZE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES FINE GRAINED
	GRAVEL SIZE		SAND SIZE			

## LEGEND

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
•	06-11	2	1.0

Project Number: 06-1189-519

Checked By: \_\_\_\_\_

**Golder Associates**

Date: 13-Feb-07



February 2013

## GEOTECHNICAL INVESTIGATION

# South Innisfil Creek Drainage Improvements Town of Innisfil, Ontario

**Submitted to:**  
Dillon Consulting Limited  
3200 Deziel Drive Suite 608  
Windsor, Ontario, N8W 5K8

REPORT



A world of  
capabilities  
delivered locally

**Report Number:** 12-1170-0057 (1000)

**Distribution:**

1 Copy - Dillon Consulting Ltd.

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### **IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT**

#### **FIGURES**

Figure 1 – Site Location Plan

Figure 2 – Borehole Location Plan

#### **LIST OF APPENDICES**

##### **APPENDIX A**

Record of Boreholes

##### **APPENDIX B**

Laboratory Figures



## **1.0 INTRODUCTION**

Golder Associates Ltd. (Golder) has been retained by Dillon Consulting Ltd. (Dillon) to carry out a geotechnical site investigation and provide geotechnical engineering pertaining to the construction of the farm crossing structures as part of the South Innisfil Creek Drainage Improvements project, located in the Town of Innisfil, Ontario. The site location is shown on Figure 1.

The purpose of the investigation was to determine the subsurface soil and groundwater conditions at the crossing structure locations by means of a limited number of boreholes and, based on our interpretation of the data, to provide engineering recommendations on the geotechnical aspects of the design of the proposed crossing structures. The investigation and reporting was carried out in general accordance with our proposal P2-1170-0057(1000) dated October 29, 2012.

The reader is referred to the "Important Information and Limitations of This Report" that follows the text of this report but forms an integral part of this document. The factual data, interpretations and recommendations contained in this report pertain to a specific project as described in the report and are not applicable to any other project or site location. If the project is modified in concept, location or elevation, or if the project is not initiated within eighteen months of the date of this report, Golder should be given an opportunity to confirm that the recommendations are still valid. This report has been prepared solely for use by Dillon and their design team. This report is not intended for use by any other party and Golder accepts no responsibility or liability for damages resulting from decisions or actions made by any other party/parties based on the contents of this report.

This report addresses only the geotechnical (physical) aspects of the subsurface conditions at this site. The geo-environmental (chemical) aspects, including consequences of possible surface and/or subsurface contamination resulting from previous activities or uses of the site and/or resulting from the introduction onto the site of materials from off-site sources, are outside the terms of reference for this report.

## **2.0 BACKGROUND INFORMATION**

Golder previously advanced four boreholes at the crossing sites to provide subsurface and geotechnical information for the farm crossing structures. Five boreholes were originally proposed to be advanced (one borehole at each of the farm crossings); however Crossing No. 4 was not accessible with the drill rig. The boreholes are designated as Boreholes 12-01, 12-02, 12-03 and 12-05 and the corresponding borehole logs are attached in Appendix A.

As discussed with Dillon, the results of the preliminary borehole investigation indicated that the subsurface conditions are not capable of supporting the shallow raft foundations originally proposed by Dillon without inducing unacceptable settlements (greater than 25 mm). As such, a second series of deeper boreholes were advanced as part of this geotechnical investigation to provide design information in regard to deep foundations for the crossing structures.

## **3.0 INVESTIGATION PROCEDURES**

A subsurface drilling investigation was carried out at the site on November 19 to 22, 2012 during which time four boreholes, designated as Boreholes BH12-01A to BH12-03A, and BH12-05A, were advanced at the locations of four of the crossing structures and immediately adjacent to the previously advanced boreholes. As noted above, Crossing No. 4 was not accessible and as such no borehole was advanced at this location. The locations of the boreholes are identified on the attached Figure 2. The boreholes were drilled using a track-mounted drill rig



supplied and operated by a specialist drilling contractor. The Record of Borehole sheets for these boreholes are included in Appendix A of this report.

The boreholes drilled during this investigation were advanced to depths varying from approximately 21.8 m to 24.8 m below existing ground surface. The 'A' series of boreholes were continuously augered to the termination depth of the previously drilled boreholes (approximately 10 m below site grades). Standard Penetration Testing (SPT) and sampling were carried out at 0.75 m and 1.5 m intervals of depth within the overburden in these boreholes using conventional 35 mm internal diameter split spoon sampling equipment. In situ field vane testing, using an "N"-sized vane, was carried out in the boreholes where cohesive material was encountered which exhibited low SPT 'N' values, to measure the undrained shear strength of these soils. A 50 mm monitoring well was installed in Boreholes 12-01 and 12-05 to allow for subsequent groundwater level readings.

The field work for this investigation was observed by a member of our engineering staff who arranged service locates, logged the subsurface conditions encountered at the borehole locations and cared for the samples obtained. All of the soil samples obtained during the investigation were brought to our Barrie laboratory for further examination, natural water content testing and selected classification testing.

Prior to the drilling operations, the borehole locations were located in the field by a member of Golder's technical staff. The ground surface elevations and locations of the boreholes were interpolated from the plans provided by Dillon and as such, are considered approximate.

## **4.0 SUBSURFACE CONDITIONS**

The subsurface soil and groundwater conditions encountered in each of the boreholes, as well as the results of the field and laboratory testing are shown on the Record of Borehole sheets in Appendix A and Appendix B following the text of this report. Lists of abbreviations and symbols, and geotechnical description terminology are provided to assist in the interpretation of the Record of Borehole sheets.

It should be noted that the boundaries between the strata on the Record of Borehole sheets have been inferred from drilling observations and non-continuous sampling. The boundaries generally represent a transition from one soil type to another and should not be inferred to represent an exact plane of geological change. Further, conditions will vary beyond the borehole locations.

The following sections of this report provide an overview of the subsurface conditions encountered at the site followed by more detailed descriptions of the major soil strata and shallow groundwater conditions encountered at the borehole locations.

### **4.1 Overview of Subsurface Conditions**

In summary, the subsurface soils encountered at the crossing sites typically comprise surficial topsoil overlying relatively deep deposits of very soft to soft cohesive and very loose to loose non-cohesive deposits. These very soft to soft / very loose to loose deposits extend to depths of between 10 m to 13 m below existing site grades (approximate Elevation 214 m to 217 m). A deposit of compact to very dense silt to sand was encountered underlying the upper deposits. A variable compact to very dense / very stiff to hard glacial till was encountered in three of the boreholes underlying the non-cohesive deposits noted above.



## 4.2 Topsoil / Peat

Topsoil was encountered at each of the borehole locations, excluding Borehole 12-05A, where a clayey silt and sand peat was encountered. The surficial material extended to depths ranging from 0.6 m to 1.4 m below site grades.

## 4.3 Upper Cohesive and Non-Cohesive Materials

Relatively shallow, interlayered cohesive and non-cohesive deposits were encountered in Boreholes 12-01 and 12-02. The shallow deposits extend to depths of between 4.1 m to 5.6 m below site grades. The cohesive materials are comprised of clayey silt and sand to silty clay; these materials are grey and are close to the plastic limit to wetter than the plastic limit. The non-cohesive materials range from silty sand to sand; these materials are brown to grey and moist to wet.

SPT 'N' values measured within the cohesive deposits varied from 0 blows per 0.3 m of penetration (weight of hammer) to 3 blows per 0.3 m of penetration. Field vane testing was completed in these deposits due to the low SPT 'N'-values. The measured undrained shear strength in these deposits range from approximately 22 kPa to 38 kPa; based on the field vane tests, these deposits are considered to have a soft to firm consistency. Standard Penetration Test (SPT) "N" values measured within the non-cohesive deposits varied from 4 blows per 0.3 m of penetration to 13 blows per 0.3 m of penetration indicating these materials are loose to compact.

The results of the laboratory grain size distribution test on one selected sample of the shallow cohesive deposit can be found on Figure B1. Atterberg Limits tests conducted on the same sample of the shallow cohesive silty clay material measured a plastic limit of about 12 per cent, a liquid limit of about 20 per cent, and a plasticity index of about 8 per cent. These results, which are plotted on a plasticity chart on Figure B3, confirm that this cohesive sample is comprised of silty clay of low plasticity.

The results of the laboratory grain size distribution test on two selected sample of the shallow non-cohesive deposit can be found on Figure B11. This figure indicates that the samples of the non-cohesive soil range from silty sand to clayey silt and sand. Atterberg testing on the clayey silt and sand sample indicated that the sample is non-plastic.

## 4.4 Silty Clay

An extensive silty clay deposit was encountered in each of the boreholes. The silty clay deposit was encountered underlying the shallow deposits noted above in Boreholes 12-01 and 12-02, and was encountered underlying the surficial topsoil and peat in Boreholes 12-03 and 12-05, respectively. The silty clay deposit is grey, and the in-situ moisture was observed to be wetter than the plastic limit. The deposit extended to depths of about 8.6 m to 10.3 m below existing site grades.

SPT 'N' values measured within the clay deposits ranged from 2 blows to 12 blows per 0.3 m of penetration. In situ vane testing performed within this cohesive deposit indicates that the undrained shear strength values of the clayey soils varied from about 9 kPa to greater than 111 kPa while the remoulded shear strength of these materials varies from approximately 3 kPa to 31 kPa. Based on the shear vane testing, SPT 'N' values and visual examination of samples of the silty clay, the silty clay deposit has a very soft to stiff consistency, but generally a soft consistency.





The natural water content measured on selected samples of the silty clay deposit varied between 15 per cent and 46 per cent.

The results of laboratory grain size distribution tests on six selected samples of the silty clay deposit can be found on Figures B1 and B2. The results of Atterberg Limit testing carried out on seven samples of the clayey soils can be found on Figures B3 and B4. The Atterberg Limit testing measured plastic limits between 11 per cent to 20 per cent, liquid limits between 19 per cent to 44 per cent, and plasticity indices between 8 per cent to 26 per cent, indicating that the tested materials consist of silty clay of low plasticity.

The results of two consolidation tests carried out on Shelby tube samples obtained at depths of about 7.6 m in Boreholes BH12-02A and BH12-05A are shown on Figures B5 to B8 (odometer consolidation summary and void ratio vs. log pressure). Based on the consolidation test results, this sample of the clay deposit is inferred to have the following compressibility related parameters:

	<b>Borehole 12-02A Sample 1</b>	<b>Borehole 12-05A Sample 1</b>
Initial Void Ratio ( $e_o$ )	0.64	0.71
Compression Index (Cc)	0.15	0.12
Recompression Index (Cr)	0.03	0.03
Preconsolidation Pressure	200 kPa	220 kPa
Coefficient of Consolidation ( $m_v$ )*	0.0001 to 0.0013 cm <sup>2</sup> /s	0.0001 to 0.0011 cm <sup>2</sup> /s

\*for pressures under about 150 kPa

The in-situ effective stress at the lower sample depth of 7.6 m that the above noted samples were collected from is estimated to be approximately 150 kPa; therefore, the clayey soils appear to be over-consolidated.

#### **4.5 Silt to Sandy Silt**

A deep deposit of silt to sandy silt was encountered in Boreholes 12-01A, 12-02A and 12-05A underlying the silty clay deposit, and in Borehole 12-03A underlying the silty sand to silt and sand deposit. The silt to sandy silt deposit is grey and moist to wet. Borehole 12-03 was terminated in the silt to sandy silt deposit at a depth of 21.8 m below existing grade.

The measured SPT 'N'-values in the silt to sandy silt deposit range from 3 blows per 0.3 m of penetration to 69 blows per 0.3 m of penetration, indicating this deposit is loose to very dense. The SPT 'N'-values in this deposit typically increase with depth.

The natural water content measured on selected samples of the silt to sandy silt deposit varied between 19 per cent and 24 per cent.

The results of grain size distribution tests carried out on seven selected samples of the silt to sandy silt deposit are shown on Figures B9 and B10.

#### **4.6 Silty Sand to Silt and Sand**

A deep deposit of silty sand to silt and sand was encountered in Borehole 12-03A underlying the silty clay deposit, and in Borehole 12-05A underlying the silt to sandy silt deposit. A relatively thin layer of sand was also



encountered in Borehole 12-05 at a depth of 4.4 m; the sand was encountered underlying the upper clayey silt to silty clay deposit. The silty sand to silt and sand deposit is grey and moist to wet.

The measured SPT 'N'-values in the silty sand to silt and sand deposit range from 5 blows per 0.3 m of penetration to 64 blows per 0.3 m of penetration, indicating this deposit is loose to very dense, but typically compact. The SPT 'N'-values in this deposit typically increase with depth.

The natural water content measured on selected samples of the silty sand to silt and sand deposit varied between 17 per cent and 20 per cent.

The results of grain size distribution tests carried out on two selected samples of the deeper silty sand to silt and sand deposit are shown on Figures B11.

#### **4.6.1 Till**

A sandy silt to silt and sand till deposit was encountered below the silt to sandy silt deposit in Boreholes 12-01A and 12-02A, and underlying the silty sand to sand and silt deposit in Borehole 12-05A. In addition, a clayey silt to silty clay deposit was encountered within the till deposit in Borehole 12-01A at a depth of 20.8 m, approximately 3.0 m in thickness. The sandy silt to silt and sand till deposit is grey and contains variable clay. The till is generally non-cohesive; however the till in Borehole 12-05A was plastic. Each of the boreholes noted above were terminated in the till deposit at depths ranging from 21.8 m to 24.8 m below existing site grades.

The measured SPT "N"-values within the non-cohesive till deposit range from 13 blows per 0.3 m of penetration to 52 blows per 0.3 m of penetration, indicating this deposit is compact to very dense. The measured SPT "N"-values within the cohesive till deposit range from 21 blows per 0.3 m of penetration to 43 blows per 0.3 m of penetration, suggestive of a very stiff to hard consistency. SPT 'N' values within the clayey silt to silty clay layer noted within the till deposit measured 35 and 54 blows per 0.3 m of penetration.

The results of grain size distribution tests completed on two selected samples of the till deposit are shown on Figure B12. Atterberg Limits testing carried out on one selected sample of the till deposit measured a plastic limit of 10 per cent, a liquid limit of 15 per cent and a plasticity index of 5 per cent. These results, which are plotted on the plasticity chart on Figure B13, indicate that the fine fraction of the till deposit has a slight plasticity.

## **4.7 Groundwater Conditions**

Groundwater levels in the open boreholes were observed throughout the drilling operations and were measured in the two piezometers which were installed as part of the original drilling program. On September 13, 2012, water levels measured in the standpipe piezometers in Boreholes 12-01 and 12-05 were at depths ranging from 1.2 m to 1.3 m below existing ground surface, corresponding to elevations ranging between 224.5 m and 225.8 m.

The groundwater levels at the site are expected to be subject to seasonal fluctuations in precipitation, runoff and temperature. Groundwater levels are expected to be higher during wet periods of the year and during/following snowmelt events.

## **5.0 GEOTECHNICAL COMMENTS AND RECOMMENDATIONS**

This section of the report provides engineering information regarding geotechnical aspects of the design of the proposed crossing structures based on interpretation of the factual data obtained from the boreholes advanced



at this site and our understanding of the project requirements. The information in this portion of the report is provided for the guidance of the design engineers and professionals. Where comments are made on construction, they are provided in order to highlight those aspects which could affect the design of the project. Contractors bidding on or undertaking any work at the site should examine the factual results of the investigation, satisfy themselves as to the adequacy of the information for construction and make their own interpretation of the factual information provided as it may affect equipment selection, proposed construction methods, scheduling and the like.

This report addresses only the geotechnical (physical) aspects of the subsurface conditions at this site. The geo-environmental (chemical) aspects, including consequences of possible surface and/or subsurface contamination resulting from previous activities or uses of the site and/or resulting from the introduction onto the site of materials from off-site sources, are outside the terms of reference for this report.

## **5.1 Foundation Design Considerations**

As described above, the subsurface conditions at the farm crossing structure locations consist of surficial topsoil underlain by relatively deep deposits of compressible, very soft to soft cohesive deposits, as well as very loose to loose non-cohesive deposits. These materials are underlain by more competent soils which are underlain by compact to very dense / very stiff to hard tills and dense silt.

Given the potential for significant consolidation and settlement of the very soft to soft / very loose to loose soils, the application of new loads associated with the farm crossing structures, as well as the raising of grades in the areas of the structures, will likely lead to unacceptable settlement of the initially proposed raft slab foundations, and therefore the crossing structures. In this regard, if settlement of the crossing structures is not acceptable, the structures should be supported on deep foundations extending into the hard clayey till and dense to very dense silt and silty sand deposits. The required depth of the pile tips at each of the borehole locations is indicated in the table below. Due to the very soft to soft / very loose to loose nature of the shallow subgrade soils, a pad of granular soils should be provided at the base of the excavation to provide a construction/working platform.

<b>Farm Structure Crossing</b>	<b>Station</b>	<b>Borehole Nos.</b>	<b>Estimated Design Pile Tip Depth Below Existing Grade (m)</b>	<b>Estimated Design Pile Tip Elevation (m)</b>
Crossing No. 1	3+071	12-01, 12-01A	22 m	203.4 m
Crossing No. 2	3+478	12-02, 12-02A	21 m	205.7 m
Crossing No. 3	3+657	12-03, 12-03A	21 m	205.4 m
Crossing No. 5	3+835	12-05, 12-05A	21 m	206.0 m

The pile caps should be constructed at a minimum depth of 1.5 m for frost protection purposes, per OPSD 3090.101 (*Foundation Frost Depths for Southern Ontario*).

Piles driven into the hard till and dense to very dense silty sand / silt deposits are considered to be a suitable foundation system for the subsurface conditions at the site. Pile capacities are a function of both the subsurface



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## GEOTECHNICAL INVESTIGATION SOUTH INNISFIL CREEK DRAINAGE IMPROVEMENTS , TOWN OF INNISFIL, ONTARIO

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conditions at the site and the type/size of pile being driven. In discussion with Dillon, the preferred pile type will be 310x110 H-Piles. It is recommended that the piles should be reinforced at the tip with driving shoes or flange plates to reduce the potential for damage to the piles during driving, in accordance with OPSS 903 (*Deep Foundations*).

For preliminary assessment purposes, a factored axial resistance (based on a resistance factor of 0.4) at Ultimate Limit States (ULS) of approximately 800 kN may be assumed for design of a 310x110 H-Pile driven into the hard till or very dense silty sand and silt soils. This factored axial resistance at ULS does not include any negative skin friction or downdrag forces; additional information in this regard is provided below. For piles driven to a specified set-criterion, it is anticipated that the factored ULS condition will govern design. However, for preliminary design purposes for the Serviceability Limit State (SLS) an unfactored axial load of 1600 kN can be used with an associated settlement of less than 15 mm. Additional geotechnical input regarding pile sizes and depths can be provided if larger structural loads are required to be supported. A minimum pile spacing of 3 pile diameters is recommended. Group effects must be considered for piles spaced closer than 3 pile diameters.

The pile termination or set criteria will be dependent on the pile driving hammer type, helmet, selected pile and length of pile. The minimum set required to assess the required pile penetration of driven piles should be determined by a geotechnical engineer prior to commencing driving based on the pile type/size and the contractor's proposed equipment.

Pile driving analyzer (PDA) testing should be carried out on representative piles in order to confirm pile capacities and set criteria for the various lengths of piles at the site. Careful monitoring of pile driving operations including assessing driven pile capacities using a Pile Driving Analyzer (PDA) or conventional methods (e.g., Hiley Formula) should also be carried out throughout the entire construction period to confirm that the required pile capacities are achieved.

Relaxation of soil surrounding the pile tips and/or heaving of the pile tips as a result of driving of adjacent piles could lead to reduced pile capacities. In this regard, the contract should specify a minimum number of piles be 'retapped' to confirm that the above phenomena are not occurring. If a significant reduction in the pile driving resistance is noted during retapping, all of the piles may need to be retapped/redriven.

Based on the preliminary site drawing provided to our office, it is anticipated that approximately 1 m of fill will be placed to raise grades at the approaches for each of the crossing structures. Long-term consolidation settlement of the clayey soils is anticipated to occur in areas where these site grades will be raised. This consolidation will induce a downward movement of the soils adjacent to the piles and negative skin friction will develop along portions of the pile shafts embedded within or above the compressible strata. This load should be considered as one of the load effects acting on the deep foundations. The amount of negative skin friction that will develop on individual deep foundation units will be a function of the foundation types/sizes/lengths and the surrounding soil strata. For preliminary assessment purposes, an unfactored down-drag load of about 200 kN for the 310x110 H-Piles should be considered in the design of the piles. The structural engineer should confirm that the loads applied to the pile, including down-drag loads described below, will not cause the structural capacity of the pile to be exceeded. The Canadian Foundation Engineering Manual indicates that the structural capacity of the pile must be sufficient to withstand the greater of either the combined permanent load plus the down-drag load (**transient** live loads are not to be included), or the combined permanent load plus the transient live loads (with the down-drag load not included). Further, the service load of the pile does not need to be reduced by the down-drag load.



It should be noted that cobbles and boulders may be encountered in the glacial tills and as such, prospective foundation contractors should be alerted to this in the tender documents.

## 5.2 Lateral Geotechnical Resistance

Resistance to lateral loading can be derived from the piles embedded in the in situ soils. In designing piles to resist lateral loads, the load displacement (p-y) behaviour of the pile is estimated and utilized to calculate the expected resistance behaviour of the pile. Although no longer recommended for the detailed design of lateral pile behaviour (CFEM, 2006) the resistance to lateral loading in front of the pile may be calculated, for preliminary purposes, using subgrade reaction theory where the coefficient of horizontal subgrade reaction is determined based on the equations given below (Canadian Foundation Engineering Manual, 1992, as noted in Section C6.8.7.1 (Table C6.5) and in Section C6.8.7.3 of the *Commentary to Canadian Highway Bridge Design Code*).

For cohesionless soils:

$$k_h = \frac{n_h z}{B} \quad \text{where}$$

$k_h$  is the coefficient of horizontal subgrade reaction (kPa/m);  
 $n_h$  is the constant of subgrade reaction (kPa/m);  
 $z$  is the depth (m); and,  
 $B$  is the pile diameter / width (m).

For cohesive soils:

$$k_h = \frac{67s_u}{B} \quad \text{where}$$

$k_h$  is the coefficient of horizontal subgrade reaction (kPa/m);  
 $s_u$  is the undrained shear strength of the soil (kPa); and,  
 $B$  is the pile diameter / width (m).



## GEOTECHNICAL INVESTIGATION SOUTH INNISFIL CREEK DRAINAGE IMPROVEMENTS , TOWN OF INNISFIL, ONTARIO

The following values of  $n_h$  and  $s_u$  may be assumed in the structural analyses, using the interpreted stratigraphic conditions as shown on the borehole records:

Soil Unit	Depth (m)	$n_h$	$s_u$
<b><u>Borehole BH12-01 / 12-01A</u></b>			
Loose to compact sand/silt, very soft to firm clayey silt to silty clay	0.0 to 4.4	2 MPa/m	
Soft to stiff silty clay	4.4 to 8.6		50 kPa
Very loose to compact silt to sandy silt	8.6 to 17.8	5 MPa/m	
Compact silt and sand till	17.8 to 20.8	6 MPa/m	
Hard clayey silt to silty clay	20.8 to 23.9		200 kPa
Very dense silt and sand till	Below 23.9	15 MPa/m	
<b><u>Borehole BH12-02 / 12-02A</u></b>			
Loose to compact silty sand / very soft clayey silt	0.0 to 5.6	2 MPa/m	
Soft to stiff silty clay	5.6 to 10.3		50 kPa
Loose sandy silt to silt	10.3 to 12.5	2 MPa/m	
Compact to very dense sandy silt to silt	12.5 to 20.8	11 MPa/m	
Dense silt and sand till	Below 20.8	11 MPa/m	
<b><u>Borehole BH12-03 / 12-03A</u></b>			
Very soft to firm silty clay	0.0 to 8.0		20 kPa
Very soft silty clay	8.0 to 10.1		5 kPa
Loose to compact silty sand	10.1 to 11.7	2 MPa/m	
Dense to very dense silty sand	11.7 to 20.8	11 MPa/m	
Dense silt	Below 20.8	11 MPa/m	
<b><u>Borehole BH12-05 / 12-05A</u></b>			
Very soft to firm clayey silt to silty clay	0.0 to 4.4		20 kPa
Compact silty sand	4.4 to 5.6	4 MPa/m	
Soft to stiff clayey silt to silty clay	5.6 to 10.1		15 kPa
Dense silt	10.1 to 12.3	11 MPa/m	
Compact to very dense sand	12.3 to 17.7	11 MPa/m	
Stiff to hard sandy silt till	Below 17.7		200 kPa

### 5.3 Embankment Construction

It is anticipated that the native site soils that will be excavated from the creek will be used as engineered fill materials for the approach embankment construction. Based on the drawings provided to our office, the embankment construction will involve a grade raise of about 1 m in height at each of the farm crossing locations.

Topsoil and other soils containing significant amounts of organic matter are not considered suitable for embankment construction. Similarly, materials containing debris or other deleterious materials are also not considered suitable for reuse as engineered fill. The native shallow soils encountered in each of the boreholes are considered to be suitable for use as engineered fill materials provided that they are at a suitable water content for compaction. However, it is noted that the natural water contents are significantly above their optimum water content for compaction and therefore, adjustment of the water content (e.g., drying of the soils, mixing with drier materials) will likely be required during placement and compaction. Drying of the site soils is



not considered to be practical during periods of sustained precipitation and/or cold weather; therefore, the embankment construction should be scheduled during the summer months when warmer and drier conditions are more likely to prevail. Alternatively, the use of an imported granular material could be considered for the embankment construction.

The surficial topsoil and organic deposits as encountered in each of the boreholes are not considered suitable for the subgrade support of the embankments. In this regard, all surficial soils should be stripped from beneath the plan area of the proposed embankment prior to fill placement. The prepared subgrade should then be heavily proof-rolled under the observation of qualified geotechnical personnel. Any soft/loose/disturbed soils or other areas that perform poorly should be subexcavated and replaced with engineered fill materials. It is noted that, in particular in Boreholes 12-03 and 12-04, soft to firm silty clay was encountered near surface and extends to significant depths (10.1 m in Borehole 12-03/12-03A, and 4.4 m in Borehole 12-05/1205A). As such it may be impractical to remove the soft soils as part of the embankment construction operations. The settlement of the soft to firm silty clay under embankment loading is discussed in Section 5.3.1, below.

The embankment fill should be placed in maximum 300 mm thick lifts. The clayey soils at this site should be compacted using a heavy sheepsfoot compactor. Full-time monitoring and compaction testing should be carried out during placement of the fill materials. The embankment materials should be adequately benched/keyed into the existing subgrade soils to prevent the formation of preferential failure planes. Golder recommends that the overall slope angle of the embankment slopes should not be steeper than about 3H:1V provided that the clayey materials can be compacted to a minimum of 95 per cent of their Standard Proctor Maximum Dry Densities (SPMDD).

### **5.3.1 Embankment Settlement**

A settlement analysis for the anticipated soil conditions below the approach embankment at the location of Borehole 12-05 was carried out using the commercially available computer program Settle-3D from Rocscience, using estimated elastic deformation moduli and consolidation parameters based on correlations with the SPT "N" values, Atterberg Limits, field vane shear strengths, and the oedometer test results. The analysis assumes that the surficial peat is removed but that the existing shallow soft to firm silty clay materials remain in place below the approach embankment.

The results of the settlement analysis indicate that the estimated total settlement due to the consolidation of the cohesive soils under the embankment to be constructed at this location is about 65 mm. The majority of the settlement will be due to post-construction consolidation of the soft to firm silty clay deposits. To minimize the post-construction settlement, consideration could be given to preloading (or surcharging) the embankment areas with the fill several months prior to construction of the farm crossing structures. Consideration could also be given to the use of lightweight fill materials for embankment construction; however, given that the general construction strategy involves cutting/removing soil from the creek to improve capacity/drainage, the reallocation of this creek soil material and the importing of lightweight material is not likely to be economical.

Alternatively, as the embankment will have a gravel pavement surface, consideration could be given to simply regrading the gravel surface on an as required basis, at locations where excessive settlement has occurred.



## 5.4 Temporary Excavations for Foundation Construction

All excavations should be carried out in accordance with the Occupational Health and Safety Act. The upper materials which will require excavation as part of the installation of the deep foundation system and the embankment construction would be classified as Type 4 soils according to the Occupational Health and Safety Act (Ont. Reg. 213/91) classification system. Flatter temporary sideslopes (3H:1V sideslopes associated with the Type 4 soils) will be required and excavated materials should not be stockpiled adjacent to the excavations. Therefore, the footprints of the excavations are anticipated to be relatively large in lateral extent and an adequate temporary support/shoring system may be required to protect existing services/facilities located adjacent to the excavations and at all locations where space limitations prevent construction of sufficiently shallow slopes.

### 5.4.1 Groundwater Control

As indicated above, on September 13, 2012, water levels measured in the standpipe piezometers in Boreholes 12-01 and 12-05 were at depths ranging from 1.2 m to 1.3 m below existing ground surface, corresponding to elevations ranging between 224.5 m and 225.8 m. As such it is anticipated that the groundwater levels at the site are relatively high. Groundwater seepage is anticipated from cohesionless lenses or interlayers within the clayey silt to silty clay deposit.

For the potential depth of excavation associated with the pile caps (1.5 m depth), the water inflow may exceed the amount of groundwater which can be handled by pumping from filtered sumps placed at the base of the excavations. Therefore, a Permit to Take Water (PTTW) may be required for the groundwater control system at this site.

## 6.0 ADDITIONAL WORK, INSPECTION AND TESTING

During construction, Golder personnel should confirm that the subsurface conditions encountered at the site are consistent with those in the boreholes and to identify any areas that may require remedial works.

We trust that this report provides sufficient geotechnical engineering information to complete the design of this project. If you have any questions regarding the contents of this report or require additional information, please do not hesitate to contact this office.

**GOLDER ASSOCIATES LTD.**

Nick La Posta, P.Eng.  
Geotechnical Engineer

Ty Garde, P.Eng.  
Principal

NLP/TJG/plc

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## **IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT**

**Standard of Care:** Golder Associates Ltd. (Golder) has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the engineering and science professions currently practising under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made.

**Basis and Use of the Report:** This report has been prepared for the specific site, design objective, development and purpose described to Golder by the Client. The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location. Any change of site conditions, purpose, development plans or if the project is not initiated within eighteen months of the date of the report may alter the validity of the report. Golder can not be responsible for use of this report, or portions thereof, unless Golder is requested to review and, if necessary, revise the report.

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without Golder's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the client, Golder may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawings and other documents as well as all electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make available the report or any portion thereof to any other party without the express written permission of Golder. The Client acknowledges that electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client can not rely upon the electronic media versions of Golder's report or other work products.

The report is of a summary nature and is not intended to stand alone without reference to the instructions given to Golder by the Client, communications between Golder and the Client, and to any other reports prepared by Golder for the Client relative to the specific site described in the report. In order to properly understand the suggestions, recommendations and opinions expressed in this report, reference must be made to the whole of the report. Golder can not be responsible for use of portions of the report without reference to the entire report.

Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project. The extent and detail of investigations, including the number of test holes, necessary to determine all of the relevant conditions which may affect construction costs would normally be greater than has been carried out for design purposes. Contractors bidding on, or undertaking the work, should rely on their own investigations, as well as their own interpretations of the factual data presented in the report, as to how subsurface conditions may affect their work, including but not limited to proposed construction techniques, schedule, safety and equipment capabilities.

**Soil, Rock and Groundwater Conditions:** Classification and identification of soils, rocks, and geologic units have been based on commonly accepted methods employed in the practice of geotechnical engineering and related disciplines. Classification and identification of the type and condition of these materials or units involves judgment, and boundaries between different soil, rock or geologic types or units may be transitional rather than abrupt. Accordingly, Golder does not warrant or guarantee the exactness of the descriptions.

## **IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT (cont'd)**

Special risks occur whenever engineering or related disciplines are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain subsurface conditions. The environmental, geologic, geotechnical, geochemical and hydrogeologic conditions that Golder interprets to exist between and beyond sampling points may differ from those that actually exist. In addition to soil variability, fill of variable physical and chemical composition can be present over portions of the site or on adjacent properties. **The professional services retained for this project include only the geotechnical aspects of the subsurface conditions at the site, unless otherwise specifically stated and identified in the report.** The presence or implication(s) of possible surface and/or subsurface contamination resulting from previous activities or uses of the site and/or resulting from the introduction onto the site of materials from off-site sources are outside the terms of reference for this project and have not been investigated or addressed.

Soil and groundwater conditions shown in the factual data and described in the report are the observed conditions at the time of their determination or measurement. Unless otherwise noted, those conditions form the basis of the recommendations in the report. Groundwater conditions may vary between and beyond reported locations and can be affected by annual, seasonal and meteorological conditions. The condition of the soil, rock and groundwater may be significantly altered by construction activities (traffic, excavation, groundwater level lowering, pile driving, blasting, etc.) on the site or on adjacent sites. Excavation may expose the soils to changes due to wetting, drying or frost. Unless otherwise indicated the soil must be protected from these changes during construction.

**Sample Disposal:** Golder will dispose of all uncontaminated soil and/or rock samples 90 days following issue of this report or, upon written request of the Client, will store uncontaminated samples and materials at the Client's expense. In the event that actual contaminated soils, fills or groundwater are encountered or are inferred to be present, all contaminated samples shall remain the property and responsibility of the Client for proper disposal.

**Follow-Up and Construction Services:** All details of the design were not known at the time of submission of Golder's report. Golder should be retained to review the final design, project plans and documents prior to construction, to confirm that they are consistent with the intent of Golder's report.

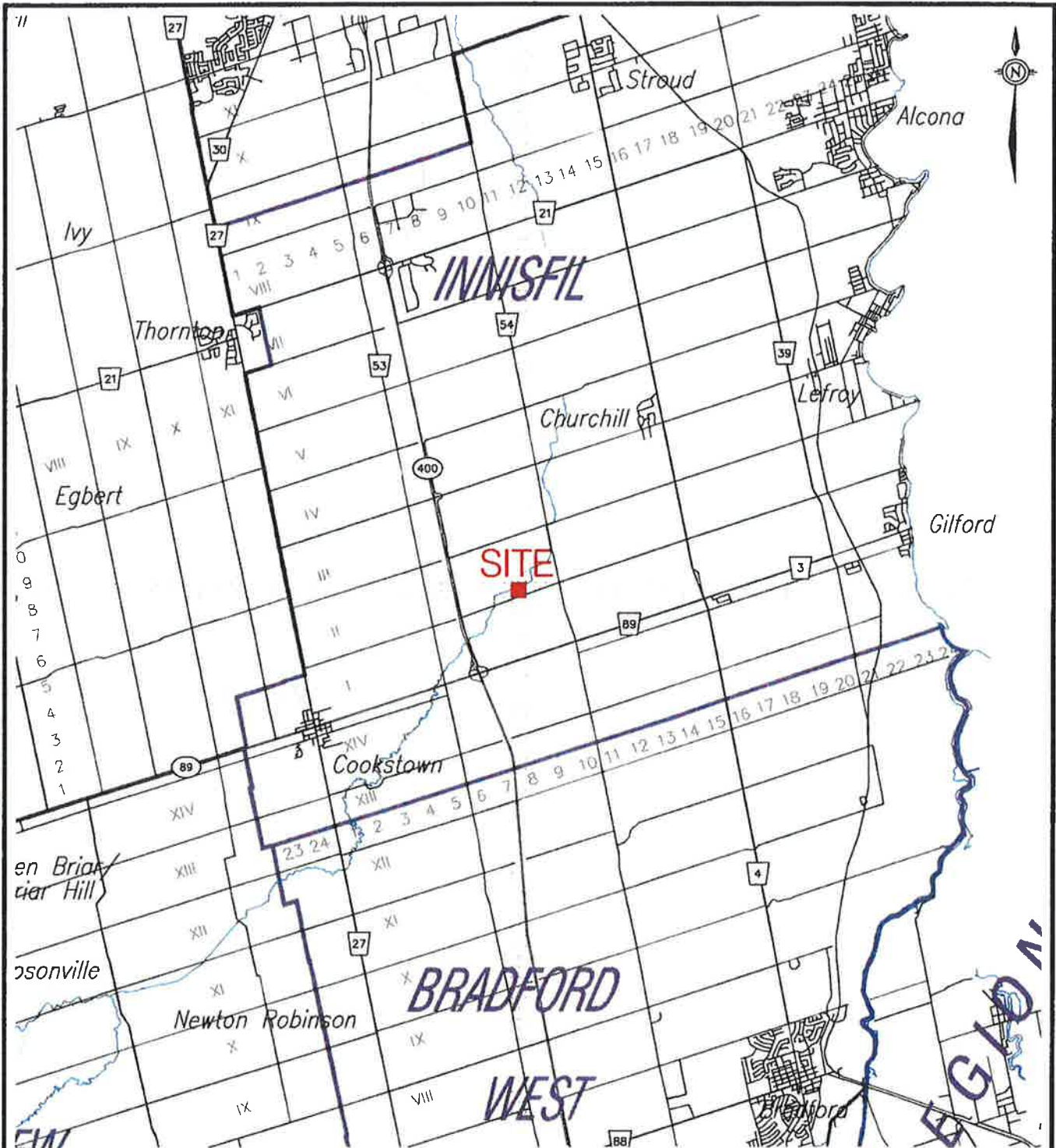
During construction, Golder should be retained to perform sufficient and timely observations of encountered conditions to confirm and document that the subsurface conditions do not materially differ from those interpreted conditions considered in the preparation of Golder's report and to confirm and document that construction activities do not adversely affect the suggestions, recommendations and opinions contained in Golder's report. Adequate field review, observation and testing during construction are necessary for Golder to be able to provide letters of assurance, in accordance with the requirements of many regulatory authorities. In cases where this recommendation is not followed, Golder's responsibility is limited to interpreting accurately the information encountered at the borehole locations, at the time of their initial determination or measurement during the preparation of the Report.

**Changed Conditions and Drainage:** Where conditions encountered at the site differ significantly from those anticipated in this report, either due to natural variability of subsurface conditions or construction activities, it is a condition of this report that Golder be notified of any changes and be provided with an opportunity to review or revise the recommendations within this report. Recognition of changed soil and rock conditions requires experience and it is recommended that Golder be employed to visit the site with sufficient frequency to detect if conditions have changed significantly.

Drainage of subsurface water is commonly required either for temporary or permanent installations for the project. Improper design or construction of drainage or dewatering can have serious consequences. Golder takes no responsibility for the effects of drainage unless specifically involved in the detailed design and construction monitoring of the system.



# FIGURES

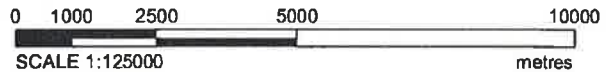


**NOTES:**

1. DATUM IS NAD UTM 83 ZONE 17

**REFERENCES:**

1. MAPPING BASED ON COUNTY OF SIMCOE MUNICIPAL BASE



SCALE	AS SHOWN
DATE	
DESIGN	
CAD	

TITLE

**SITE KEY PLAN**

FILE No. 1211700057ABSITE.dwg : Figure 1

CHECK *JP*  
REVIEW

DILLON CONSULTING LIMITED, TOWN OF INNISFIL  
SOUTH INNISFIL CREEK IMPROVEMENTS

FIGURE

**1**

PLOT DATE: January 29, 2013  
 FILENAME: T:\Projects\2012\12-1170-0057 (Innisfil, Culvert Crossings)\-AB-1211700057ABSITE.dwg

PLOT DATE: January 29, 2013  
 FILENAME: T:\Projects\2012\12-1170-0057 (Innisfil, Culvert Crossings)\-AB-\1211700057ABSITE.dwg



**LEGEND:**  
 BH12-01 GOLDER BOREHOLE LOCATION (APPROXIMATE)



**NOTES:**

1. PROJECTION IS UTM NAD 83 ZONE 17

**REFERENCES:**

1. MAPPING BASED ON COUNTY OF SIMCOE

 <b>Golder Associates</b> Barrie, Ontario, Canada	SCALE	AS SHOWN	TITLE
	DATE		
	DESIGN		
	CAD		
	CHECK		
	REVIEW		
FILE No	1211700057ABSITE.dwg	REV	
PROJECT No.			

## BOREHOLE LOCATION PLAN

DILLON CONSULTING LIMITED, TOWN OF INNISFIL  
 SOUTH INNISFIL CREEK IMPROVEMENTS

FIGURE

**2**



# **APPENDIX A**

## **Record of Boreholes**



## LIST OF SYMBOLS

Unless otherwise stated, the symbols employed in the report are as follows:

### I. GENERAL

$\pi$	3.1416
$\ln x$ ,	natural logarithm of x
$\log_{10}$	x or log x, logarithm of x to base 10
g	acceleration due to gravity
t	time
FoS	factor of safety
V	volume
W	weight

### II. STRESS AND STRAIN

$\gamma$	shear strain
$\Delta$	change in, e.g. in stress: $\Delta \sigma$
$\epsilon$	linear strain
$\epsilon_v$	volumetric strain
$\eta$	coefficient of viscosity
$\nu$	poisson's ratio
$\sigma$	total stress
$\sigma'$	effective stress ( $\sigma' = \sigma - \mu$ )
$\sigma'_{vo}$	initial effective overburden stress
$\sigma_1, \sigma_2, \sigma_3$	principal stress (major, intermediate, minor)
$\sigma_{oct}$	mean stress or octahedral stress = $(\sigma_1 + \sigma_2 + \sigma_3)/3$
$\tau$	shear stress
$\mu$	porewater pressure
E	modulus of deformation
G	shear modulus of deformation
K	bulk modulus of compressibility

### III. SOIL PROPERTIES

#### (a) Index Properties

$\rho(\gamma)$	bulk density (bulk unit weight*)
$\rho_d(\gamma_d)$	dry density (dry unit weight)
$\rho_w(\gamma_w)$	density (unit weight) of water
$\rho_s(\gamma_s)$	density (unit weight) of solid particles
$\gamma'$	unit weight of submerged soil ( $\gamma' = \gamma - \gamma_w$ )
$D_R$	relative density (specific gravity) of solid particles ( $D_R = \rho_s / \rho_w$ ) (formerly $G_s$ )
e	void ratio
n	porosity
S	degree of saturation

#### (a) Index Properties (continued)

w	water content
$w_l$	liquid limit
$w_p$	plastic limit
$I_p$	plasticity index = $(w_l - w_p)$
$w_s$	shrinkage limit
$I_L$	liquidity index = $(w - w_p) / I_p$
$I_C$	consistency index = $(w_l - w) / I_p$
$e_{max}$	void ratio in loosest state
$e_{min}$	void ratio in densest state
$I_D$	density index = $(e_{max} - e) / (e_{max} - e_{min})$ (formerly relative density)

#### (b) Hydraulic Properties

h	hydraulic head or potential
q	rate of flow
v	velocity of flow
i	hydraulic gradient
k	hydraulic conductivity (coefficient of permeability)
j	seepage force per unit volume

#### (c) Consolidation (one-dimensional)

$C_c$	compression index (normally consolidated range)
$C_r$	recompression index (over-consolidated range)
$C_s$	swelling index
$C_a$	coefficient of secondary consolidation
$m_v$	coefficient of volume change
$c_v$	coefficient of consolidation
$T_v$	time factor (vertical direction)
U	degree of consolidation
$\sigma'_p$	pre-consolidation pressure
OCR	over-consolidation ratio = $\sigma'_p / \sigma'_{vo}$

#### (d) Shear Strength

$T_p, T_r$	peak and residual shear strength
$\phi'$	effective angle of internal friction
$\delta$	angle of interface friction
$\mu$	coefficient of friction = $\tan \delta$
$c'$	effective cohesion
$c_u, s_u$	undrained shear strength ( $\phi = 0$ analysis)
p	mean total stress $(\sigma_1 + \sigma_3)/2$
$p'$	mean effective stress $(\sigma'_1 + \sigma'_3)/2$
q	$(\sigma_1 + \sigma_3)/2$ or $(\sigma'_1 + \sigma'_3)/2$
$q_u$	compressive strength $(\sigma_1 + \sigma_3)$
$S_t$	sensitivity

\* Density symbol is  $\rho$ . Unit weight symbol is  $\gamma$  where  $\gamma = \rho g$  (i.e. mass density multiplied by acceleration due to gravity)

Notes: 1  $\tau = c' + \sigma' \tan \phi'$   
2 shear strength = (compressive strength)/2



## LIST OF ABBREVIATIONS

The abbreviations commonly employed on Records of Boreholes, on figures and in the text of the report are as follows:

### I. SAMPLE TYPE

AS	Auger sample
BS	Block sample
CS	Chunk sample
SS	Split-spoon
DS	Denison type sample
FS	Foil sample
RC	Rock core
SC	Soil core
ST	Slotted tube
TO	Thin-walled, open
TP	Thin-walled, piston
WS	Wash sample

### II. PENETRATION RESISTANCE

#### Standard Penetration Resistance (SPT), N:

The number of blows by a 63.5 kg. (140 lb.) hammer dropped 760 mm (30 in.) required to drive a 50 mm (2 in.) drive open sampler for a distance of 300 mm (12 in.)

#### Dynamic Cone Penetration Resistance; $N_d$ :

The number of blows by a 63.5 kg (140 lb.) hammer dropped 760 mm (30 in.) to drive uncased a 50 mm (2 in.) diameter, 60° cone attached to "A" size drill rods for a distance of 300 mm (12 in.).

**PH:** Sampler advanced by hydraulic pressure

**PM:** Sampler advanced by manual pressure

**WH:** Sampler advanced by static weight of hammer

**WR:** Sampler advanced by weight of sampler and rod

#### Piezo-Cone Penetration Test (CPT)

A electronic cone penetrometer with a 60° conical tip and a project end area of 10 cm<sup>2</sup> pushed through ground at a penetration rate of 2 cm/s. Measurements of tip resistance ( $Q_t$ ), porewater pressure (PWP) and friction along a sleeve are recorded electronically at 25 mm penetration intervals.

### III. SOIL DESCRIPTION

#### (a) Cohesionless Soils

Density Index	N
Relative Density	Blows/300 mm or Blows/ft
Very loose	0 to 4
Loose	4 to 10
Compact	10 to 30
Dense	30 to 50
Very dense	over 50

#### (b) Cohesive Soils Consistency

	$c_u, s_u$	
	kPa	psf
Very soft	0 to 12	0 to 250
Soft	12 to 25	250 to 500
Firm	25 to 50	500 to 1,000
Stiff	50 to 100	1,000 to 2,000
Very stiff	100 to 200	2,000 to 4,000
Hard	over 200	over 4,000

### IV. SOIL TESTS

w	water content
$w_p$	plastic limit
$w_l$	liquid limit
C	consolidation (oedometer) test
CHEM	chemical analysis (refer to text)
CID	consolidated isotropically drained triaxial test <sup>1</sup>
CIU	consolidated isotropically undrained triaxial test with porewater pressure measurement <sup>1</sup>
$D_R$	relative density (specific gravity, $G_s$ )
DS	direct shear test
M	sieve analysis for particle size
MH	combined sieve and hydrometer (H) analysis
MPC	Modified Proctor compaction test
SPC	Standard Proctor compaction test
OC	organic content test
SO <sub>4</sub>	concentration of water-soluble sulphates
UC	unconfined compression test
UU	unconsolidated undrained triaxial test
V	field vane (LV-laboratory vane test)
$\gamma$	unit weight

**Note: 1** Tests which are anisotropically consolidated prior to shear are shown as CAD, CAU.



PROJECT: 1211700057

# RECORD OF BOREHOLE BH12-01

SHEET 1 OF 1

LOCATION: N 4896895.0 ; E 608130.0

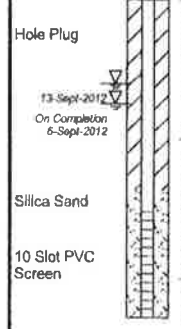
BORING DATE: 6-Sept-2012

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER		TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
									20	40	60	80	10 <sup>-4</sup>	10 <sup>-5</sup>			10 <sup>-6</sup>	10 <sup>-7</sup>
0		GROUND SURFACE																
		(SM) silty sand, dark brown; TOPSOIL; non-cohesive, moist, loose		225.01	1	DO	4											
		(SM) Silty SAND, trace clay, brown; non-cohesive, moist, very loose		224.33	2	DO	4											
		(ML) CLAYEY SILT, some sand, grey; cohesive, w-PL, very soft		223.57	3	DO	2											
		(SP) SAND, some silt, grey; non-cohesive, moist, loose		222.80	4	DO	5											
		(CI) SILTY CLAY, some sand, grey; cohesive, w-PL, firm		222.04	5	DO	3											
		(ML) SILT, some sand, some clay, grey; cohesive, wet, compact		221.28	6	DO	11											
				218.10	10	DO	11											
10		End of Borehole		9.60														



NOTE: Surface elevation, Northings, and Eastings are approximate

WHITBY\_BHS\_1211700057LOG.GPJ\_GLDR\_LDN.GDT\_28-01-13

DEPTH SCALE

1 : 100



LOGGED: DD

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PROJECT: 1211700057

# RECORD OF BOREHOLE BH12-01A

SHEET 1 OF 2

LOCATION: See Figure 1

BORING DATE: 19-Nov-2012

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
									20	40	60	80	10 <sup>-6</sup>	10 <sup>-5</sup>	10 <sup>-4</sup>			10 <sup>-3</sup>
0		GROUND SURFACE																
2		For Soil Description Refer to BH12-01					224											
4							222											
6							220											
8	Truck Mount Power Auger 19-Nov-2012	(CI) SILTY CLAY, grey; cohesive, w>PL, soft	218.05 7.62	1	DO	4	218											
10		(ML) SILT, some sand, fine, grey; non-cohesive, wet, very loose to compact	217.09 8.61	2	DO	11	216											
12			214.04 11.66	3	DO	3	214									MH		
14		(ML) Sandy SILT, grey; non-cohesive, wet, loose to compact		4	DO	3	214											
16				5	DO	16	212											
18				8	DO	15	210									MH		
20				7	DO	30	208											
20			Sample 8 non-plastic (SM) SILT and SAND, some clay, trace gravel, grey; TILL: non-cohesive, moist, compact	207.95 17.75	8	DO	13	208								MH		
20					9	DO	28	206										

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DEPTH SCALE

1 : 100



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PROJECT: 1211700057

# RECORD OF BOREHOLE BH12-01A

SHEET 2 OF 2

LOCATION: See Figure 1

BORING DATE: 19-Nov-2012

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	20	40	60	80	10 <sup>-6</sup>	10 <sup>-5</sup>	10 <sup>-4</sup>			10 <sup>-3</sup>
		— CONTINUED FROM PREVIOUS PAGE —																
20	Truck Mount Power Auger 19-Nov-2012	(SM) SILT and SAND, some clay, trace gravel, grey; TILL; non-cohesive, moist, compact		204.90	9	DO	28											
				20.80														
22		(ML) CLAYEY SILT to (CL) SILTY CLAY, trace to some sand, trace gravel, grey; cohesive, w>PL, hard			10	DO	35	204										
		50 mm thick SILT seam encountered at 23.0 m			11A	DO	54											
					11B	DO	54											
24		(SM) SILT and SAND, some clay, trace gravel, grey; TILL; non-cohesive, moist, very dense		201.85														
				23.85														
				200.68	12	DO	52											
		End of Borehole		24.84														

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DEPTH SCALE

1 : 100



LOGGED: DD

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PROJECT: 1211700057

# RECORD OF BOREHOLE BH12-02

SHEET 1 OF 1

LOCATION: N 4896970.0 ; E 608266.0

BORING DATE: 6-Sept-2012

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	20	40	60	80	10 <sup>-6</sup>	10 <sup>-5</sup>	10 <sup>-4</sup>		
0		GROUND SURFACE															
		(SM) silty sand, dark brown; TOPSOIL; non-cohesive, moist, loose		225.33	1	DO	6										
				224.57	2	DO	5										
2		(ML) CLAYEY SILT, grey, cohesive, w>PL, very soft		224.57	3	DO	WH										
		Sample 4 non-plastic (SM) Silty SAND, some clay, grey; non-cohesive, wet, loose to compact		223.04	4	DO	8										
				222.28	5	DO	11										
4		(SM) Silty SAND, trace clay, grey; non-cohesive, wet, compact		222.28	6	DO	13										
		Sample 7 non-plastic (SC) CLAYEY SILT and SAND, grey; non-cohesive, wet, compact		221.14	7	DO	21										
				218.62	8	DO	9										
6		(CI) SILTY CLAY, grey, cohesive, w-PL, stiff		218.62	9	DO	8										
8		End of Borehole		218.62													

WHITBY BHS 1211700057 LOG.GPJ GILDR LDN.GDT 28-01-13

DEPTH SCALE  
1 : 100



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PROJECT: 1211700057

# RECORD OF BOREHOLE BH12-02A

SHEET 1 OF 2

LOCATION: See Figure 1

BORING DATE: 20-Nov-2012

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS
		DESCRIPTION	STRATA PILOT	ELEV. DEPTH (m)	NUMBER		TYPE	20	40	60	80	10 <sup>-6</sup>	10 <sup>-5</sup>	10 <sup>-4</sup>		
0		GROUND SURFACE														
2																
4		For Soil Description Refer to BH12-02														
6																
8				219.08 7.62	1	TO										
		(CL) SILTY CLAY to (ML) CLAYEY SILT, grey; cohesive, w>PL, soft to stiff			2	DO										
		Vane V1 Sank Under own Weight			V1	VANE										
10				216.41 10.29	3	DO										
		Sample 3a non-plastic														
12					4	DO										
14		Compact at 13.7 m			5	DO										
16					6	DO										
		(ML) Sandy SILT to SILT, grey; non-cohesive, moist to wet, loose to very dense														
18					7	DO										
		Dense to very dense at 18.3 m			8	DO										
20					9	DO										

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DEPTH SCALE  
1 : 100



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PROJECT: 1211700057

# RECORD OF BOREHOLE BH12-02A

SHEET 2 OF 2

LOCATION: See Figure 1

BORING DATE: 20-Nov-2012

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER		TYPE	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
								20	40	60	80	10 <sup>-6</sup>	10 <sup>-5</sup>	10 <sup>-4</sup>			10 <sup>-3</sup>
		— CONTINUED FROM PREVIOUS PAGE —															
20	20-Nov-2012	(ML) Sandy SILT to SILT, grey; non-cohesive, moist to wet, loose to very dense		205.90	9	DO	43										
		(SM) SILT and SAND, some clay, trace gravel, grey; TILL; non-cohesive, moist, dense		20.80													
22		End of Borehole		204.91	10	DO	34										
22				21.79													
24																	
26																	
28																	
30																	
32																	
34																	
36																	
38																	
40																	

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DEPTH SCALE  
1: 100



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PROJECT: 1211700057

# RECORD OF BOREHOLE BH12-03

SHEET 1 OF 1

LOCATION: N 4896990.0 ;E 608440.0

BORING DATE: 7-Sept-2012

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE		BLOWS/0.3m	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
									20	40	60	80	nat V. rem V.	+ ⊕	U - ⊙			10 <sup>-6</sup>
0		GROUND SURFACE																
		(SM) silty sand, dark brown; TOPSOIL; non-cohesive, moist, loose		225.79	1	SS	4	226										
				0.81	2	SS	8											
2					3	SS	3											
					V1	WANE		224										
					V2	WANE												
					V3	WANE												
		Organics noted at 3.4 m			V4	WANE	2											
					4	SS	2											
4		(CL) SILTY CLAY, gray; cohesive, w-FL, very soft to firm, peat deposits noted within silty clay SAND and SILT seams encountered at 4.6 m to 5.0 m			V5	WANE		222										
					5	SS	3											
6					6	SS	4	220										
		SILTY CLAY becoming stiff to very stiff at 7.6 m			V6	WANE												
					7	SS	12											
8		End of Borehole		218.17														
				8.23														

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DEPTH SCALE  
1 : 100



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PROJECT: 1211700057

# RECORD OF BOREHOLE BH12-03A

SHEET 1 OF 2

LOCATION: See Figure 1

BORING DATE: 21-Nov-2012

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER		TYPE	SHEAR STRENGTH Cu, kPa		WATER CONTENT PERCENT						
0		GROUND SURFACE				226										
2						224										
4		For Soil Description Refer to BH12-03				222										
6						220										
8						218										
8.62						218										
8.76						218										
9		(CL) SILTY CLAY, trace sand, grey; cohesive, w-PL, soft				218										
9.13		Vane V3 Sank Under own Weight				218										
10						216										
10.13						216										
12						214										
14		Dense to very dense at 13.7 m				212										
14.7						212										
15		(SM) Silty SAND to SILT and SAND, grey; non-cohesive, moist to wet, loose to very dense				212										
16						210										
16.8		Pocket of loose sand at 16.8 m				210										
17						208										
18						208										
20						208										

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WHITBY BHS 1211700057\LOG.GPJ GLDR\_LDN.GDT 28-01-13

DEPTH SCALE  
1 : 100



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PROJECT: 1211700057

# RECORD OF BOREHOLE BH12-03A

SHEET 2 OF 2

LOCATION: See Figure 1

BORING DATE: 21-Nov-2012

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER		TYPE	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
								20	40	60	80	nat rem	V. V.	+ ⊕			Q - U
		--- CONTINUED FROM PREVIOUS PAGE ---					10	20	30	40							
20	21-Nov-2012	(SM) Silty SAND to SILT and SAND, grey; non-cohesive, moist to wet, loose to very dense		205.60	9	DO	36										
		20.80															
		(ML) SILT, some sand, grey; non-cohesive, moist, dense		204.61	10A	DO	36										
22		End of Borehole		21.79	10B	DO	36										

WHITBY\_BHS\_1211700057.LOG.GPJ\_GLDR\_LDN.GDT\_25-01-13

DEPTH SCALE

1 : 100



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PROJECT: 1211700057

# RECORD OF BOREHOLE BH12-05

SHEET 1 OF 1

LOCATION: N 4897070.0 ; E 608600.0

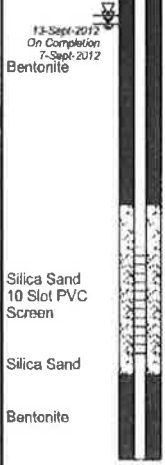
BORING DATE: 7-Sept-2012

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER TYPE		BLOWS/0.3m	20	40	60	80	10 <sup>6</sup>	10 <sup>5</sup>	10 <sup>4</sup>		
0		GROUND SURFACE														
0.5		(PT) PEAT, black; non-cohesive, moist, very loose to loose, contains interlayers of CLAYEY SILT and SAND, some silt		225.63	1 SS	7										
1.5				225.63 1.37	2 SS	2										
2.0		(ML) CLAYEY SILT to (CL) SILTY CLAY, grey; cohesive, w-PL, very soft to firm			3 SS											
2.5					V1 VANE											
3.0					V2 VANE											
3.5					V3 VANE											
4.0					V4 VANE											
4.5					V5 VANE											
5.0					V6 VANE											
5.5				222.58	V7 VANE											
6.0		Sample 4 non-plastic (SM) Silty SAND, interlayered with CLAYEY SILT to SILTY CLAY from 4.4 m to 5.6 m, grey, non-cohesive, wet, compact		221.40	4 SS	15										
6.5				221.40 5.60												
7.0		(CL) SILTY CLAY, trace to some sand, grey, cohesive, w-PL, soft to stiff			V8 VANE											
7.5					V9 VANE											
8.0					V10 VANE											
8.5		End of Borehole		218.77	5 SS	14										
9.0				218.77 8.23												



NOTE: Surface elevation, Northings, and Eastings are approximate

WHITBY BHS 1211700057LOG.GPJ GLDR LDN.GDT 28-01-13

DEPTH SCALE  
1: 100



LOGGED: DD  
CHECKED: NLP

40

PROJECT: 1211700057

# RECORD OF BOREHOLE BH12-05A

SHEET 1 OF 2

LOCATION: See Figure t

BORING DATE: 22-Nov-2012

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, $k_f$ cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER		TYPE	SHEAR STRENGTH $C_u$ , kPa				WATER CONTENT PERCENT					
								20	40	60	80	nat V. + rem V. $\oplus$	Q - U - $\ominus$	Wp			W
0		GROUND SURFACE															
2		For Soil Description Refer to BH12-05				226											
4						224											
6						222											
8						220											
8		(CL) SILTY CLAY, grey; cohesive, w-PL, soft to firm				219.38											
						7.62											
10		(ML) SILT, some fine sand, trace gravel to (ML) Sandy SILT, trace gravel, grey; non-cohesive, wet, dense	1	TO		218									MH		
				V1	VANE												
				V2	VANE												
				2	DO	3	218									MH	
10		(ML) SILT, some fine sand, trace gravel to (ML) Sandy SILT, trace gravel, grey; non-cohesive, wet, dense				216											
				V3	VANE												
				V4	VANE												
				3	DO	37	216									MH	
12		(SP-SW) SAND, fine to coarse, trace to some silt, grey with black interlayers; non-cohesive, wet to moist, compact to very dense				214											
				4	DO	32	214										
14		(SP-SW) SAND, fine to coarse, trace to some silt, grey with black interlayers; non-cohesive, wet to moist, compact to very dense				212											
				5	DO	17	212										
16		(SM) Sandy SILT, some clay, some gravel, grey; TILL: cohesive, w-PL, very stiff to hard				210											
				6	DO	38	210										
16		(SM) Sandy SILT, some clay, some gravel, grey; TILL: cohesive, w-PL, very stiff to hard				208											
				7	DO	64	208									MH	
18		(SM) Sandy SILT, some clay, some gravel, grey; TILL: cohesive, w-PL, very stiff to hard				209.30											
							17.70										
18		(SM) Sandy SILT, some clay, some gravel, grey; TILL: cohesive, w-PL, very stiff to hard				208											
20			8	DO	39	208									MH		
20			9	DO	21	208											

— CONTINUED NEXT PAGE —

WHITBY\_BHS\_1211700057.LOG.GPJ\_GLDR\_LDN.GDT\_28-01-13

DEPTH SCALE

1: 100



LOGGED: DD  
CHECKED: NLP

40

PROJECT: 1211700057

# RECORD OF BOREHOLE BH12-05A

SHEET 2 OF 2

LOCATION: See Figure 1

BORING DATE: 22-Nov-2012

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		ELEVATION	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	INSTALLATION AND GROUNDWATER OBSERVATIONS	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER		TYPE	SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT					
								20	40	60	80	nat rem	V. V.	+ ⊕			U - ○
		— CONTINUED FROM PREVIOUS PAGE —					10	20	30	40	10	20	30	40			
20	22-Nov-2012				9	DO 21											
		(SM) Sandy SILT, some clay, some gravel, grey, TILL; cohesive, w-PL, very stiff to hard Sample 10 non-plastic			10	DO 43	206										
22		End of Borehole		205.21 21.79													
24																	
26																	
28																	
30																	
32																	
34																	
36																	
38																	
40																	

WHITBY\_BHS\_1211700057.LOG.GPJ\_GLDR\_LDN.GDT\_26-01-13

DEPTH SCALE  
1 : 100



LOGGED: DD  
CHECKED: NLP

*Handwritten signature*



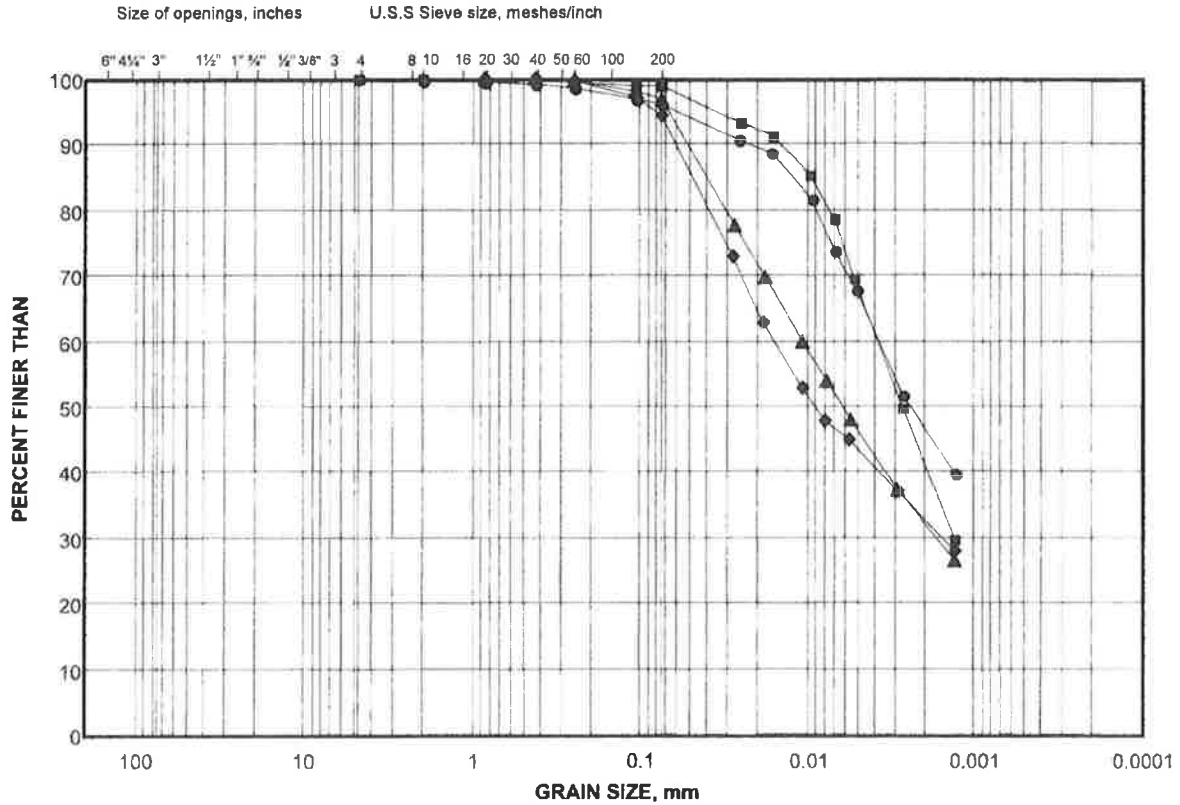
# **APPENDIX B**

## **Laboratory Figures**

# GRAIN SIZE DISTRIBUTION

(CL) Silty Clay

FIGURE B1



COBBLE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
SIZE	GRAVEL SIZE		SAND SIZE			FINE GRAINED

**LEGEND**

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
●	12-02A	1	7.60 - 8.20
■	12-03A	2	9.10 - 9.60
◆	12-01	5	3.00 - 3.50
▲	12-03	6	6.10 - 6.50

Project Number: 12-1170-0057

Checked By: *[Signature]*

**Golder Associates**

Date: 25-Jan-13



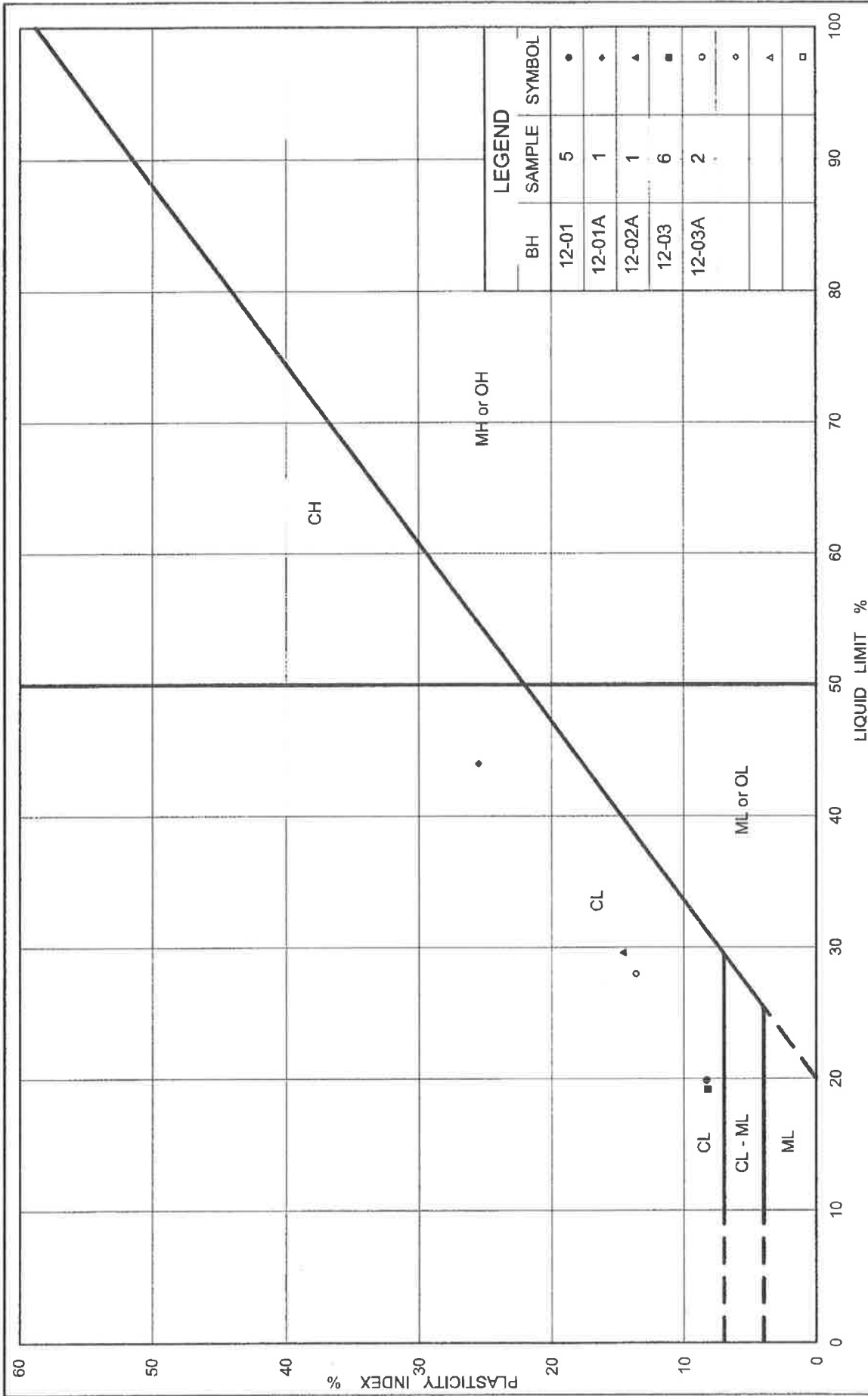


Figure No. B3  
 Project No. 12-1170-0057  
 Checked By: *[Signature]*

**PLASTICITY CHART**  
 Silty Clay





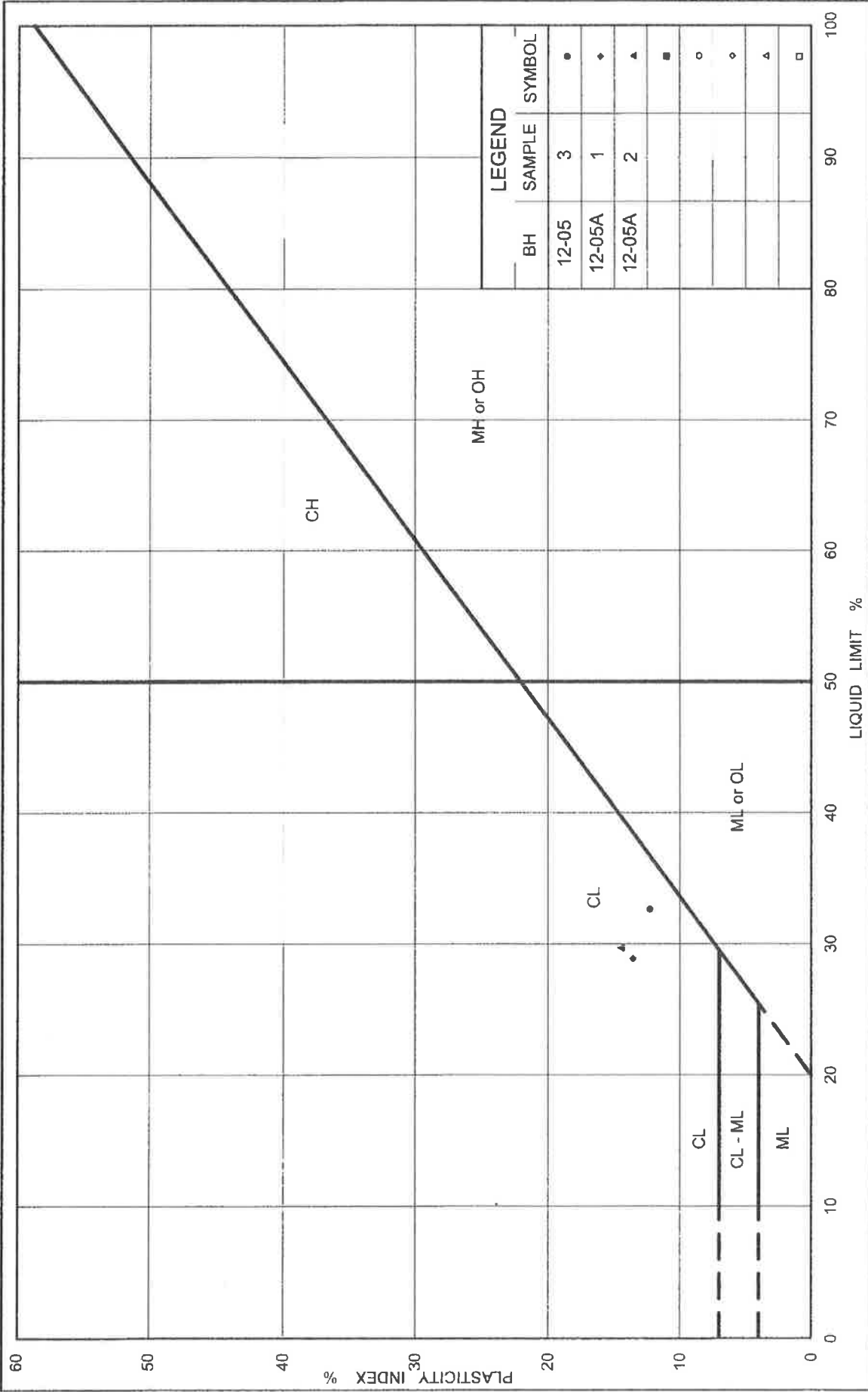


Figure No. B4  
 Project No. 12-1170-0057  
 Checked By: GP

**PLASTICITY CHART  
 (CL) Silty Clay**



## CONSOLIDATION TEST SUMMARY

FIGURE B5

### SAMPLE IDENTIFICATION

Project Number	12-1170-0057	Sample Number	1
Borehole Number	12-02A	Sample Depth, m	7.6-8.2

### TEST CONDITIONS

Test Type	Standard	Load Duration, hr	24
Oedometer Number	5		
Date Started	12/11/2012		
Date Completed	12/22/2012		

### SAMPLE DIMENSIONS AND PROPERTIES - INITIAL

Sample Height, cm	1.90	Unit Weight, kN/m <sup>3</sup>	19.90
Sample Diameter, cm	6.35	Dry Unit Weight, kN/m <sup>3</sup>	15.94
Area, cm <sup>2</sup>	31.69	Specific Gravity, measured	2.72
Volume, cm <sup>3</sup>	60.18	Solids Height, cm	1.135
Water Content, %	24.87	Volume of Solids, cm <sup>3</sup>	35.95
Wet Mass, g	122.11	Volume of Voids, cm <sup>3</sup>	24.23
Dry Mass, g	97.79	Degree of Saturation, %	100.4

### TEST COMPUTATIONS

Stress kPa	Corr.	Void Ratio	Average	t <sub>90</sub> sec	cv, cm <sup>2</sup> /s	mv m <sup>2</sup> /kN	k cm/s
	Height cm		Height cm				
0.00	1.899	0.674	1.899				
5.96	1.884	0.660	1.891	327	2.32E-03	1.34E-03	3.05E-07
10.69	1.875	0.652	1.879	487	1.54E-03	1.00E-03	1.51E-07
20.39	1.868	0.647	1.871	277	2.68E-03	3.69E-04	9.70E-08
39.80	1.858	0.637	1.863	252	2.92E-03	2.79E-04	7.99E-08
78.48	1.842	0.624	1.850	240	3.02E-03	2.11E-04	6.25E-08
155.73	1.821	0.605	1.832	254	2.80E-03	1.45E-04	3.98E-08
310.29	1.794	0.581	1.807	296	2.34E-03	9.34E-05	2.14E-08
619.24	1.756	0.548	1.775	245	2.73E-03	6.44E-05	1.72E-08
1237.25	1.710	0.508	1.733	214	2.98E-03	3.86E-05	1.13E-08
2473.75	1.661	0.464	1.686	101	5.97E-03	2.09E-05	1.22E-08
619.24	1.678	0.479	1.670				
155.73	1.700	0.498	1.689				
39.80	1.724	0.519	1.712				
10.69	1.742	0.535	1.733				

Note:  
k calculated using cv based on t<sub>90</sub> values.

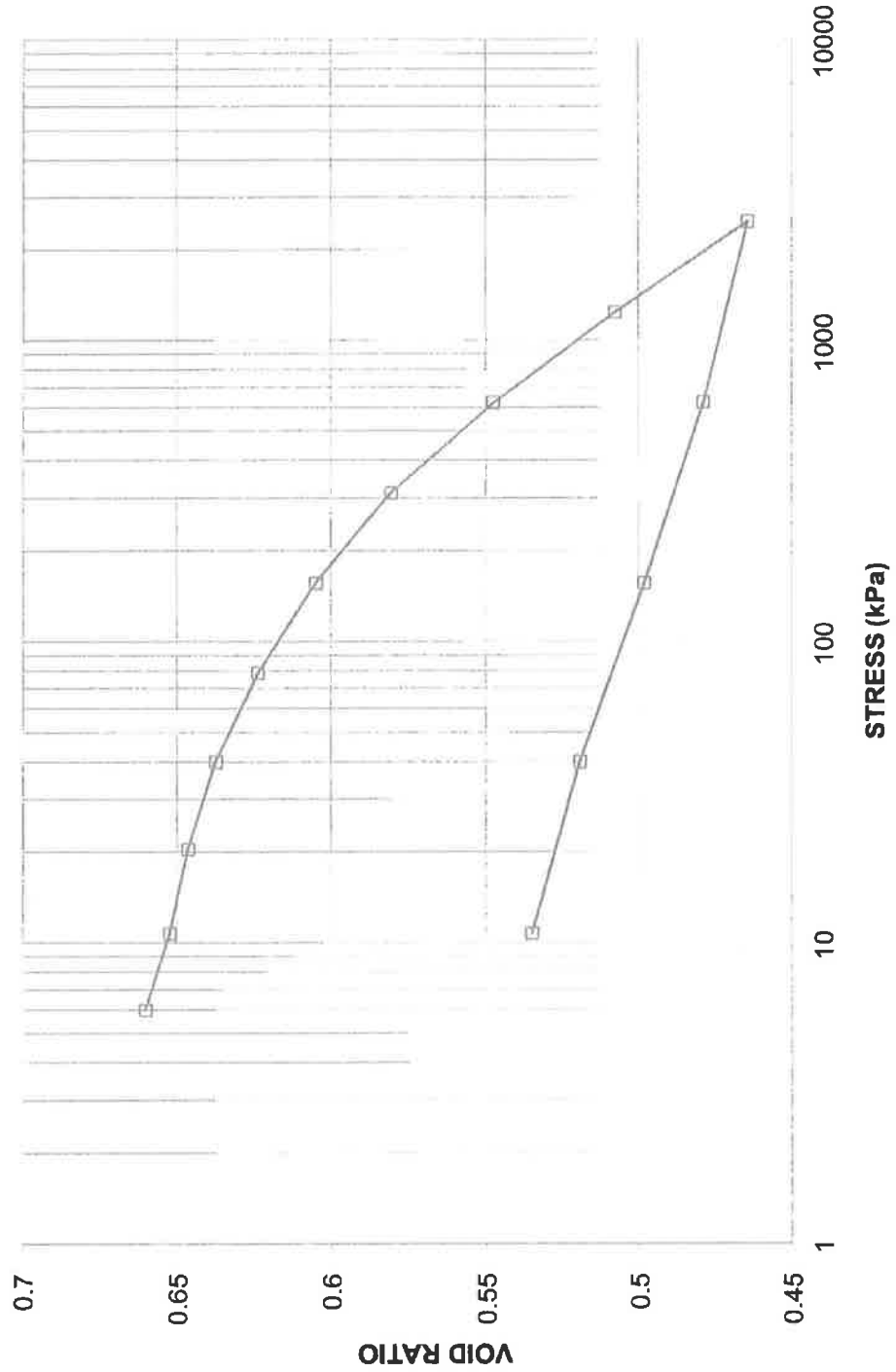
### SAMPLE DIMENSIONS AND PROPERTIES - FINAL

Sample Height, cm	1.74	Unit Weight, kN/m <sup>3</sup>	20.89
Sample Diameter, cm	6.35	Dry Unit Weight, kN/m <sup>3</sup>	17.38
Area, cm <sup>2</sup>	31.69	Specific Gravity, measured	2.72
Volume, cm <sup>3</sup>	55.19	Solids Height, cm	1.135
Water Content, %	20.23	Volume of Solids, cm <sup>3</sup>	35.95
Wet Mass, g	117.57	Volume of Voids, cm <sup>3</sup>	19.23
Dry Mass, g	97.79		

CONSOLIDATION TEST  
VOID RATIO VS LOG STRESS

FIGURE B6

CONSOLIDATION TEST  
VOID RATIO vs STRESS  
BH 12-02A SA 1



Project No. 12-1170-0057

Prepared By: LFG

Golder Associates

Checked By: *gp*

**CONSOLIDATION TEST SUMMARY**

**FIGURE B7**

**SAMPLE IDENTIFICATION**

Project Number	12-1170-0057	Sample Number	1
Borehole Number	12-05A	Sample Depth, m	7.6-8.2

**TEST CONDITIONS**

Test Type	Standard	Load Duration, hr	24
Oedometer Number	4		
Date Started	12/14/2012		
Date Completed	12/29/2012		

**SAMPLE DIMENSIONS AND PROPERTIES - INITIAL**

Sample Height, cm	2.53	Unit Weight, kN/m <sup>3</sup>	19.82
Sample Diameter, cm	6.35	Dry Unit Weight, kN/m <sup>3</sup>	15.80
Area, cm <sup>2</sup>	31.71	Specific Gravity, measured	2.77
Volume, cm <sup>3</sup>	80.22	Solids Height, cm	1.471
Water Content, %	25.44	Volume of Solids, cm <sup>3</sup>	46.65
Wet Mass, g	162.11	Volume of Voids, cm <sup>3</sup>	33.57
Dry Mass, g	129.23	Degree of Saturation, %	97.9

**TEST COMPUTATIONS**

Stress kPa	Corr.	Void Ratio	Average	t <sub>90</sub> sec	cv, cm <sup>2</sup> /s	mv m <sup>2</sup> /kN	k cm/s
	Height cm		Height cm				
0.00	2.530	0.720	2.530				
6.21	2.511	0.707	2.521	1542	8.73E-04	1.20E-03	1.02E-07
10.88	2.498	0.697	2.504	1270	1.05E-03	1.16E-03	1.19E-07
20.77	2.486	0.690	2.492	856	1.54E-03	4.68E-04	7.05E-08
39.97	2.473	0.681	2.479	520	2.51E-03	2.64E-04	6.47E-08
78.68	2.452	0.667	2.463	437	2.94E-03	2.14E-04	6.18E-08
155.94	2.432	0.653	2.442	342	3.70E-03	1.04E-04	3.76E-08
310.40	2.401	0.632	2.416	217	5.70E-03	7.96E-05	4.45E-08
619.73	2.359	0.603	2.380	205	5.86E-03	5.32E-05	3.05E-08
1237.23	2.308	0.568	2.333	135	8.55E-03	3.30E-05	2.76E-08
2472.93	2.248	0.528	2.278	190	5.79E-03	1.89E-05	1.07E-08
1237.23	2.253	0.532	2.251				
310.40	2.282	0.551	2.268				
78.68	2.309	0.569	2.295				
20.77	2.331	0.584	2.320				
6.21	2.345	0.594	2.338				

Note:  
k calculated using cv based on t<sub>90</sub> values.

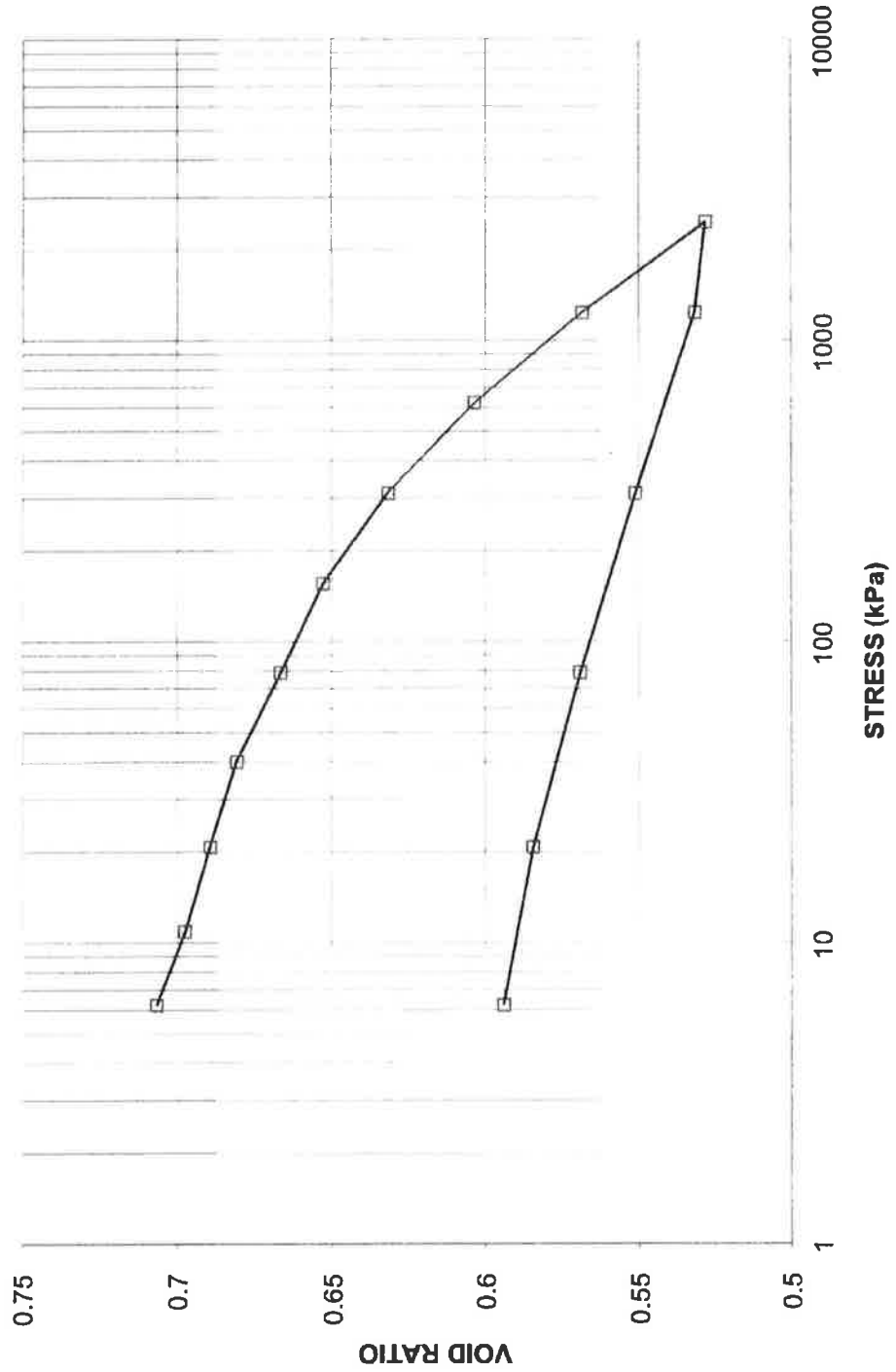
**SAMPLE DIMENSIONS AND PROPERTIES - FINAL**

Sample Height, cm	2.35	Unit Weight, kN/m <sup>3</sup>	20.79
Sample Diameter, cm	6.35	Dry Unit Weight, kN/m <sup>3</sup>	17.04
Area, cm <sup>2</sup>	31.71	Specific Gravity, measured	2.77
Volume, cm <sup>3</sup>	74.37	Solids Height, cm	1.471
Water Content, %	21.98	Volume of Solids, cm <sup>3</sup>	46.65
Wet Mass, g	157.63	Volume of Voids, cm <sup>3</sup>	27.71
Dry Mass, g	129.23		

CONSOLIDATION TEST  
VOID RATIO VS LOG STRESS

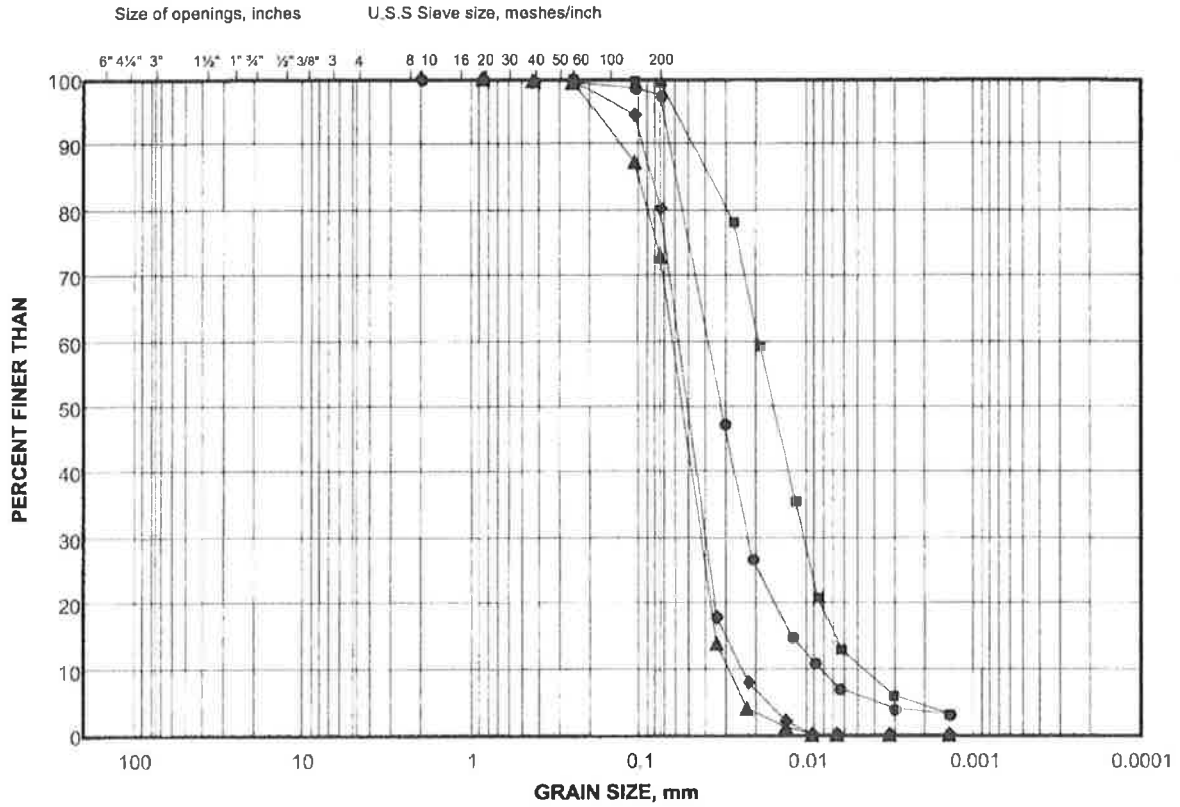
FIGURE B8

CONSOLIDATION TEST  
VOID RATIO vs STRESS  
BH 12-05A SA 1



# GRAIN SIZE DISTRIBUTION (ML) Silt

FIGURE B9



COBBLE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
SIZE	GRAVEL SIZE		SAND SIZE			FINE GRAINED

**LEGEND**

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
●	12-01A	3	10.70 - 11.10
■	12-02A	3A	10.70 - 10.90
◆	12-01A	6	15.20 - 15.70
▲	12-02A	7	16.80 - 16.90

Project Number: 12-1170-0057

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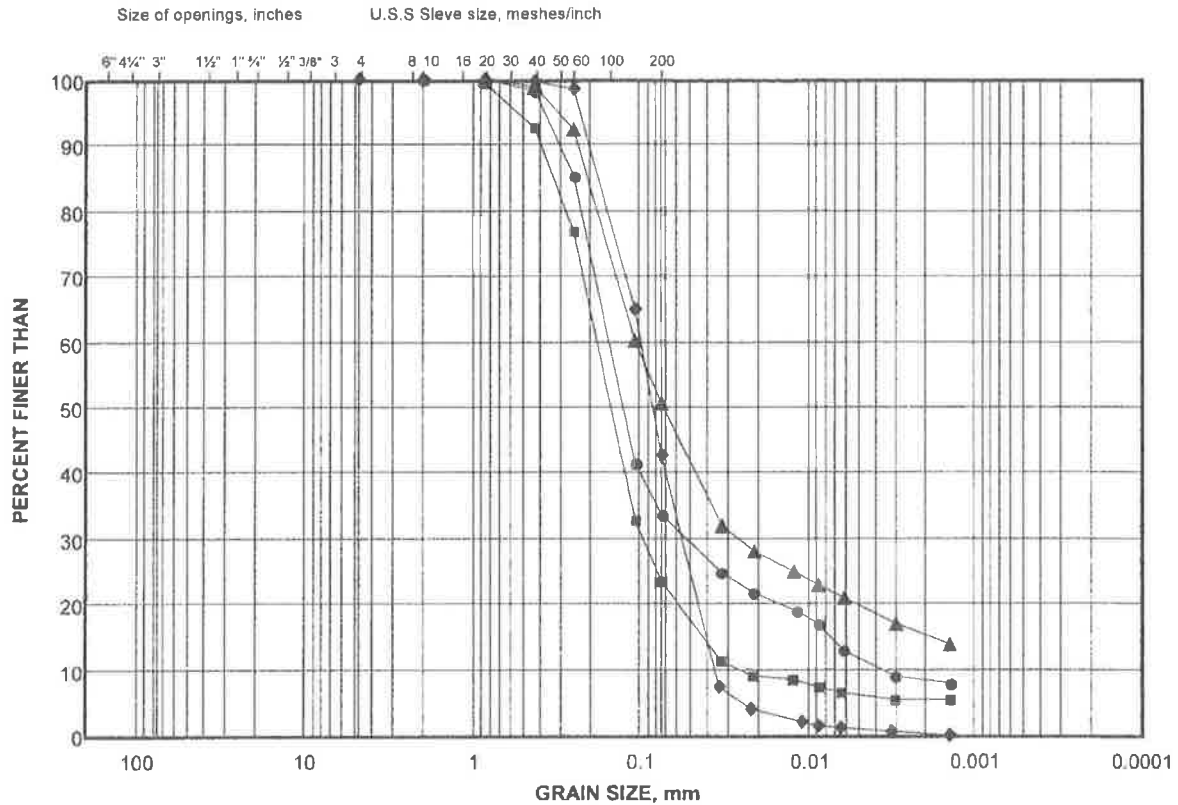
Date: 25-Jan-13



# GRAIN SIZE DISTRIBUTION

(SM) Silty Sand to (SC) Clayey Silt and Sand

FIGURE B11



COBBLE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
SIZE	GRAVEL SIZE		SAND SIZE			FINE GRAINED

**LEGEND**

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
●	12-02	4	2.30 - 2.70
■	12-05	4	4.60 - 5.00
◆	12-03A	5	13.70 - 14.20
▲	12-02	7	4.60 - 5.00

Project Number: 12-1170-0057

Checked By:         *GP*        

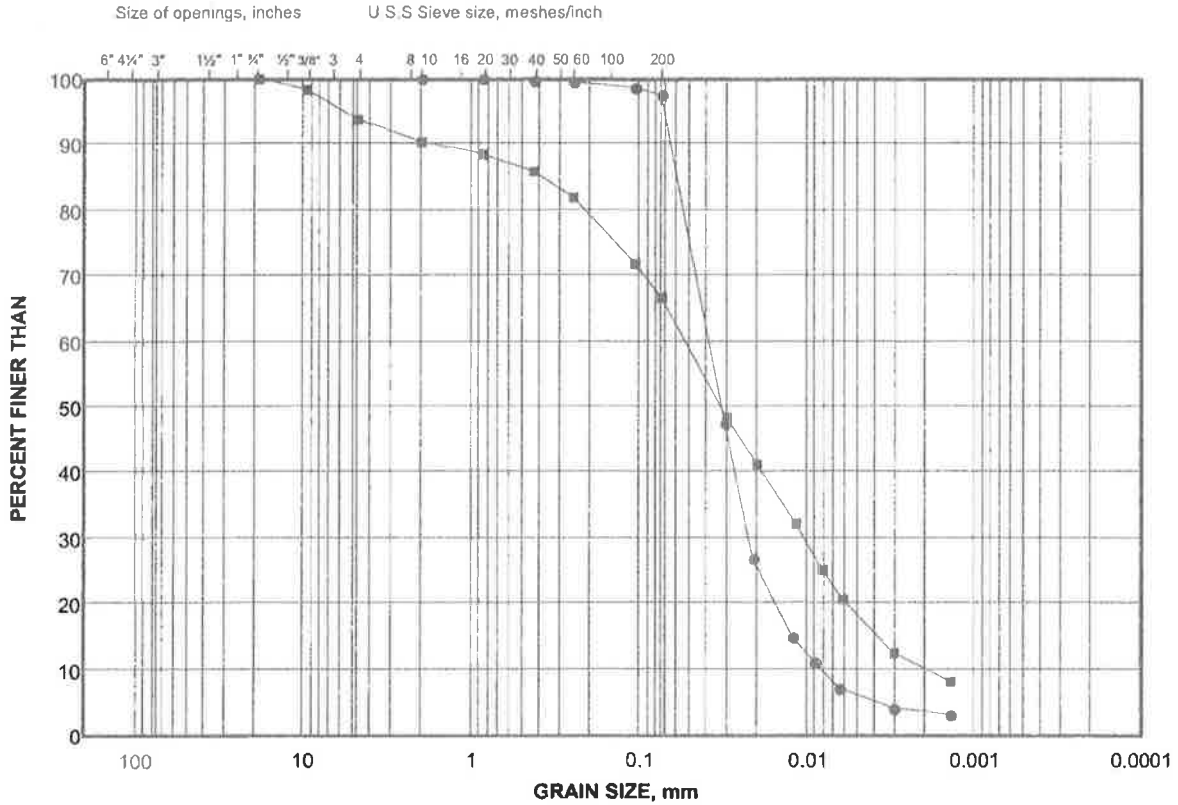
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Date: 25-Jan-13



**GRAIN SIZE DISTRIBUTION**  
 (CL-ML) Sandy Silt (Till) to (SM) Silt and Sand (Till)

**FIGURE B12**



COBBLE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
SIZE	GRAVEL SIZE		SAND SIZE			FINE GRAINED

**LEGEND**

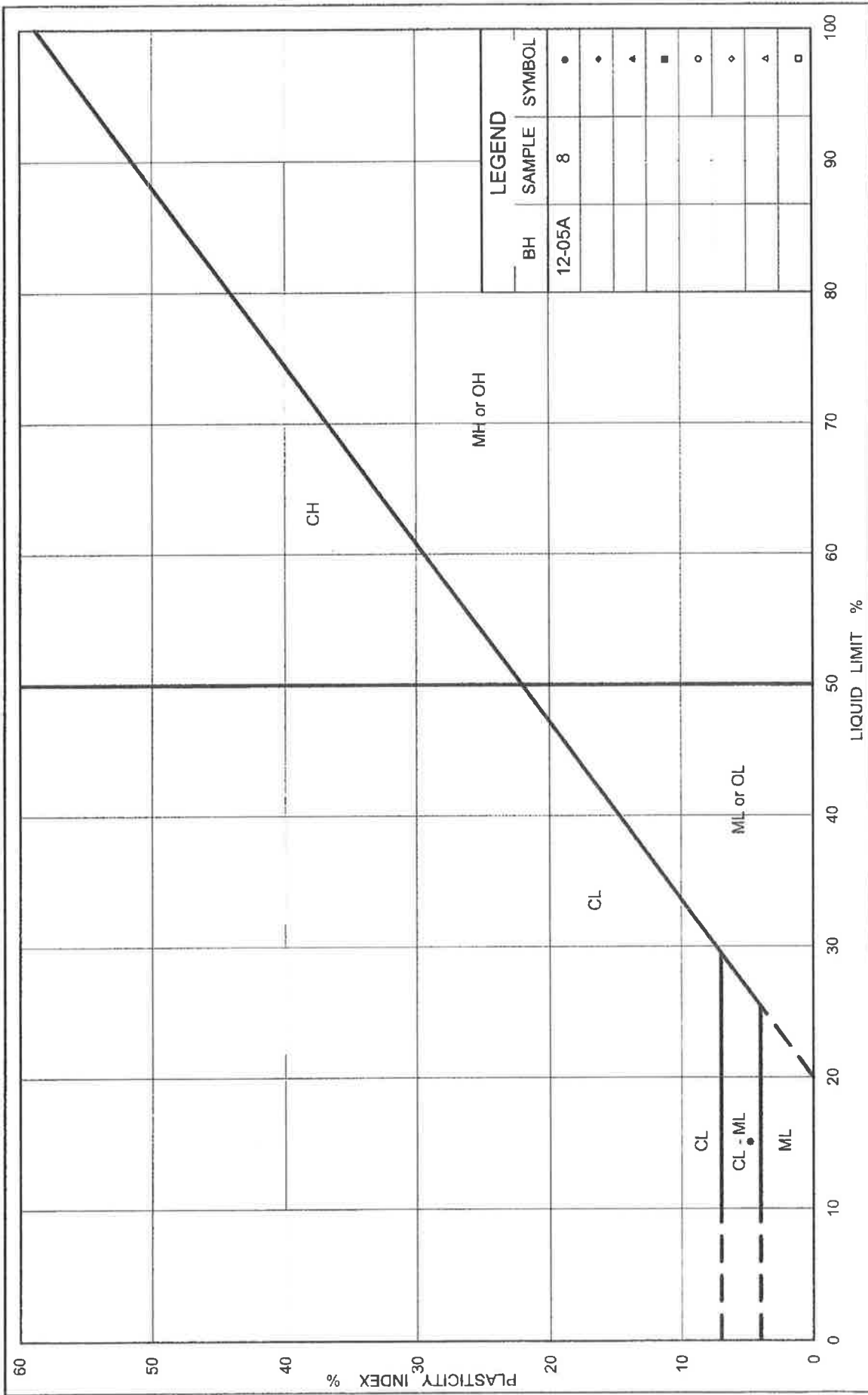
SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
●	12-01A	3	10.70 - 11.10
■	12-05A	8	18.30 - 18.70

Project Number: 12-1170-0057

Checked By: *[Signature]*

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Date: 25-Jan-13



LEGEND		
BH	SAMPLE	SYMBOL
12-05A	8	•
		◆
		▲
		■
		○
		◇
		△
		□

Figure No. B13  
 Project No. 12-1170-0057  
 Checked By: *[Signature]*

**PLASTICITY CHART  
 (CL-ML) Sandy Silt Till**



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**Canada**  
**T: +1 (705) 722 4492**



Mar 06, 2013 - 2:47pm \\dillon.ca\dillon\dfs\Oakville\CAD\cad\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Overall.dwg

# SOUTH INNISFIL CREEK DRAIN AND BRANCHES

## SCHEDULE G

### DRAWINGS

- 1 DRAWING LIST
- 2 OVERALL PLAN - BENCHMARKS
- 3 PLAN 1-1 - SOUTH INNISFIL CREEK DRAIN
- 4 PLAN 1-2 - SOUTH INNISFIL CREEK DRAIN
- 5 PLAN 1-3 - SOUTH INNISFIL CREEK DRAIN
- 6 PLAN 1-4 - SOUTH INNISFIL CREEK DRAIN
- 7 PLAN 1-5 - SOUTH INNISFIL CREEK DRAIN
- 8 PLAN 1-6 - SOUTH INNISFIL CREEK DRAIN
- 9 PLAN 1-7 - SOUTH INNISFIL CREEK DRAIN
- 10 HNYDCZAK OUTLET RELIEF DRAIN
- 11 3RD LINE BRANCH DRAIN
- 12 3RD LINE SPUR DRAIN
- 13 10 SIDEROAD BRANCH DRAIN
- 14 SECTIONS 2-1 - SOUTH INNISFIL CREEK
- 15 SECTIONS 2-2 - SOUTH INNISFIL CREEK
- 16 SECTIONS 2-3 - SOUTH INNISFIL CREEK
- 17 SECTIONS 2-4 - SOUTH INNISFIL CREEK
- 18 SECTIONS 2-5 - SOUTH INNISFIL CREEK
- 19 SECTIONS 2-6 - SOUTH INNISFIL CREEK
- 20 SECTIONS 2-7 - SOUTH INNISFIL CREEK
- 21 SECTIONS 2-8 - SOUTH INNISFIL CREEK
- 22 SECTIONS 2-9 - SOUTH INNISFIL CREEK
- 23 SECTIONS 2-10 - SOUTH INNISFIL CREEK
- 24 SECTIONS 2-11 - SOUTH INNISFIL CREEK
- 25 SECTIONS 2-12 - SOUTH INNISFIL CREEK

### DRAWINGS

- 26 PROFILES 3-1 - SOUTH INNISFIL CREEK STA. -0+650 to 0+000
- 27 PROFILES 3-2 - SOUTH INNISFIL CREEK STA. 0+000 to 0+700
- 28 PROFILES 3-3 - SOUTH INNISFIL CREEK STA. 0+700 to 1+400
- 29 PROFILES 3-4 - SOUTH INNISFIL CREEK STA. 1+400 to 2+100
- 30 PROFILES 3-5 - SOUTH INNISFIL CREEK STA. 2+100 to 2+800
- 31 PROFILES 3-6 - SOUTH INNISFIL CREEK STA. 2+800 to 3+500
- 32 PROFILES 3-7 - SOUTH INNISFIL CREEK STA. 3+500 to 4+200
- 33 PROFILES 3-8 - SOUTH INNISFIL CREEK STA. 4+200 to 4+900
- 34 PROFILES 3-9 - SOUTH INNISFIL CREEK STA. 4+900 to 5+600
- 35 PROFILES 3-10 - SOUTH INNISFIL CREEK STA. 5+600 to 6+300
- 36 PROFILES 3-11 - SOUTH INNISFIL CREEK STA. 6+300 to 7+000
- 37 PROFILES 3-12 - SOUTH INNISFIL CREEK STA. 7+000 to 7+700
- 38 PROFILES 3-13 - SOUTH INNISFIL CREEK STA. 7+700 to 8+400
- 39 PROFILES 3-14 - SOUTH INNISFIL CREEK STA. 8+400 to 9+100
- 40 PROFILES 3-15 - SOUTH INNISFIL CREEK STA. 9+100 to 9+325
- 41 PROFILES 4-1 - HNYDCZAK OUTLET REFIEF STA. 0+000 to 0+700
- 42 PROFILES 5-1 - 3RD LINE BRANCH STA. 0+000 to 0+675
- 43 PROFILES 5-2 - 3RD LINE BRANCH STA. 0+675 to 1+375
- 44 PROFILES 5-3 - 3RD LINE BRANCH STA. 1+375 to 1+750
- 45 PROFILES 6-1 - 3RD LINE SPUR DRAIN STA. 0+000 to 0+675
- 46 PROFILES 6-2 - 3RD LINE SPUR DRAIN STA. 0+675 to 0+800
- 47 PROFILES 7-1 - 10 SIDEROAD BRANCH STA. 0+000 to 0+675
- 48 PROFILES 7-2 - 10 SIDEROAD BRANCH STA. 0+675 to 1+375
- 49 PROFILES 7-3 - 10 SIDEROAD BRANCH STA. 1+375 to 1+525

### DRAWINGS

- 50 PLAN 8-1 - OVERFLOW AREA 1
- 51 DETAILS 8-2 - OVERFLOW AREA 1
- 52 PLAN 8-3 - OVERFLOW AREA 3
- 53 SECTIONS 8-4 - OVERFLOW AREA 3
- 54 DETAILS 8-5 - OVERFLOW AREA 3
- 55 DETAILS 9-1A - FARM ACCESS CULVERTS
- 56 DETAILS 9-1B - FARM ACCESS CULVERTS
- 57 DETAILS 9-1C - FARM ACCESS CULVERTS PILE INFORMATION
- 58 DETAILS 9-1D - FARM ACCESS CULVERTS NOTES
- 59 DETAILS 9-2 - 4th LINE BRIDGE
- 60 DETAILS 9-3 - BRANCH DRAINS ACCESS CULVERTS
- 61 CULVERT TABLES 9-4 - BRANCH DRAINS
- 62 DETAILS 10-1 - GENERAL DETAILS
- 63 DETAILS 10-2 - GENERAL DETAILS

### SCHEDULE " G "

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL  
CREEK DRAIN  
AND BRANCHES**

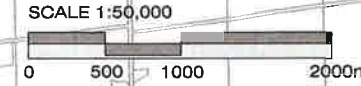
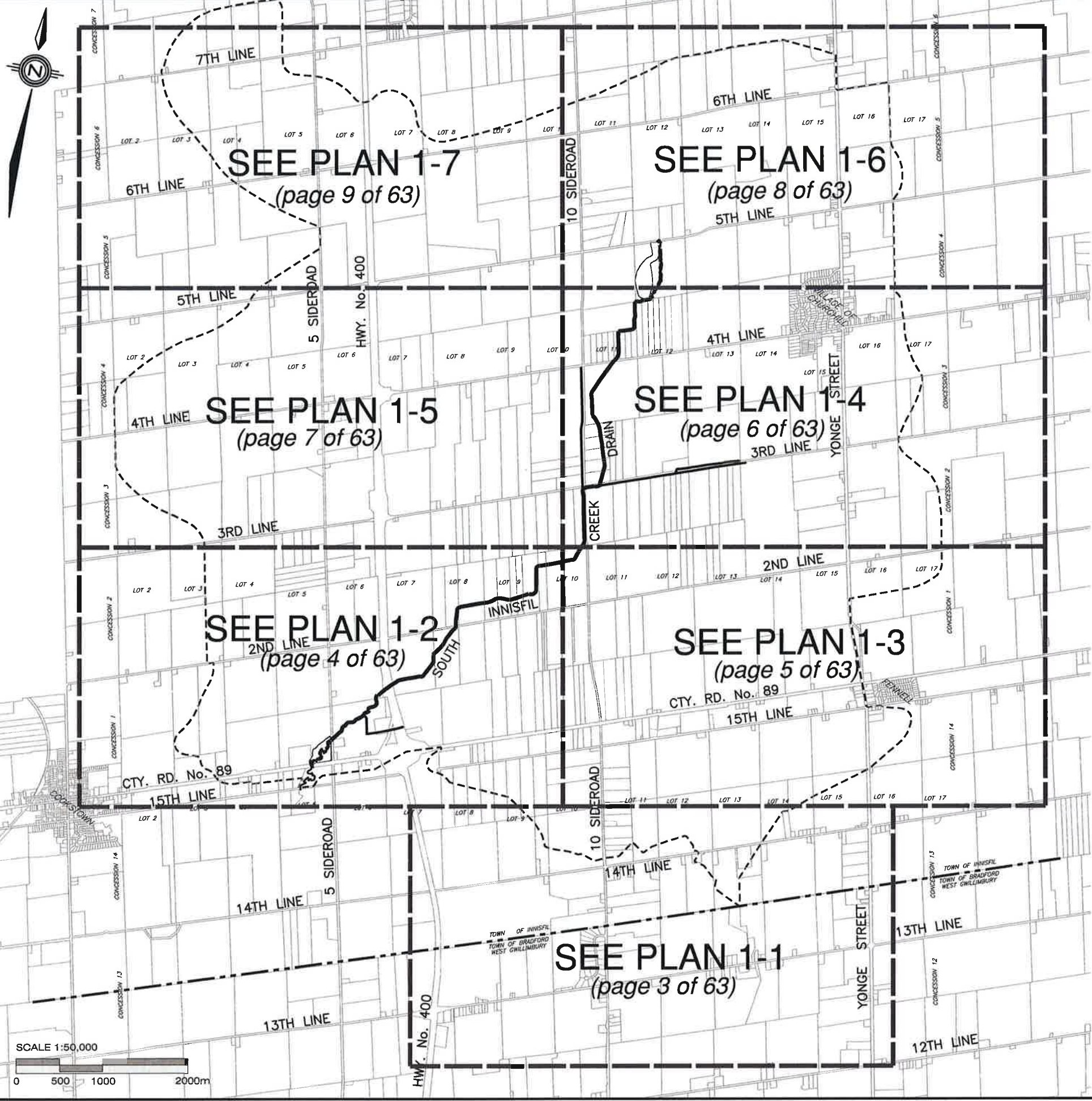
TOWN OF INNISFIL

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**BENCHMARKS**

BM1	TEMPORARY BENCH MARK BM1 (225.85m) TOP & CONC. CURB, SOUTH END OF HWY. 89 BRIDGE OVER INNISFIL DRAIN. SEE PLAN 1-2
BM7	TEMPORARY BENCH MARK BM7 (227.66m) TOP & CONC. CURB, NORTH END OF 2nd LINE BRIDGE OVER INNISFIL DRAIN. SEE PLAN 1-2
BM10	TEMPORARY BENCH MARK BM10 (228.18m) TOP & CONC. CURB, EAST END OF 10th SIDEROAD BRIDGE OVER INNISFIL DRAIN. SEE PLAN 1-4
BM11	TEMPORARY BENCH MARK BM11 (229.03m) TOP & CONC. CURB, NORTH END OF 10th SIDEROAD BRIDGE OVER INNISFIL DRAIN. SEE PLAN 1-4
BM16	TEMPORARY BENCH MARK BM16 (236.98m) TOP & CONC. CURB, SOUTH END OF 5th LINE BRIDGE OVER INNISFIL DRAIN. SEE PLAN 1-6

**LEGEND**

	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
PLAN 1-1	DRAWING REFERENCE NUMBER



**DILLON  
CONSULTING**

OVERALL PLAN

DRAWING SCALES BASED  
ON A 11"x17" SHEET

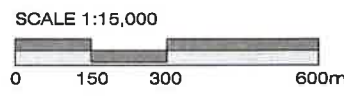
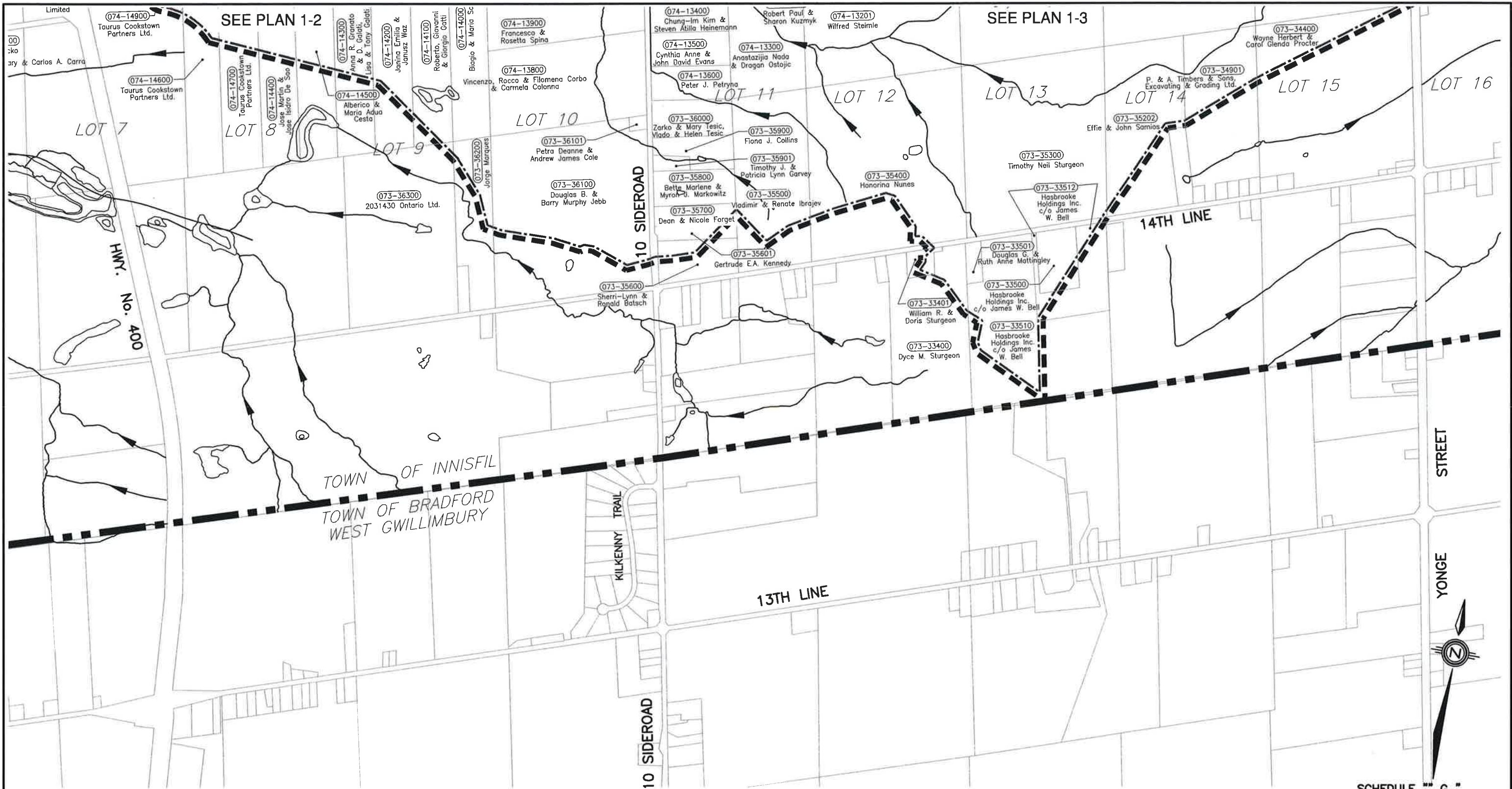
**SCHEDULE " G "**

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL  
CREEK DRAIN  
AND BRANCHES**

TOWN OF INNISFIL

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May 16, 2013 - 4:07pm \\dillon.ca\DILLON\_DFS\Oakville\CAD\cad\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Drain Dwg 1-1.dwg



LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
PLAN 1-1	DRAWING REFERENCE NUMBER
	OTHER MUNICIPAL DRAINS
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED



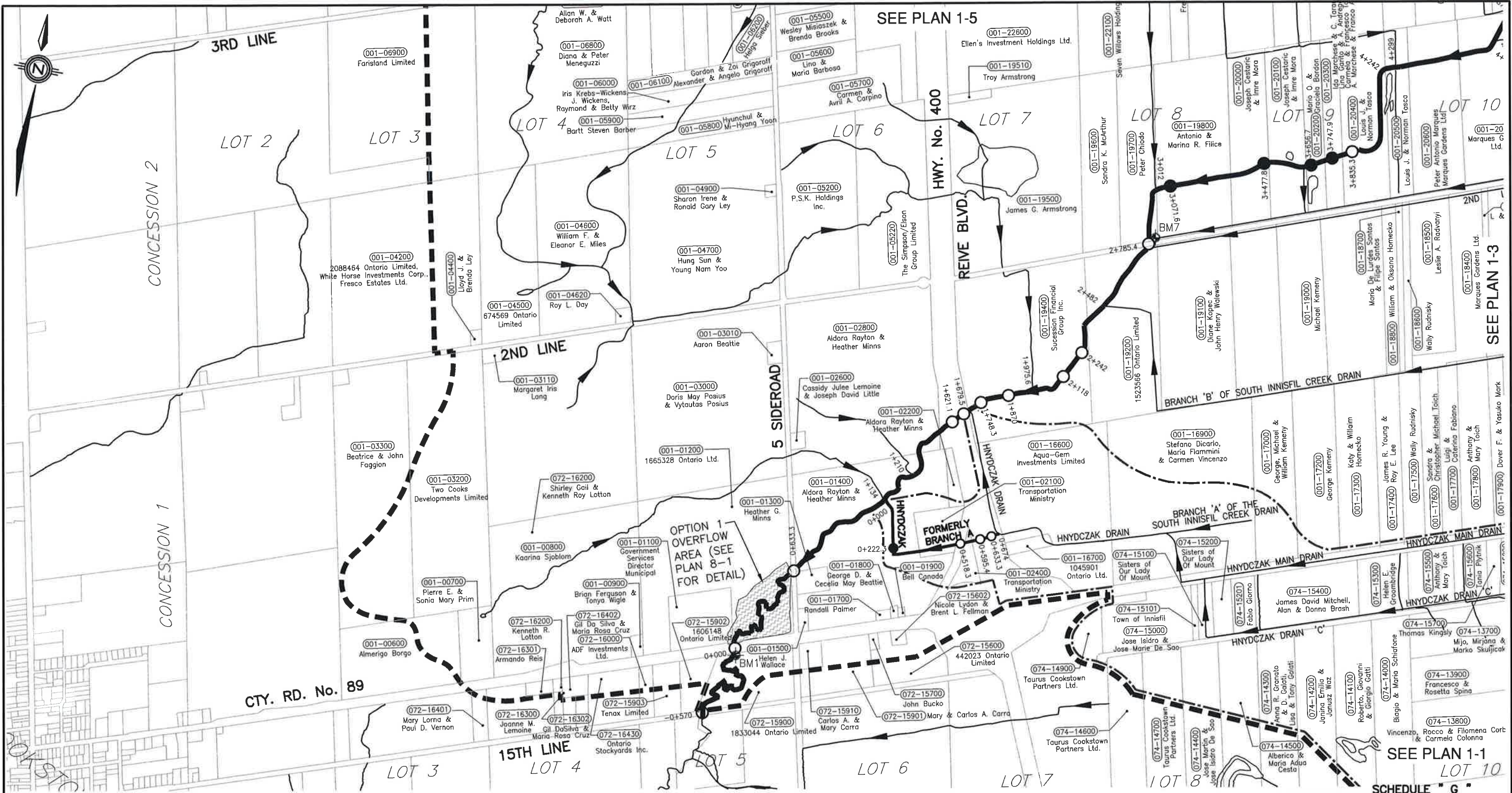
**DILLON CONSULTING**

PLAN 1-1

DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
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SCHEDULE "G"



BM1 TEMPORARY BENCH MARK BM1 (225.85m)  
 TOP € CONC. CURB, SOUTH END OF  
 HWY. 89 BRIDGE OVER INNISFIL DRAIN  
  
 BM7 TEMPORARY BENCH MARK BM7 (227.66m)  
 TOP € CONC. CURB, NORTH END OF  
 2nd LINE BRIDGE OVER INNISFIL DRAIN  
  
 SCALE 1:15,000

LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	PLAN 1-1 DRAWING REFERENCE NUMBER
	OTHER MUNICIPAL DRAINS
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED



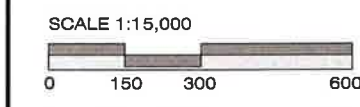
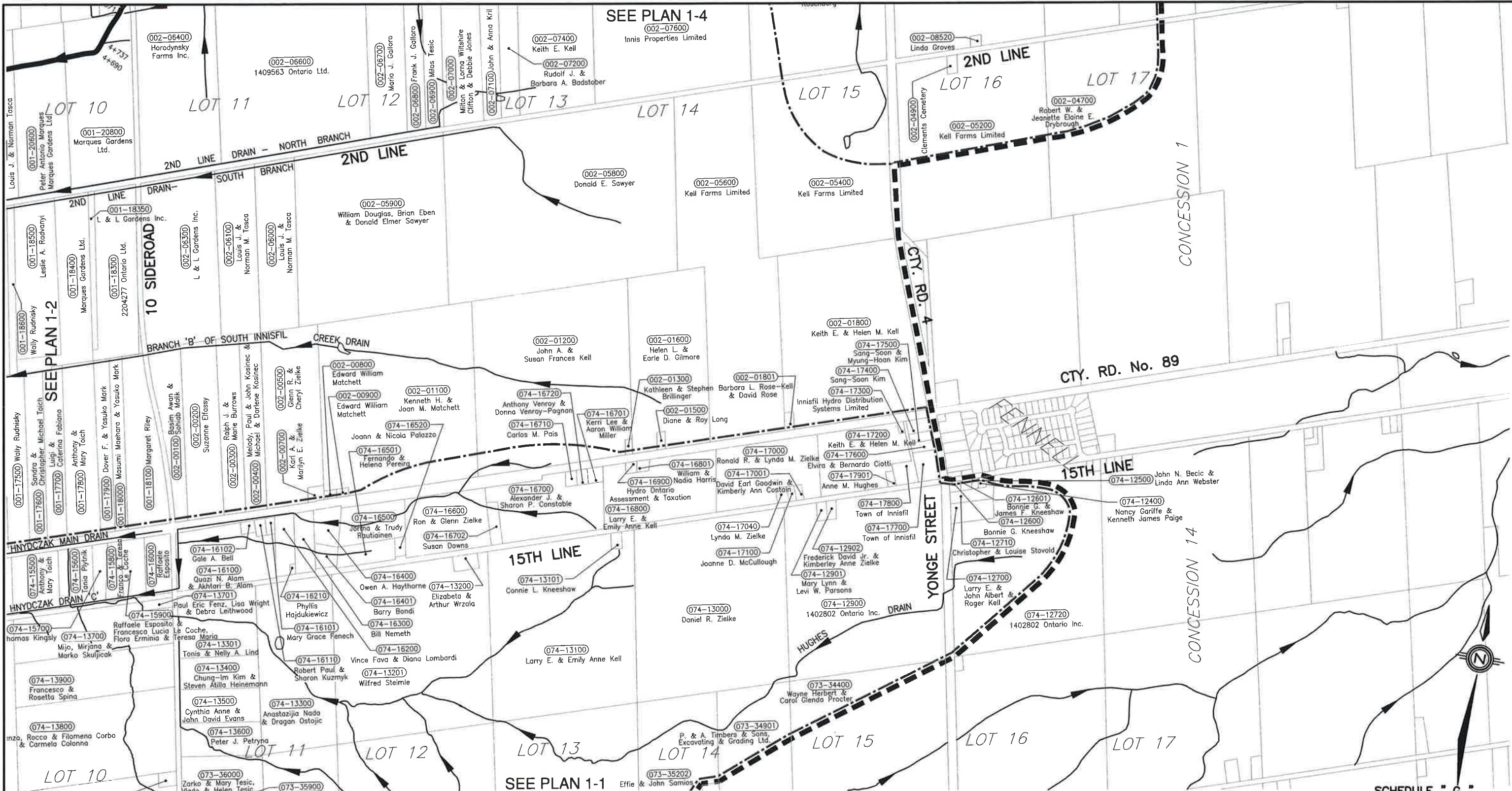
**DILLON CONSULTING**  
 PLAN 1-2  
 DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**  
 TOWN OF INNISFIL  
 1 MARCH 2013  
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SEE PLAN 1-1  
LOT 10  
SCHEDULE "G"

SEE PLAN 1-3

SEE PLAN 1-5



LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	DRAWING REFERENCE NUMBER
	OTHER MUNICIPAL DRAINS
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED



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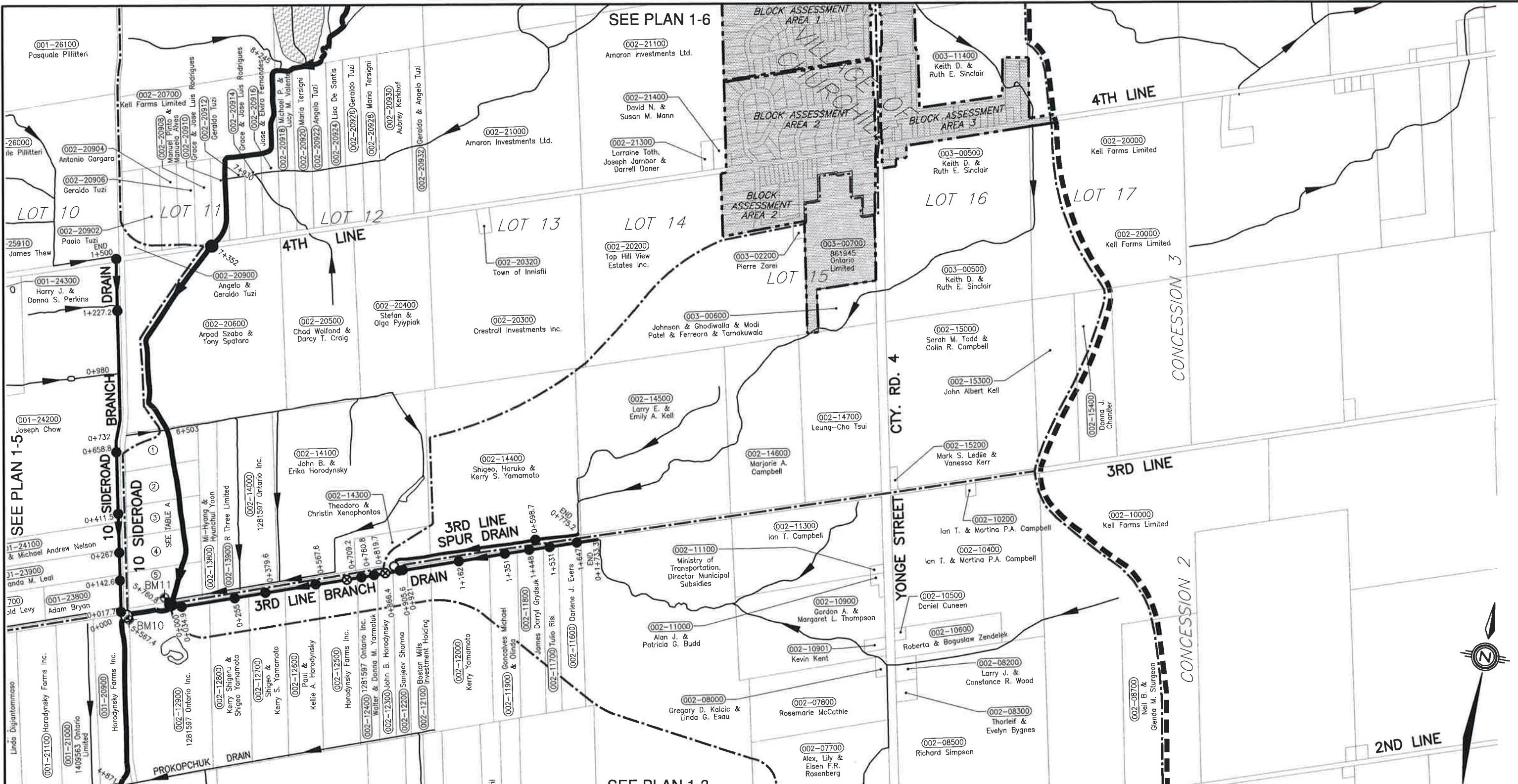
PLAN 1-3

DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
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SCHEDULE "G"





TEMPORARY BENCH MARK  
 BM10 (228.18m) TOP € CONC.  
 CURB, EAST END OF 10th SIDEROAD  
 BRIDGE OVER INNISFIL DRAIN  
 TEMPORARY BENCH MARK  
 BM11 (229.03m) TOP € CONC.  
 CURB, NORTH END OF 10th  
 SIDEROAD BRIDGE OVER  
 INNISFIL DRAIN

SCALE 1:15,000

**TABLE A**

No.	ROLL No.	OWNER NAMES
1	002-13300	Christina Bova & Susan Liberatore
2	002-13400	Gina Norrie
3	002-13500	Michael J. & Brenda J. McCarthy
4	002-13600	Eugenio Carbone & Iris Curtis
5	002-13700	Lubica & Danny Martinovski, Peter & Diana Efstathiadis

**LEGEND**

- SOUTH INNISFIL CREEK DRAIN
- MUNICIPAL BRANCH DRAINS
- SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
- TOWNSHIP BOUNDARY
- DRAWING REFERENCE NUMBER
- OTHER MUNICIPAL DRAINS
- NATURAL TRIBUTARIES
- BRANCH DRAIN WATERSHED
- EXISTING BRIDGE
- BRIDGE TO BE REPLACED
- BRIDGE TO BE LOWERED



**DILLON CONSULTING**

PLAN 1-4

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE "G"**

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

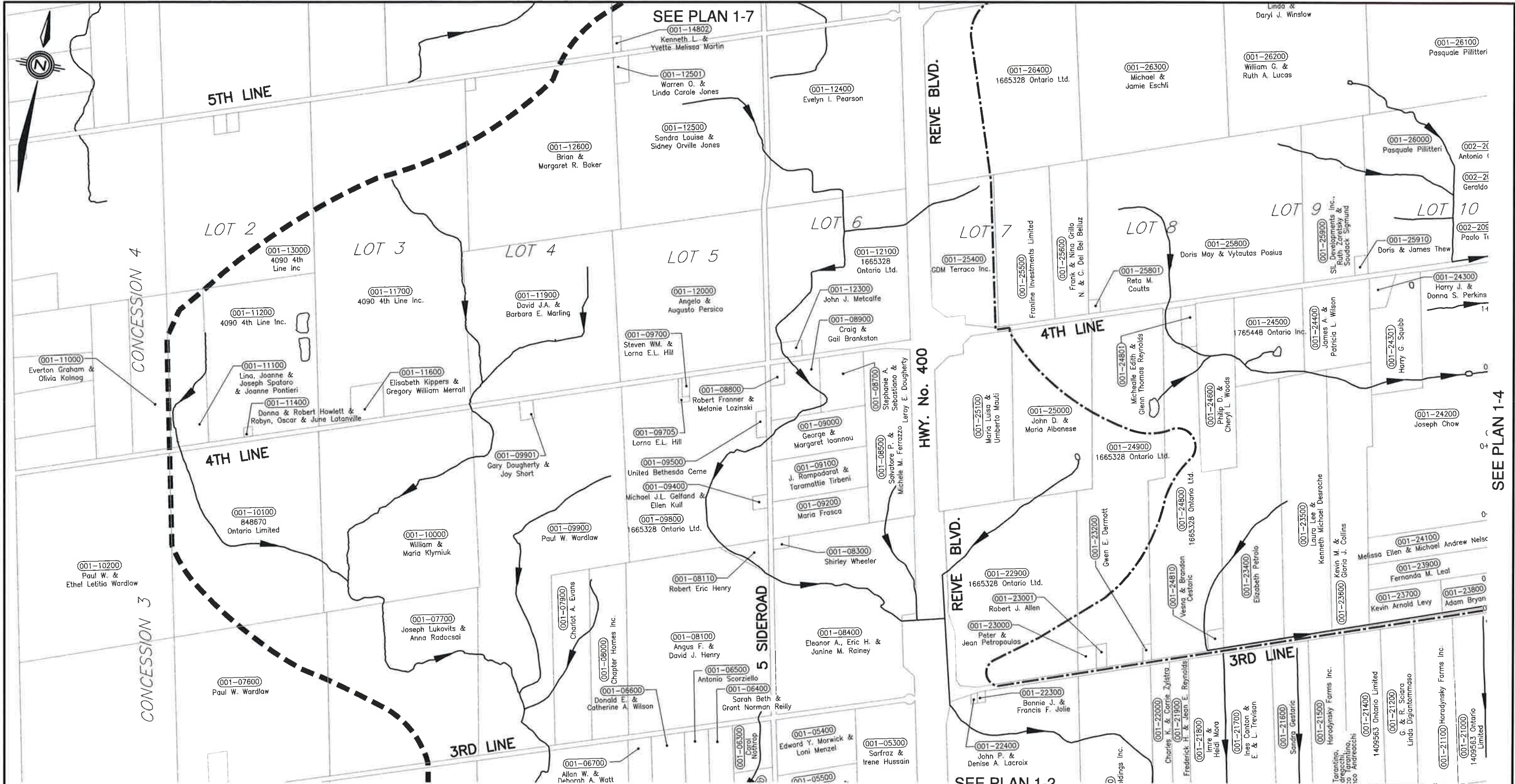
TOWN OF INNISFIL

1 MARCH 2013

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May 16, 2013 - 4:16pm \\dillon\_cad\dfs\Oakville\CAD\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Drain Dwg 1-5.dwg

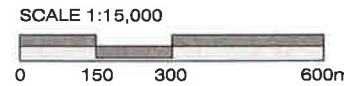


SEE PLAN 1-7

HWY. No. 400

SEE PLAN 1-2

SEE PLAN 1-4



LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	PLAN 1-1 DRAWING REFERENCE NUMBER
	OTHER MUNICIPAL DRAINS
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED



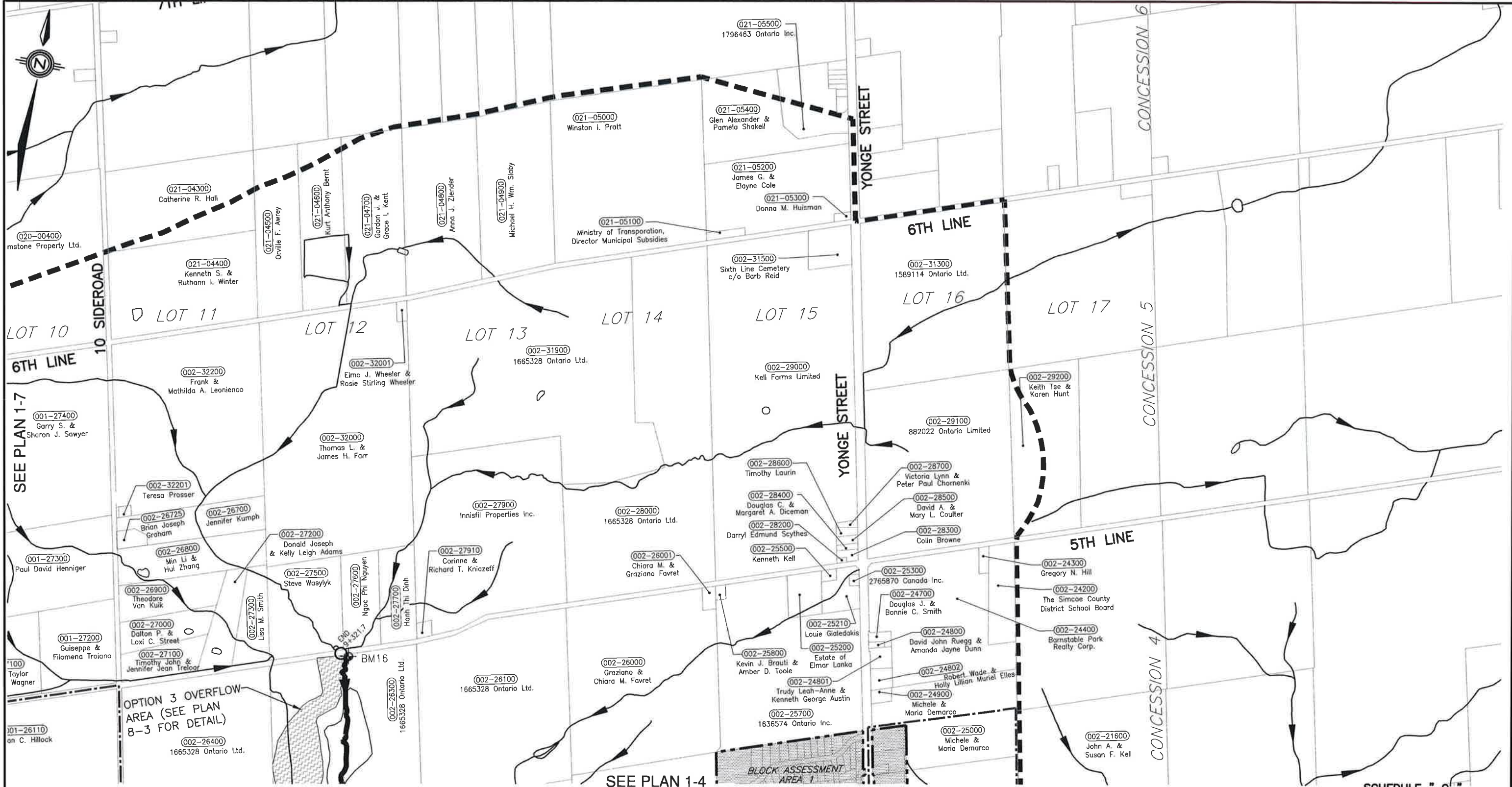
**DILLON CONSULTING**

PLAN 1-5  
DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE	
<b>SOUTH INNISFIL CREEK DRAIN AND BRANCHES</b>	
TOWN OF INNISFIL	
1 MARCH 2013	
PROJECT No. 05-4787	
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SCHEDULE "G"

May 16, 2013 - 4:17pm \\dillon.ca\dillon\dfs\Oakville\CAD\cad\2005\05 4787 South Innisfil Creek Drain\02-Sheets\054787 Drain Dwg 1-6.dwg



BM16  
 TEMPORARY BENCH MARK BM16 (236.98m)  
 TOP € CONC. CURB, SOUTH END OF  
 5th LINE BRIDGE OVER INNISFIL DRAIN



LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	PLAN 1-1 DRAWING REFERENCE NUMBER
	DRAIN NAME
	OTHER MUNICIPAL DRAINS
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED



**DILLON**  
 CONSULTING

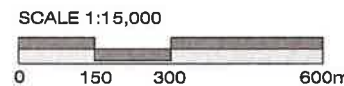
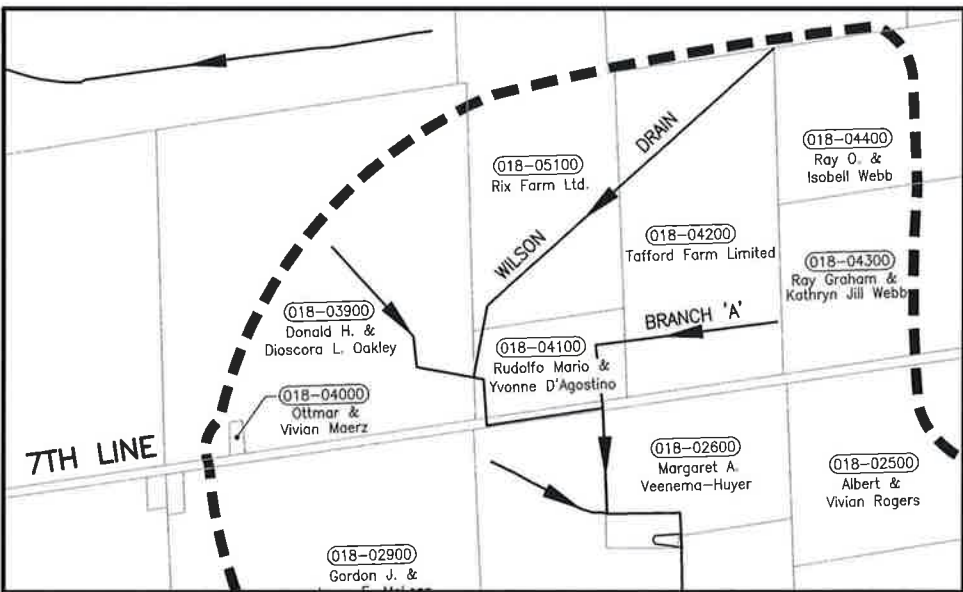
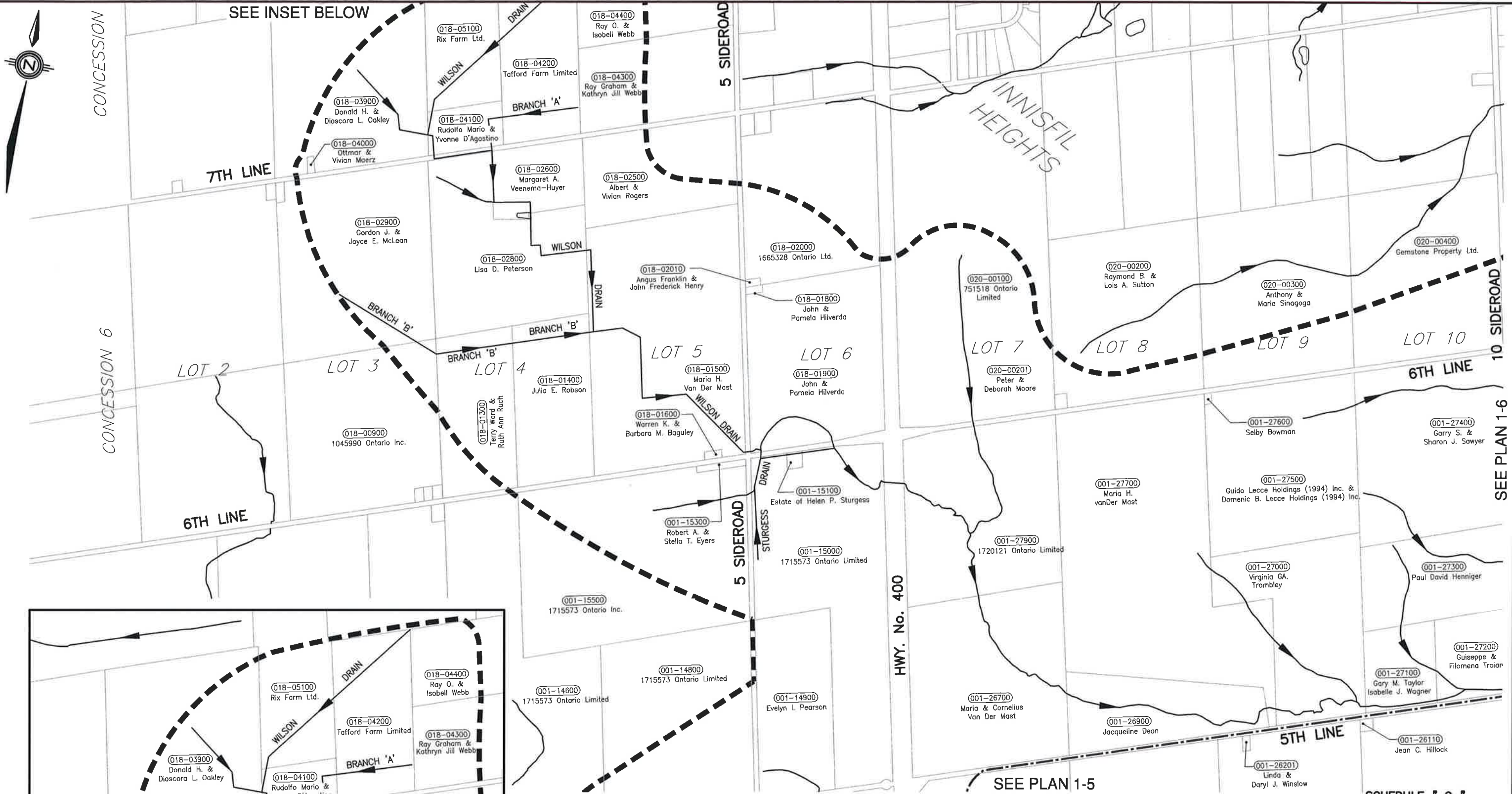
PLAN 1-6

DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
1 MARCH 2013	
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SCHEDULE "G"

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LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	PLAN 1-1 DRAWING REFERENCE NUMBER
	DRAIN NAME
	OTHER MUNICIPAL DRAINS
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED



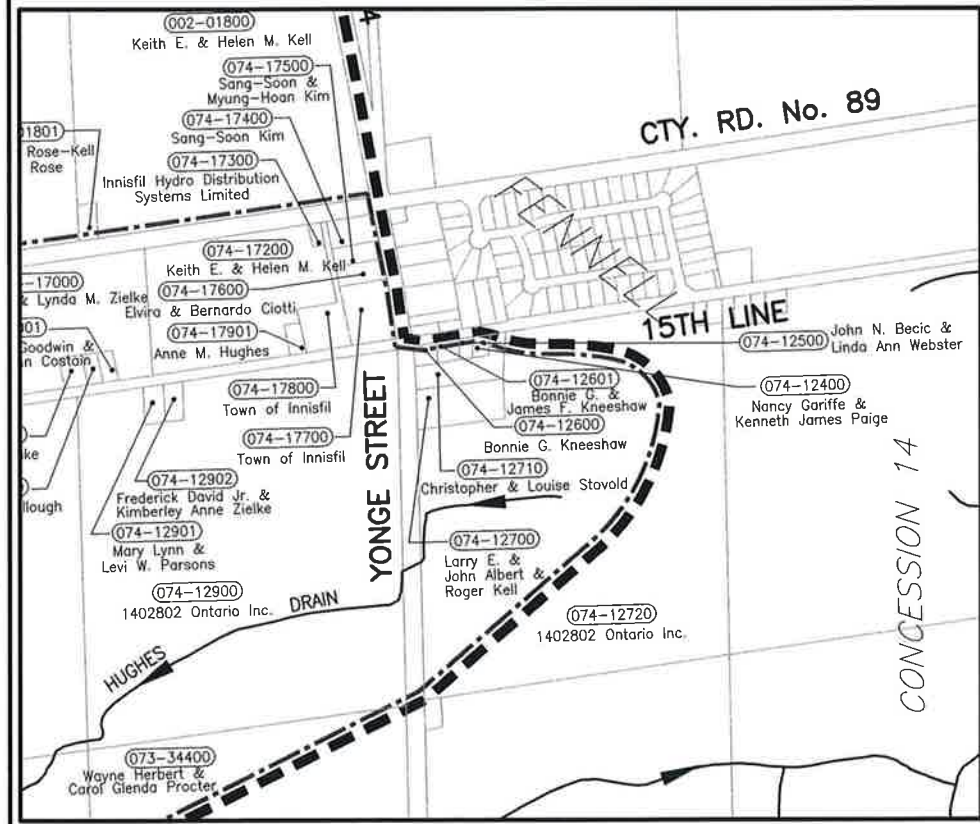
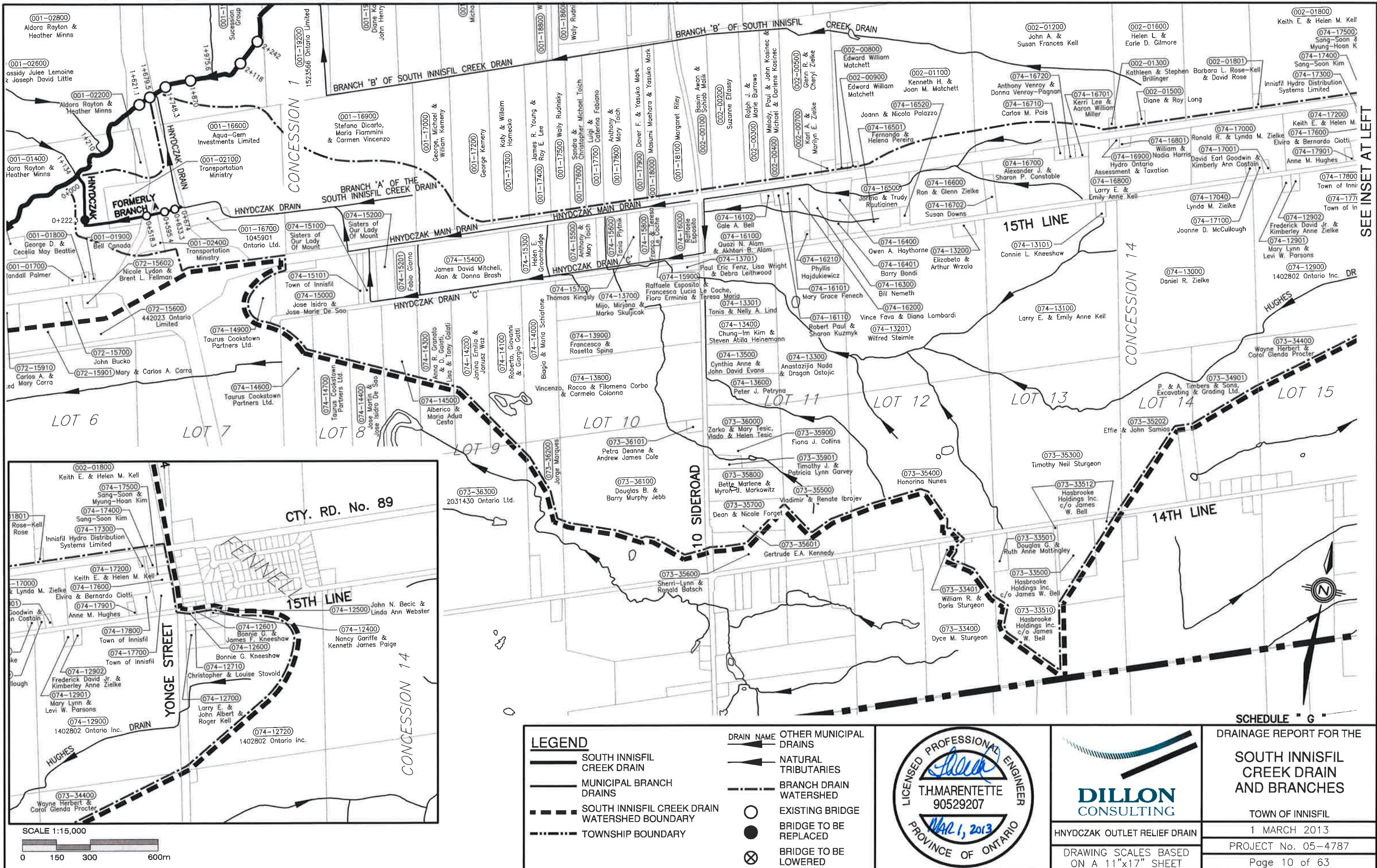
**DILLON CONSULTING**  
PLAN 1-7  
DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE "G"	
DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
1 MARCH 2013	
PROJECT No. 05-4787	
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SEE PLAN 1-6

SEE PLAN 1-5

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LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	DRAIN NAME
	OTHER MUNICIPAL DRAINS
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED



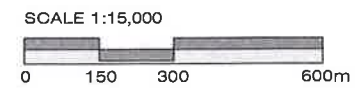
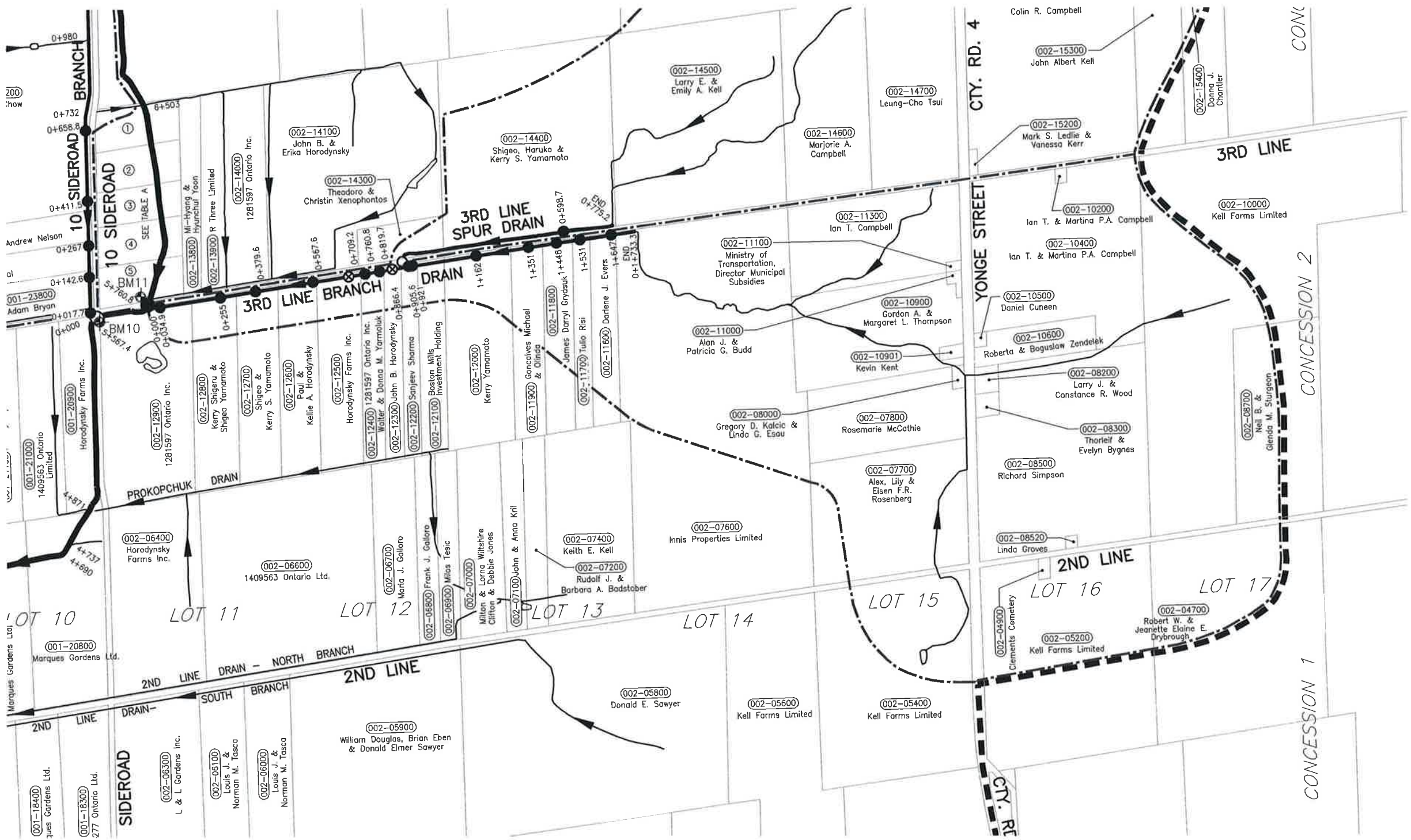
**DILLON CONSULTING**

HNYDCZAK OUTLET RELIEF DRAIN

DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE "G"	
DRAINAGE REPORT FOR THE SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
1 MARCH 2013	
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SEE INSET AT LEFT



LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	OTHER MUNICIPAL DRAINS
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED

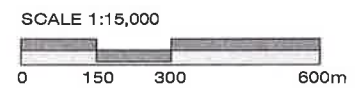
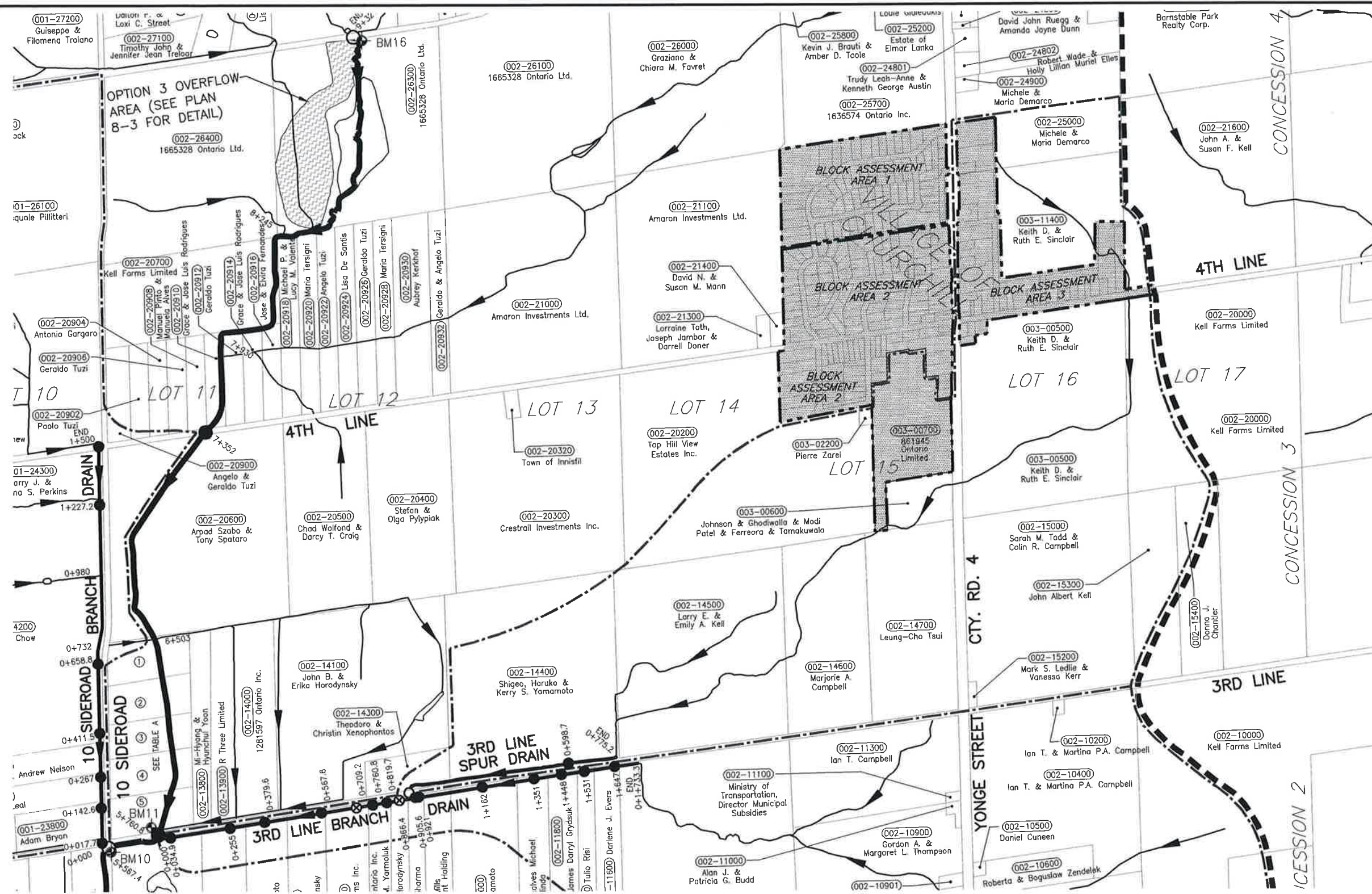


**DILLON CONSULTING**

**3RD LINE BRANCH DRAIN**

DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE " G "	
DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
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LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	DRAIN NAME
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED



**DILLON CONSULTING**

**3RD LINE SPUR DRAIN**

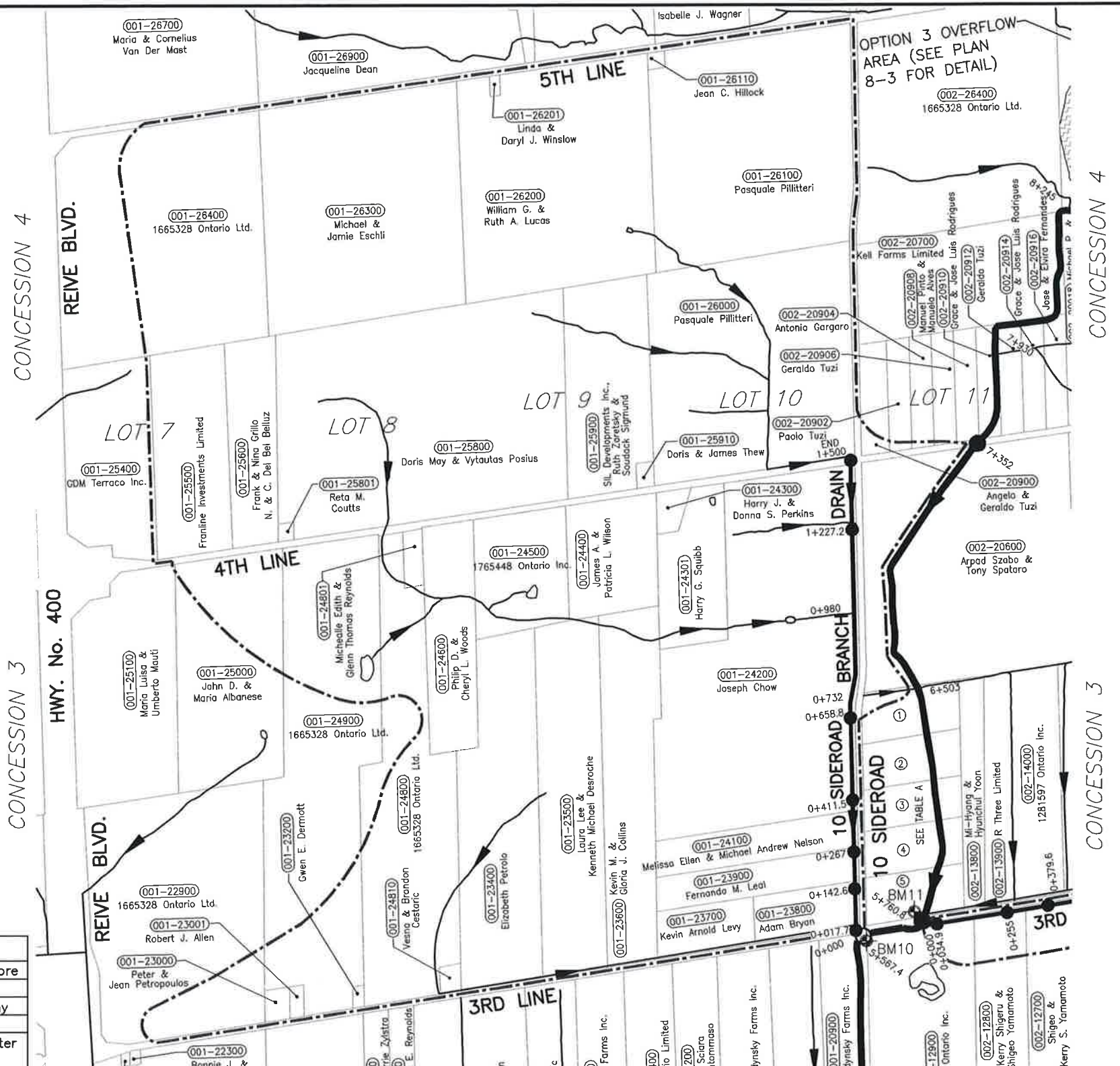
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**SCHEDULE " G "**

**DRAINAGE REPORT FOR THE SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL

1 MARCH 2013
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**TABLE A**

No.	ROLL No.	OWNER NAMES
1	002-13300	Christina Bova & Susan Liberatore
2	002-13400	Gina Norrie
3	002-13500	Michael J. & Brenda J. McCarthy
4	002-13600	Eugenio Carbone & Iris Curtis
5	002-13700	Lubica & Danny Martinovski, Peter & Diana Efstathiadis

**BM10** TEMPORARY BENCH MARK BM10 (228.18m)  
 TOP € CONC. CURB, EAST END OF 10th  
 SIDEROAD BRIDGE OVER INNISFIL DRAIN  
  
**BM11** TEMPORARY BENCH MARK BM11 (229.03m)  
 TOP € CONC. CURB, NORTH END OF 10th  
 SIDEROAD BRIDGE OVER INNISFIL DRAIN  
  
 SCALE 1:15,000

**LEGEND**

	SOUTH INNISFIL CREEK DRAIN		OTHER MUNICIPAL DRAINS
	MUNICIPAL BRANCH DRAINS		NATURAL TRIBUTARIES
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY		BRANCH DRAIN WATERSHED
	TOWNSHIP BOUNDARY		EXISTING BRIDGE
			BRIDGE TO BE REPLACED
			BRIDGE TO BE LOWERED



**DILLON CONSULTING**

10 SIDEROAD BRANCH DRAIN

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL

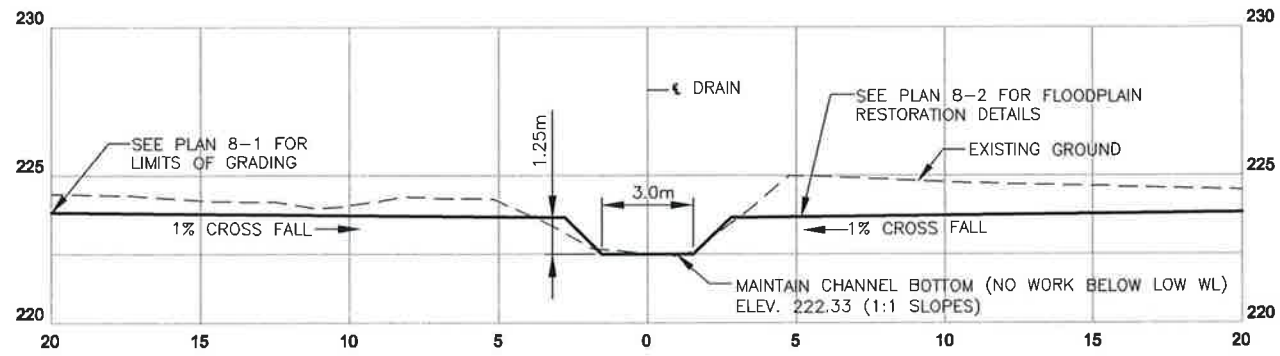
1 MARCH 2013

PROJECT No. 05-4787

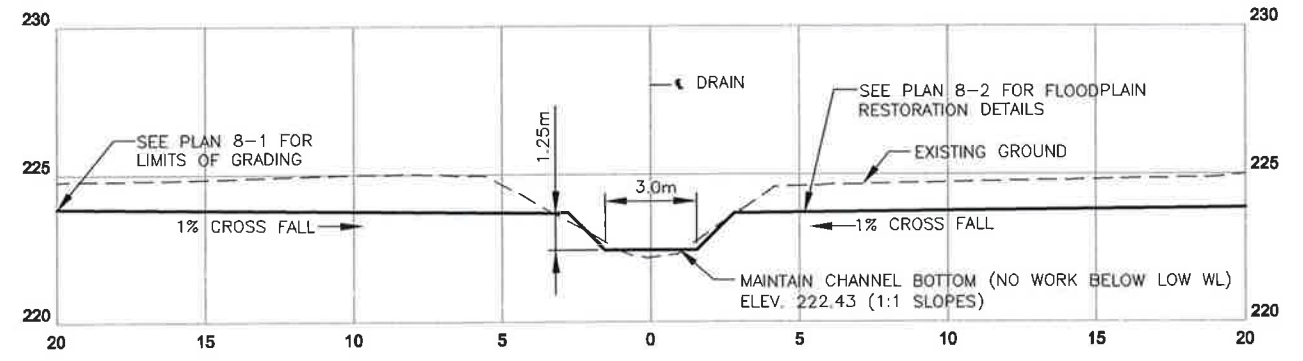
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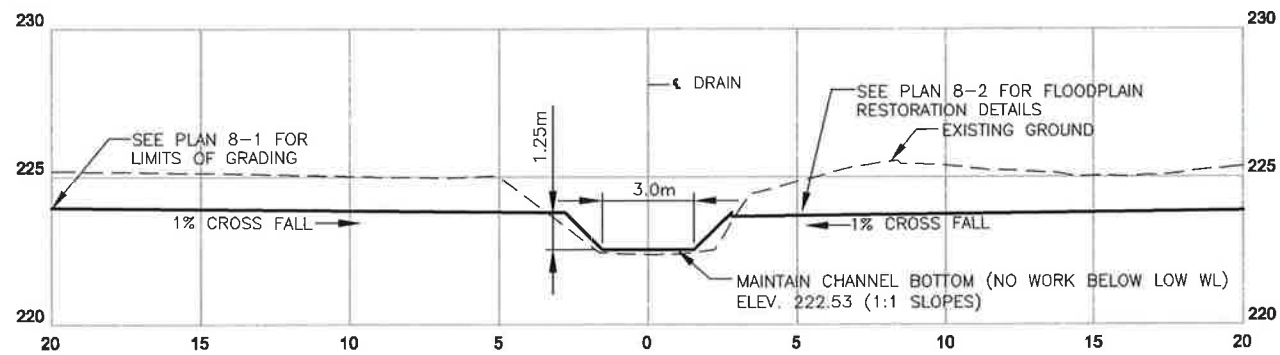
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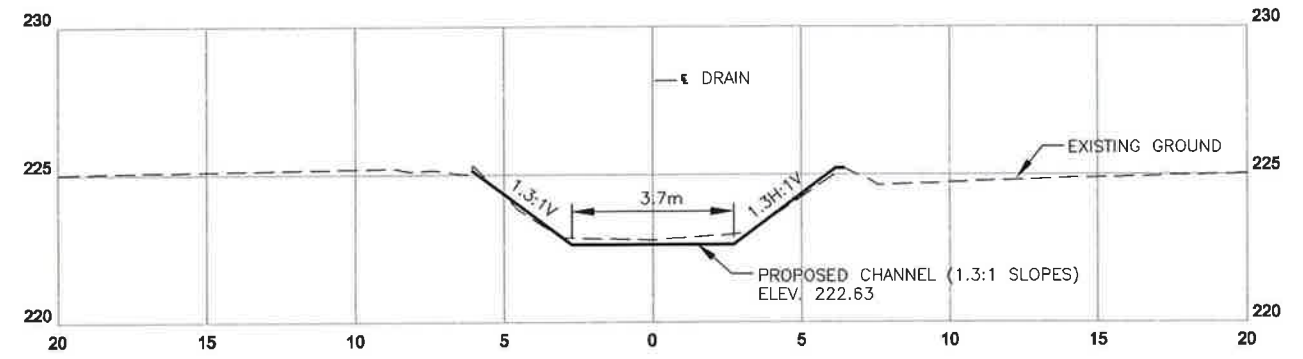
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**STATION 0+300**



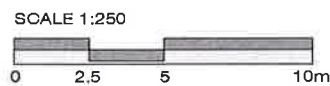
**STATION 0+500**



**STATION 0+700**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM

SCHEDULE " G "



**DILLON CONSULTING**

**SECTIONS 2-1**

DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

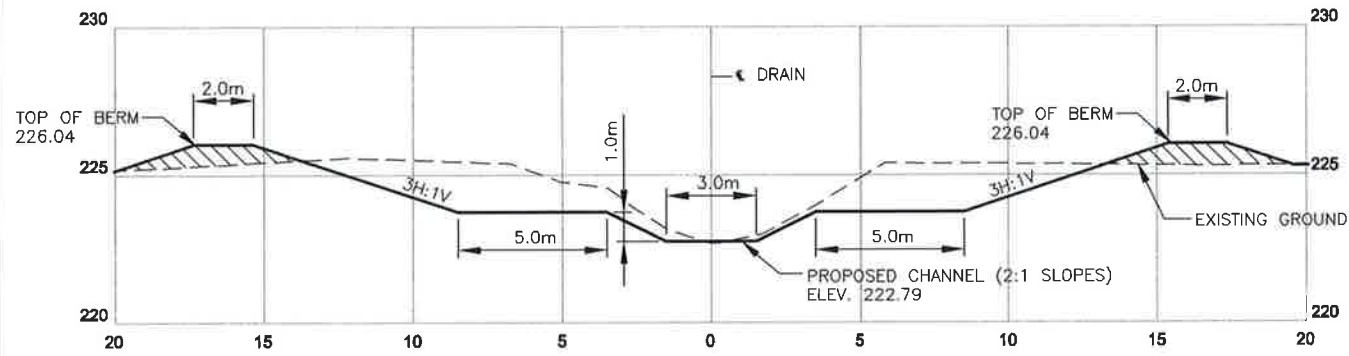
TOWN OF INNISFIL

1 MARCH 2013

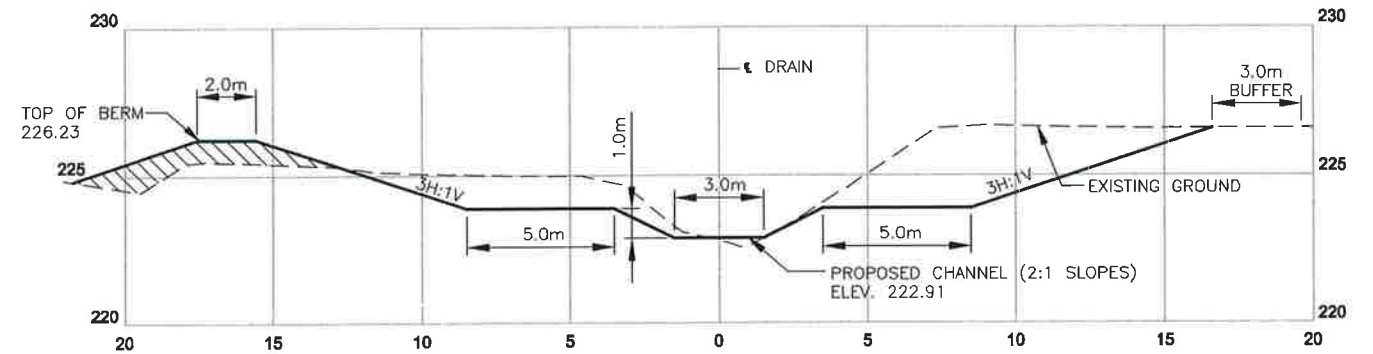
PROJECT No. 05-4787

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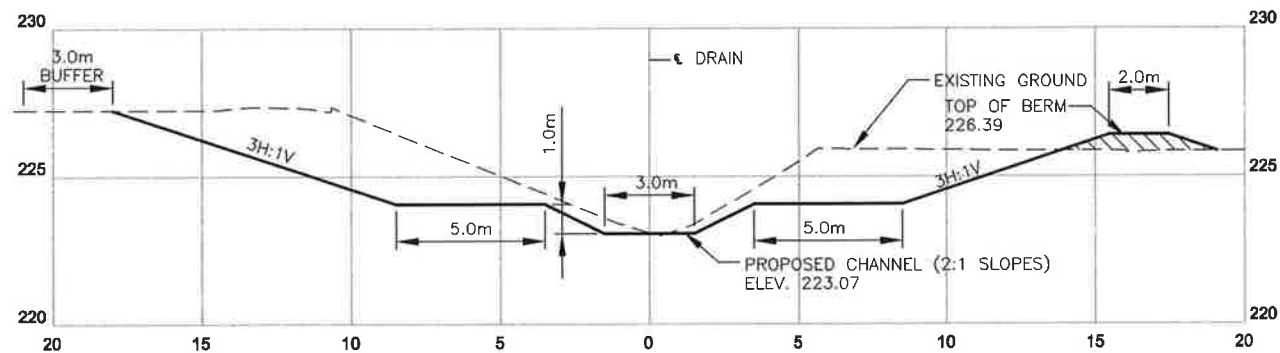
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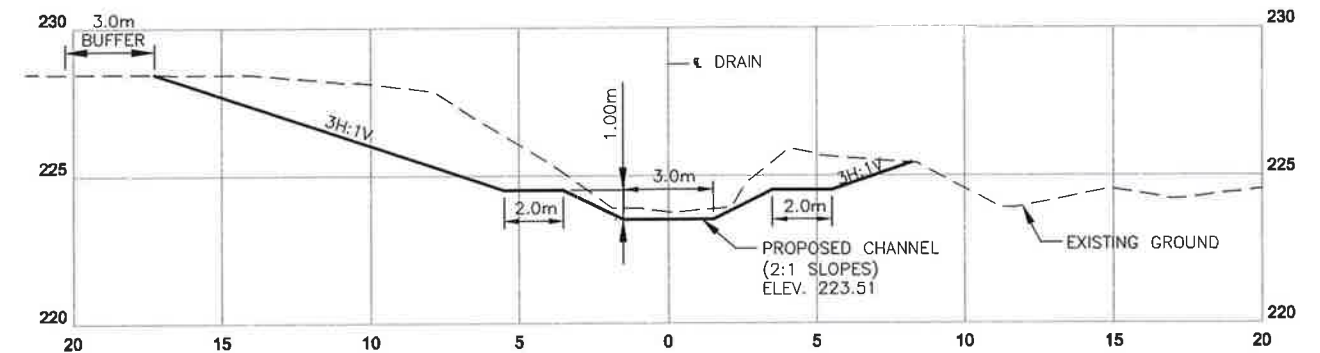
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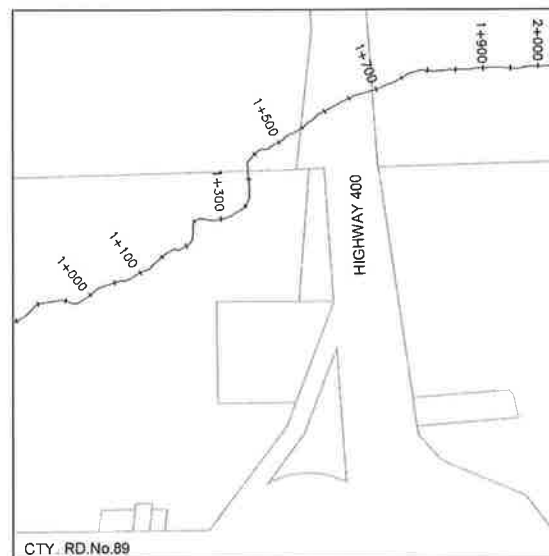
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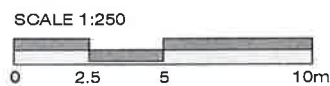
**STATION 1+500**



**STATION 1+700**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM



**DILLON CONSULTING**

**SECTIONS 2-2**

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

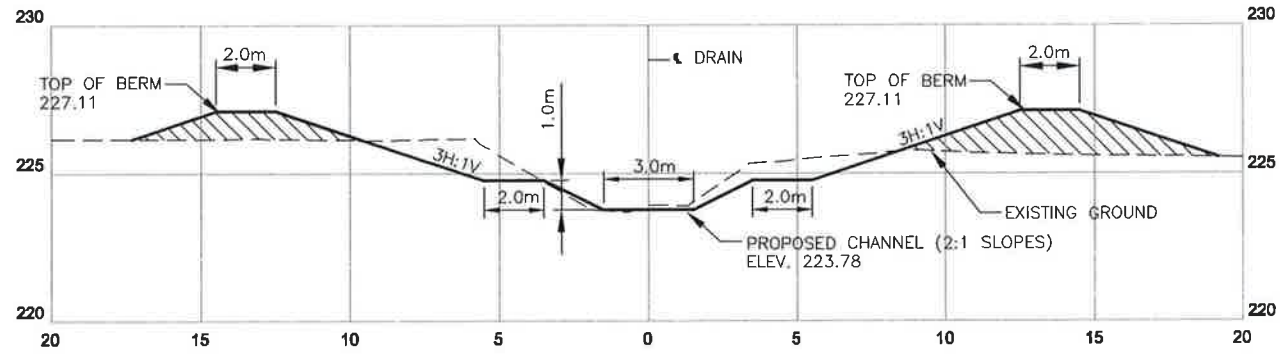
TOWN OF INNISFIL

1 MARCH 2013

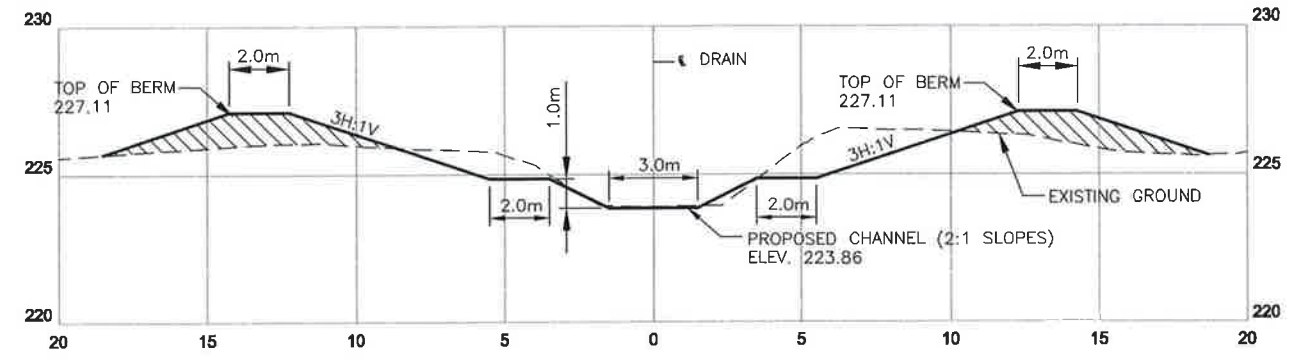
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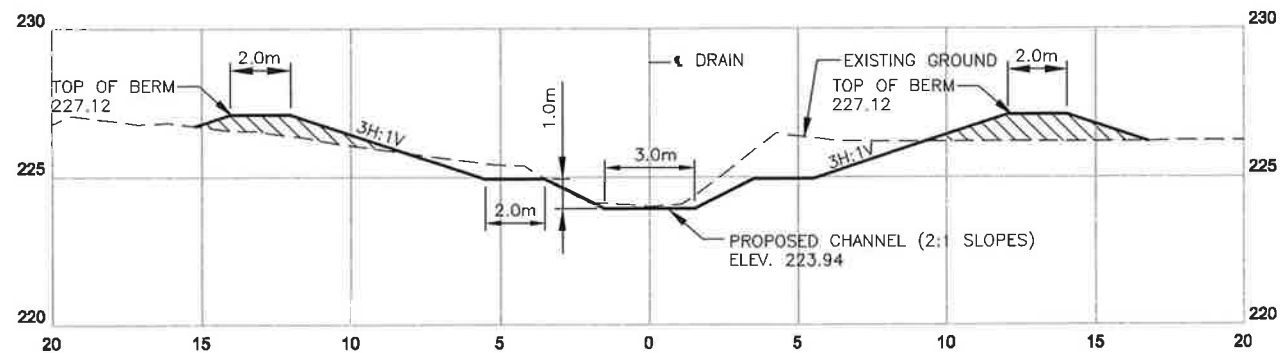
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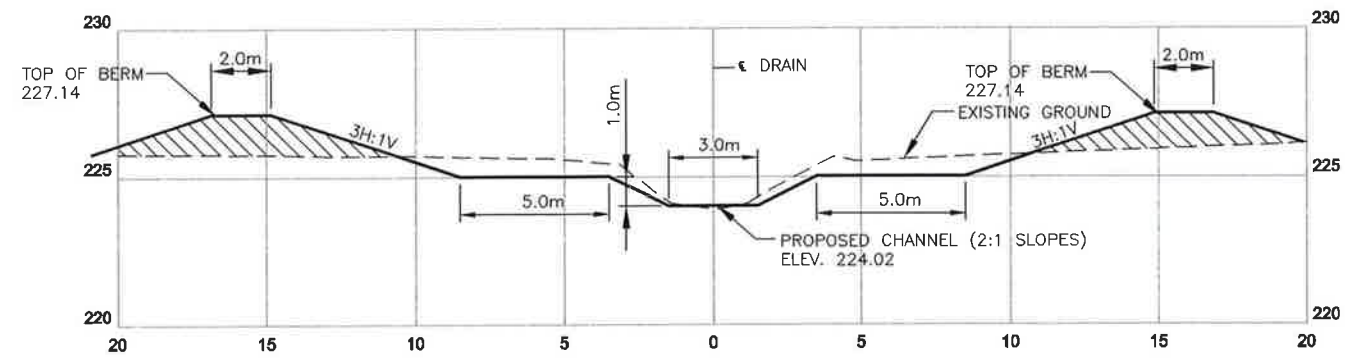
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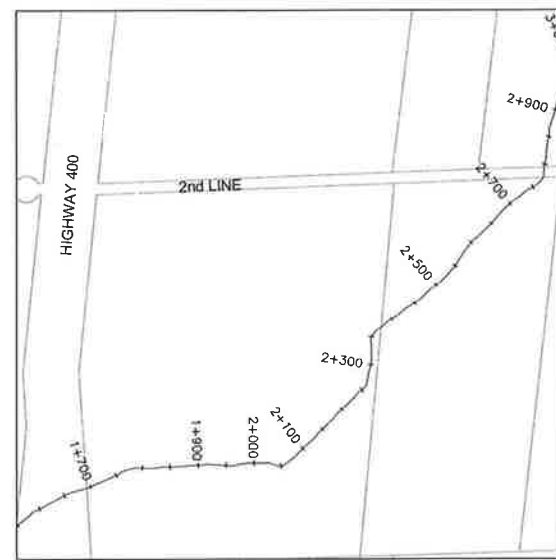
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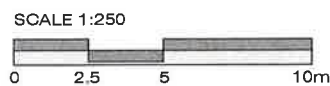
**STATION 2+300**



**STATION 2+500**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM



**DILLON CONSULTING**

**SECTIONS 2-3**

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

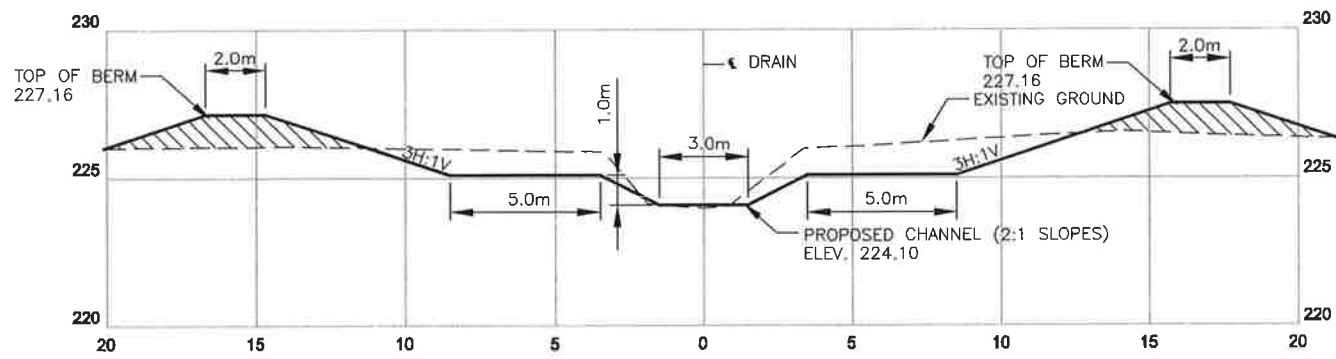
TOWN OF INNISFIL

1 MARCH 2013

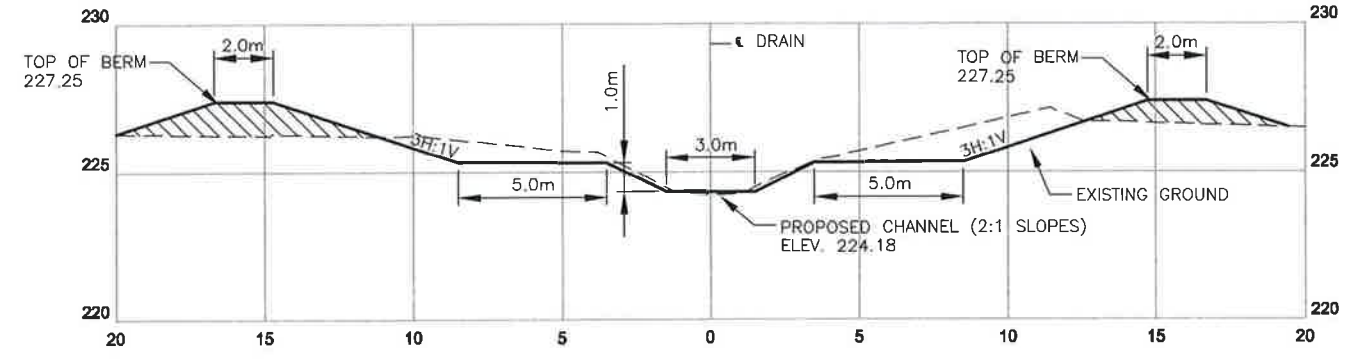
PROJECT No. 05-4787

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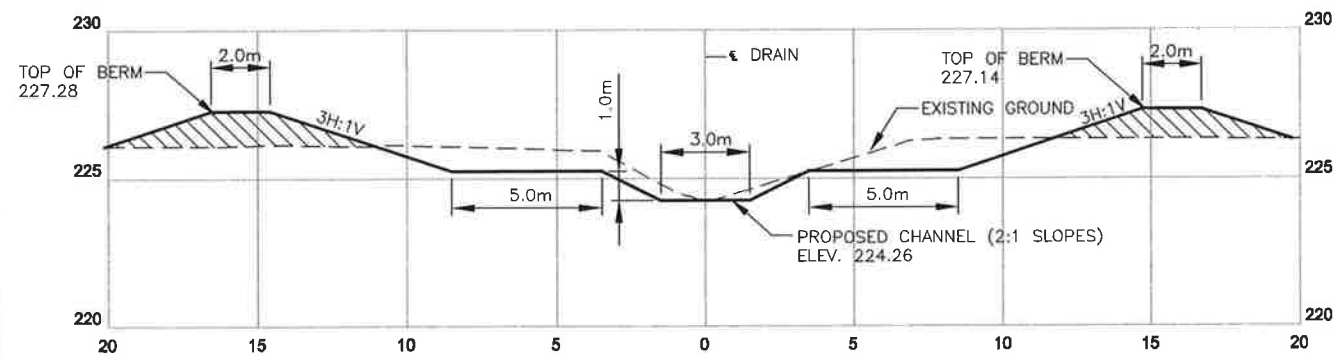
Mar 06, 2013 - 3:07pm - \\dillon.ca\DILLON\_DFS\Oakville\CAD\2005\05\_4787\_South\_Innisfill\_Creek\_Drain\2012\_Update\03-Drain\02-Sheets\054787\_Sections.dwg



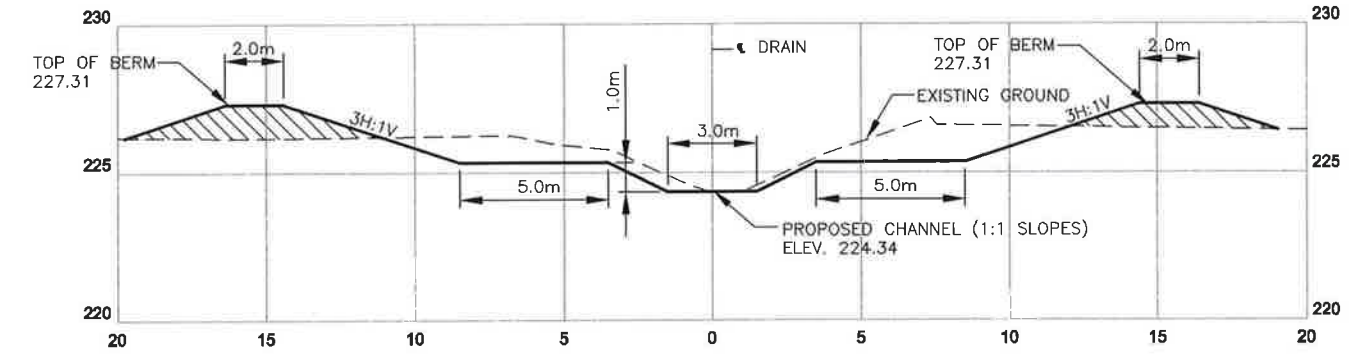
**STATION 2+700**



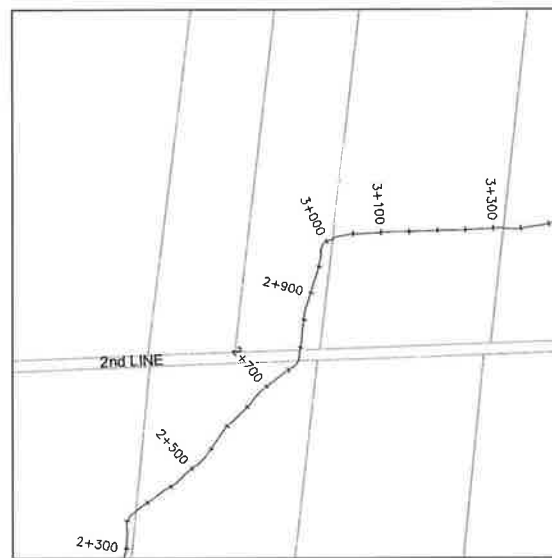
**STATION 2+900**



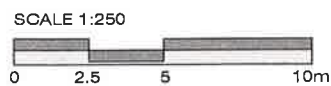
**STATION 3+100**



**STATION 3+300**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM

SCHEDULE " G "



**DILLON CONSULTING**

**SECTIONS 2-4**

DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE

**SOUTH INNISFILL CREEK DRAIN AND BRANCHES**

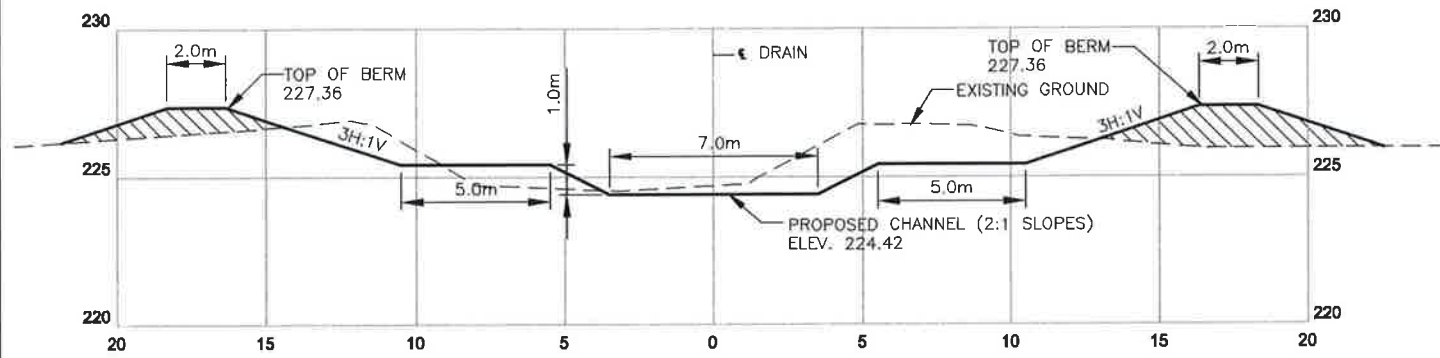
TOWN OF INNISFILL

1 MARCH 2013

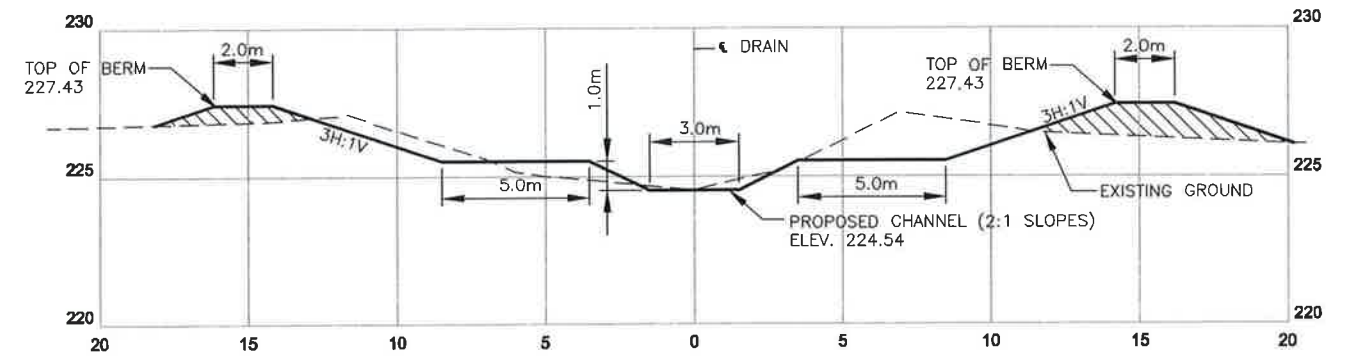
PROJECT No. 05-4787

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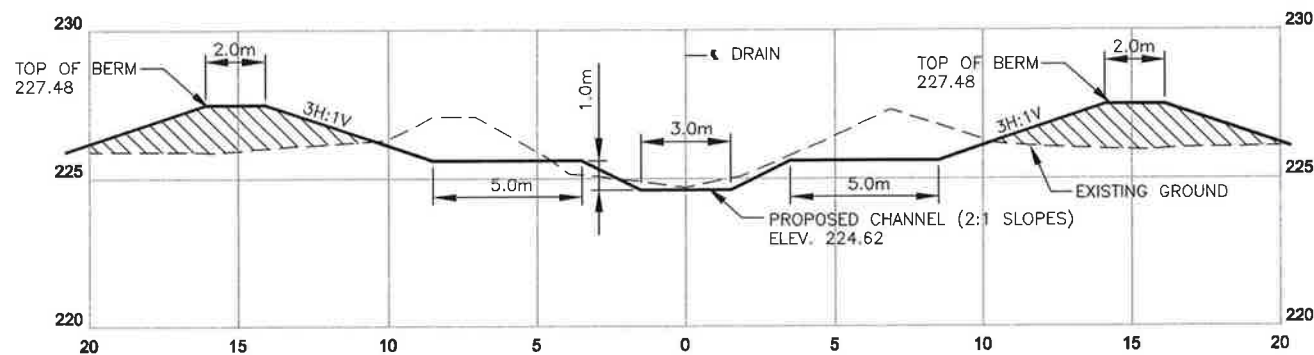
Mar 06, 2013 - 3:07pm \\dillon.ca\DILLON\_DFS\Oakville\CAD\cad\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Sections.dwg



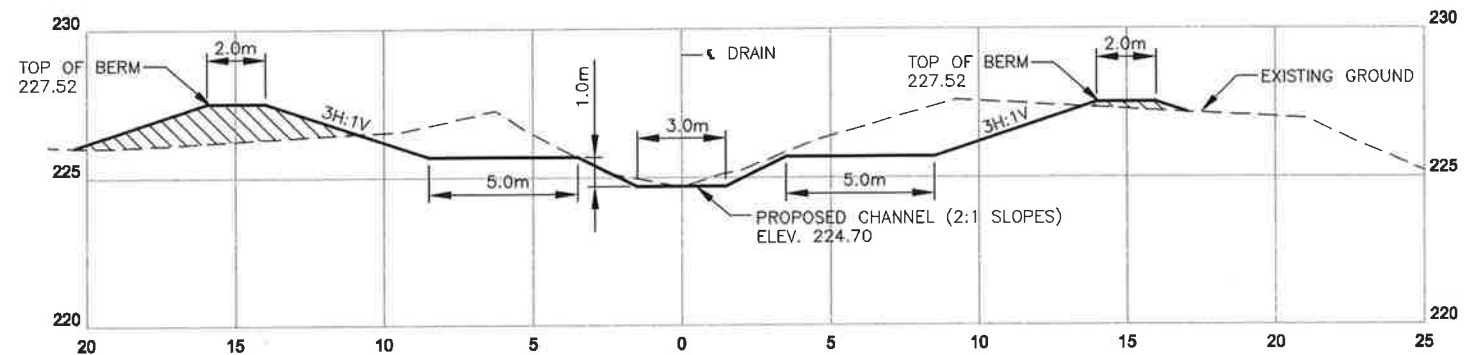
**STATION 3+500**



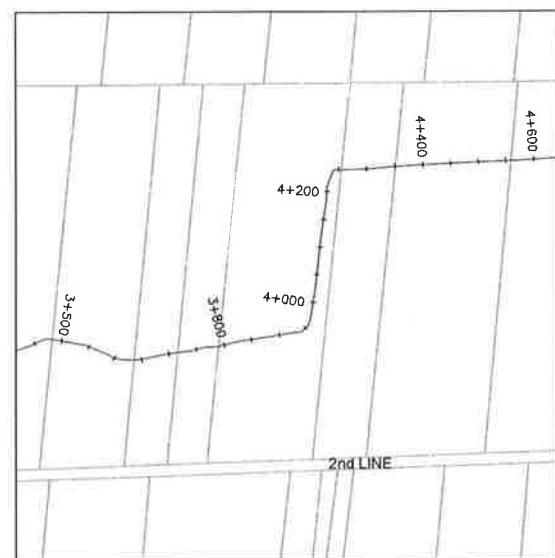
**STATION 3+800**



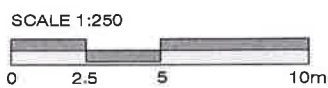
**STATION 4+000**



**STATION 4+200**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM



**DILLON CONSULTING**

SECTIONS 2-5

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE "G"**

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

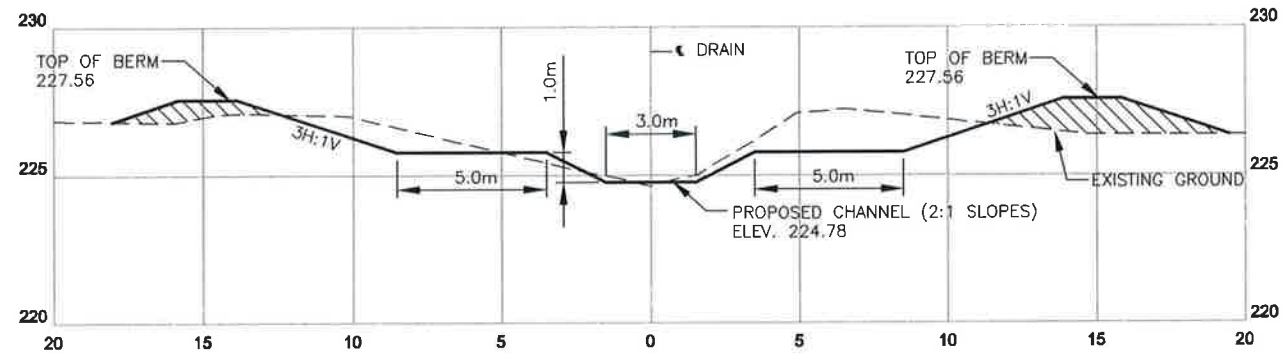
TOWN OF INNISFIL

1 MARCH 2013

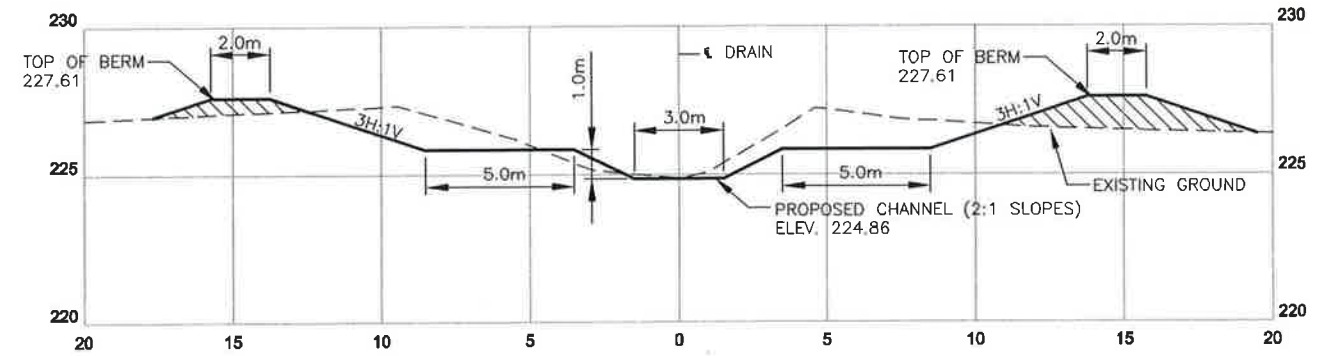
PROJECT No. 05-4787

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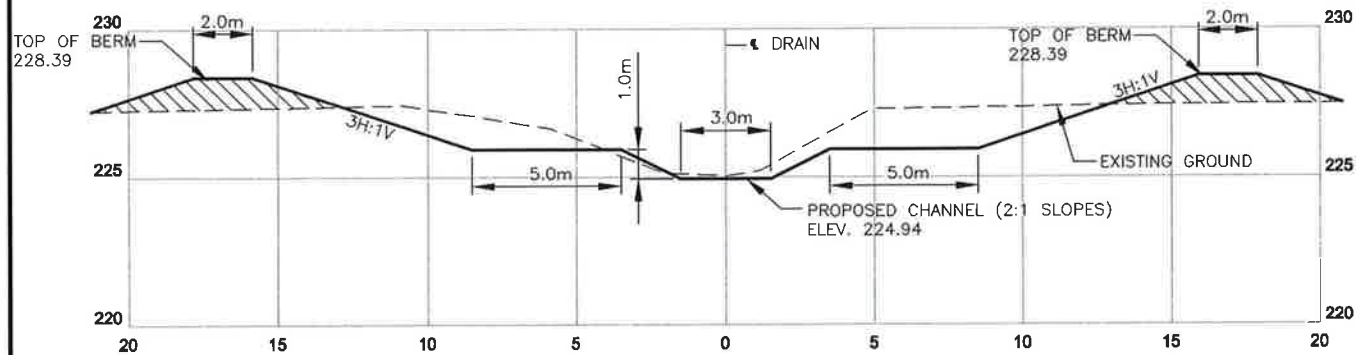
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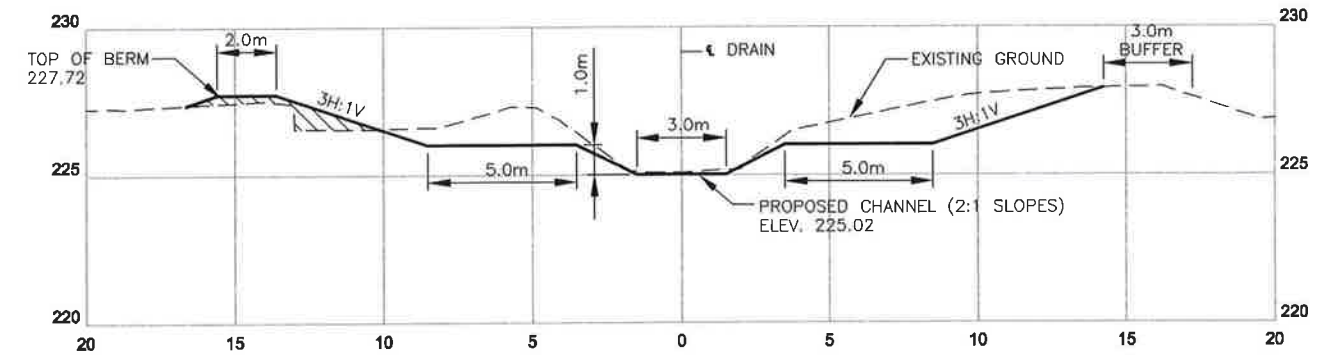
**STATION 4+400**



**STATION 4+600**



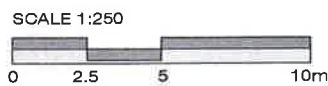
**STATION 4+800**



**STATION 5+000**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM



**DILLON CONSULTING**

**SECTIONS 2-6**

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

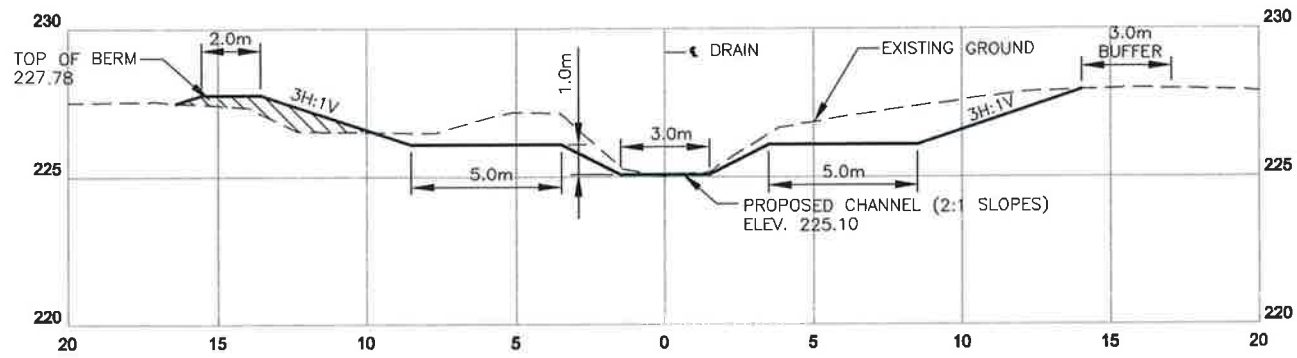
TOWN OF INNISFIL

1 MARCH 2013

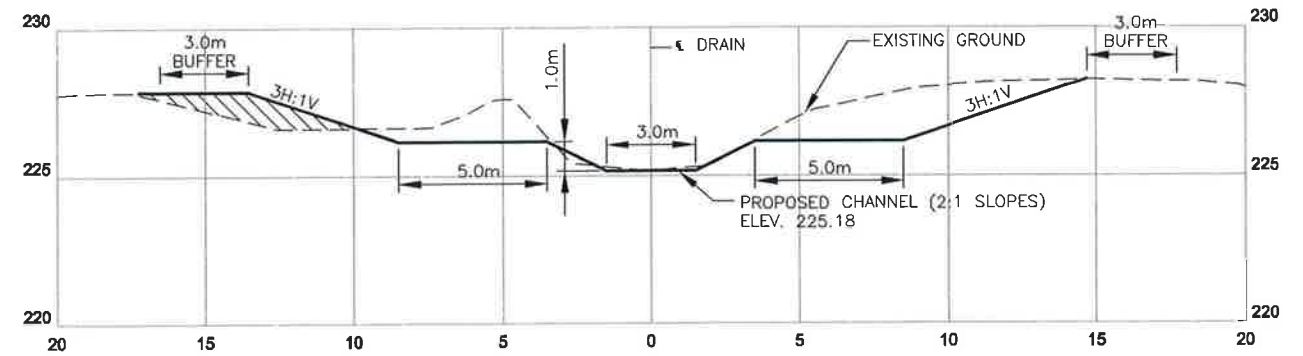
PROJECT No. 05-4787

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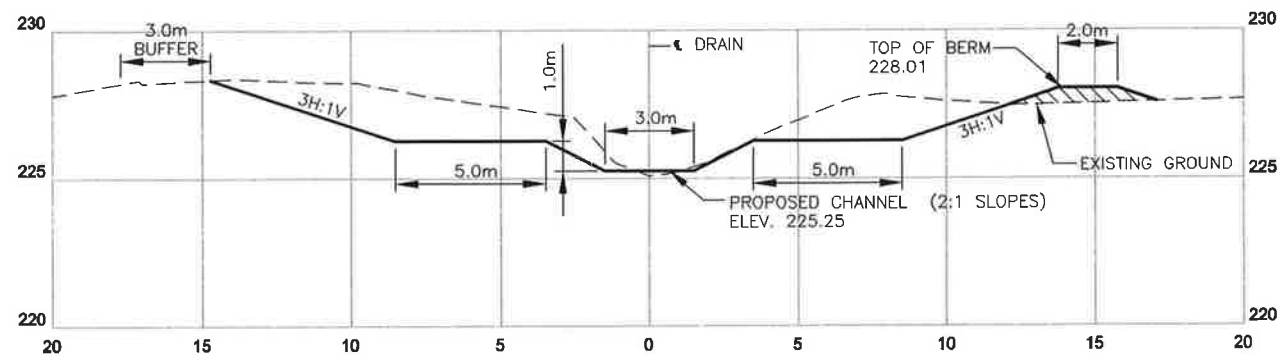
Mar 06, 2013 - 3:07pm \\dillon.ca\DILLON\_DFS\Oakville\CAD\cad\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Sections.dwg



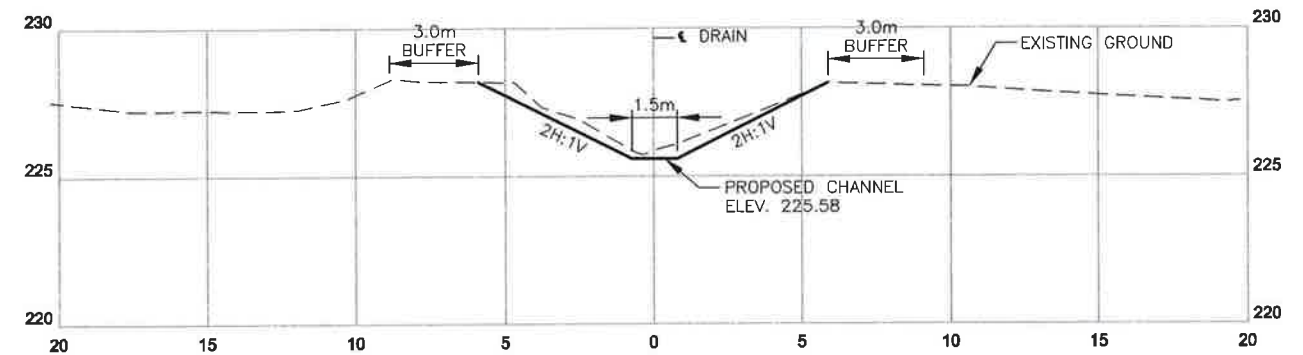
**STATION 5+200**



**STATION 5+400**



**STATION 5+600**

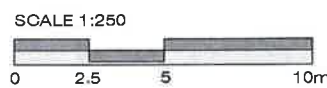


**STATION 5+800**

FUTURE MAINTENANCE ONLY



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM

SCHEDULE " G "



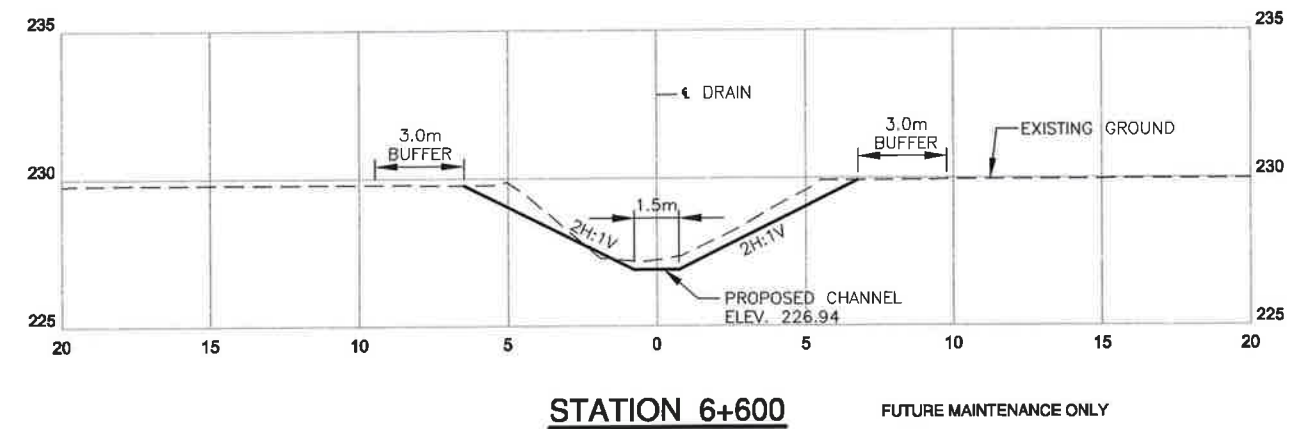
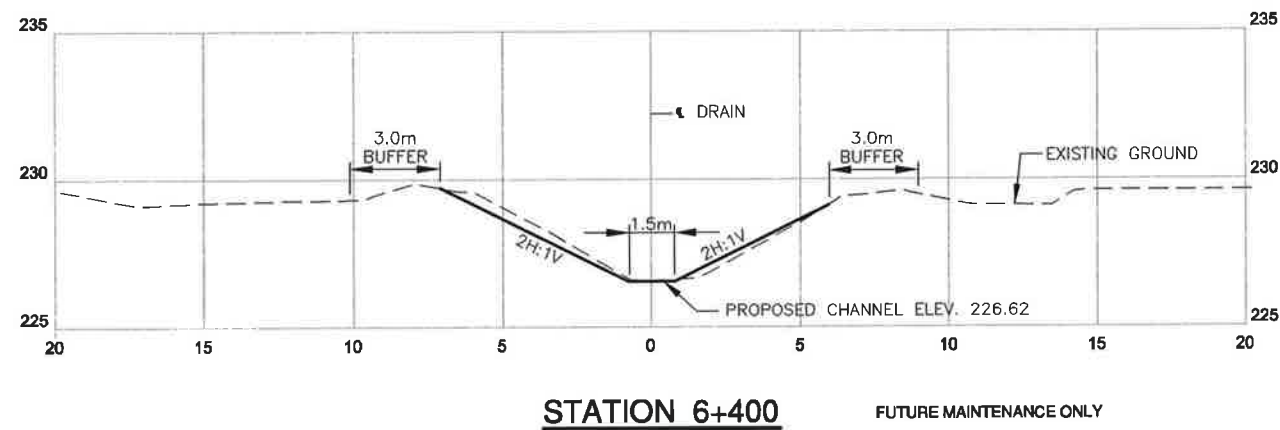
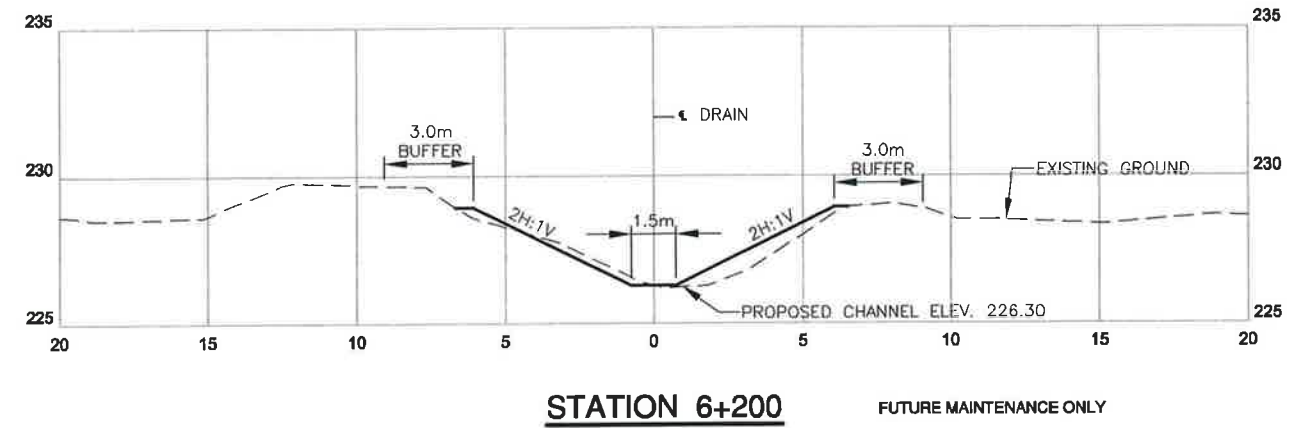
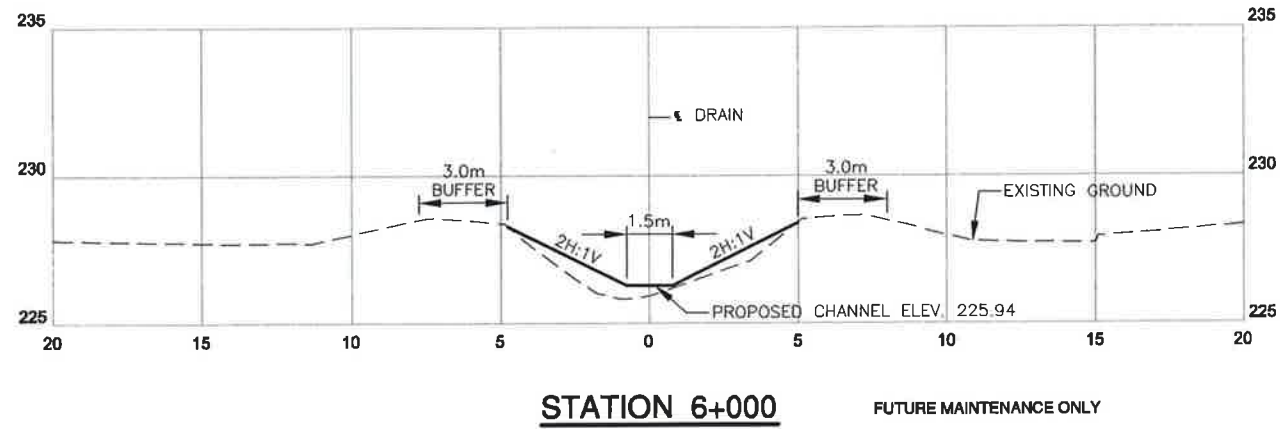
**DILLON CONSULTING**

**SECTIONS 2-7**

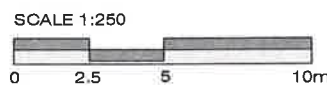
DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
1 MARCH 2013	
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Mar 06, 2013 - 3:07pm \\dillon.ca\DILLON\_DFS\Oakville\Oakville CAD\cad\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Sections.dwg



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM

SCHEDULE " G "



**DILLON CONSULTING**

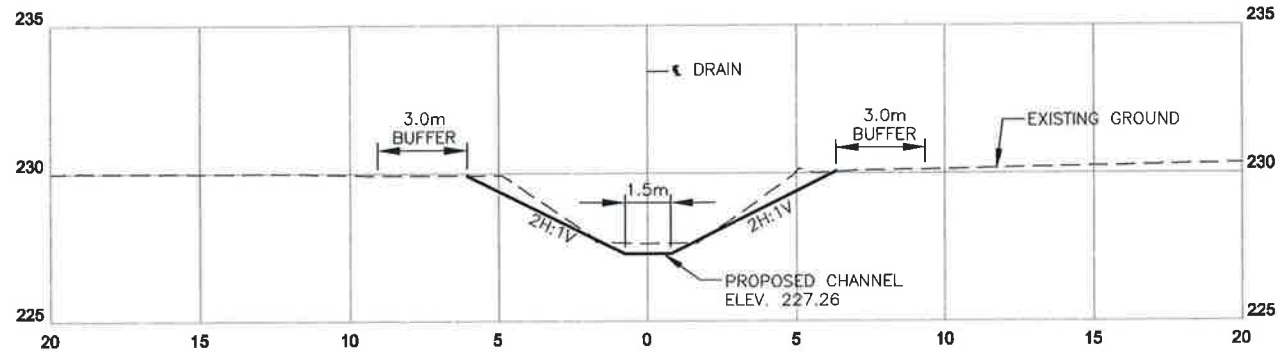
**SECTIONS 2-8**

DRAWING SCALES BASED ON A 11"x17" SHEET

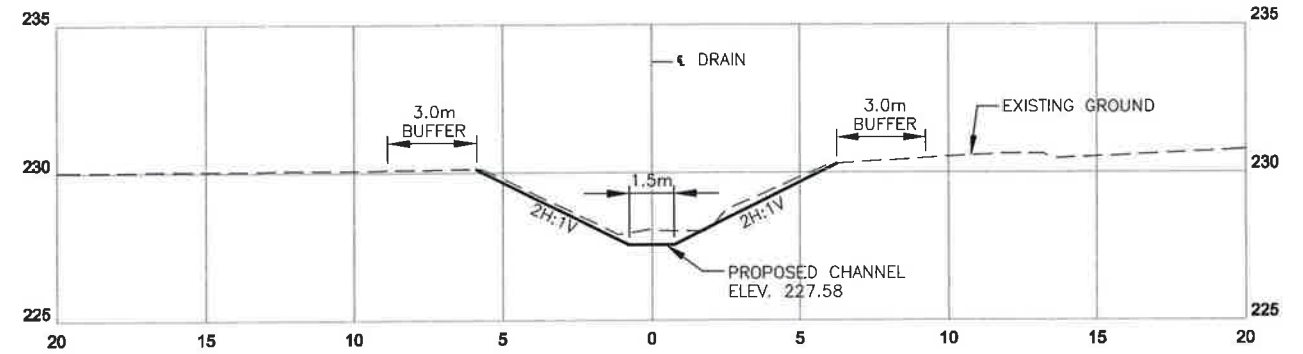
DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**  
 TOWN OF INNISFIL  
 1 MARCH 2013  
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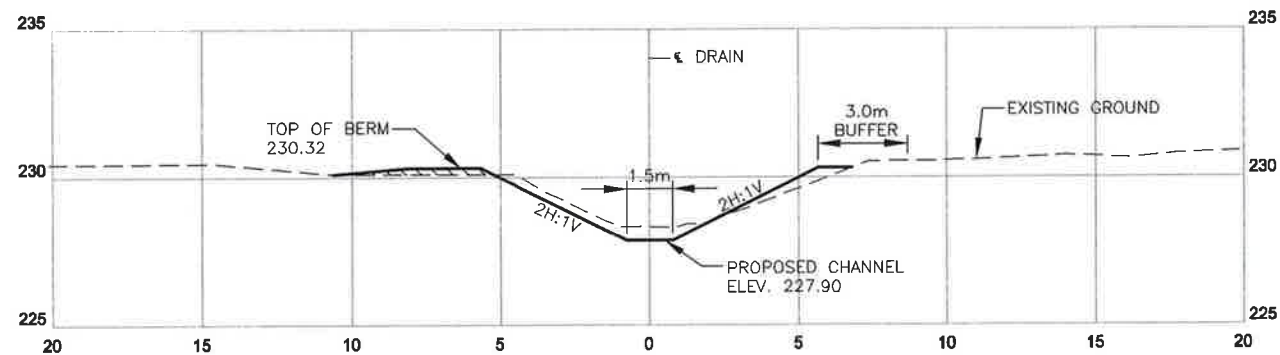
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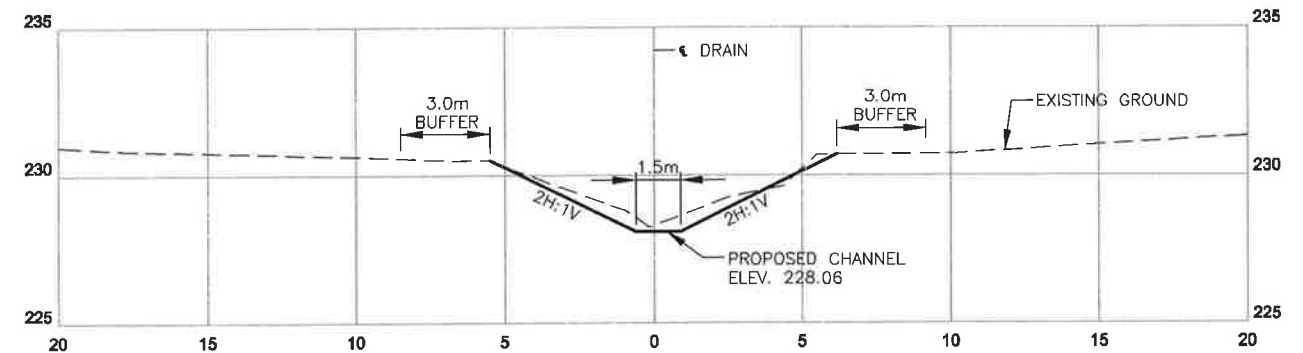
**STATION 6+800** FUTURE MAINTENANCE ONLY



**STATION 7+000** FUTURE MAINTENANCE ONLY



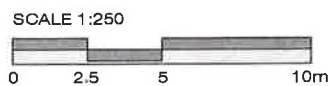
**STATION 7+200** FUTURE MAINTENANCE ONLY



**STATION 7+300** FUTURE MAINTENANCE ONLY



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM

SCHEDULE " G "



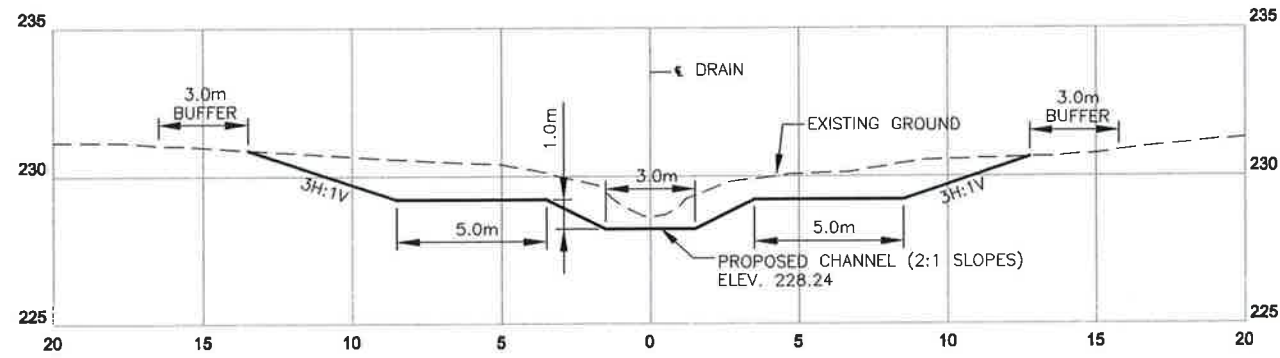
**DILLON CONSULTING**

**SECTIONS 2-9**

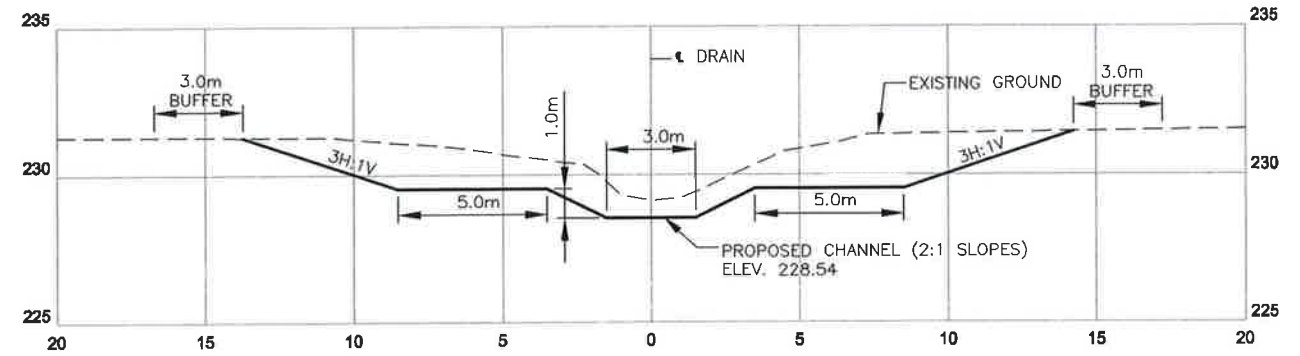
DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
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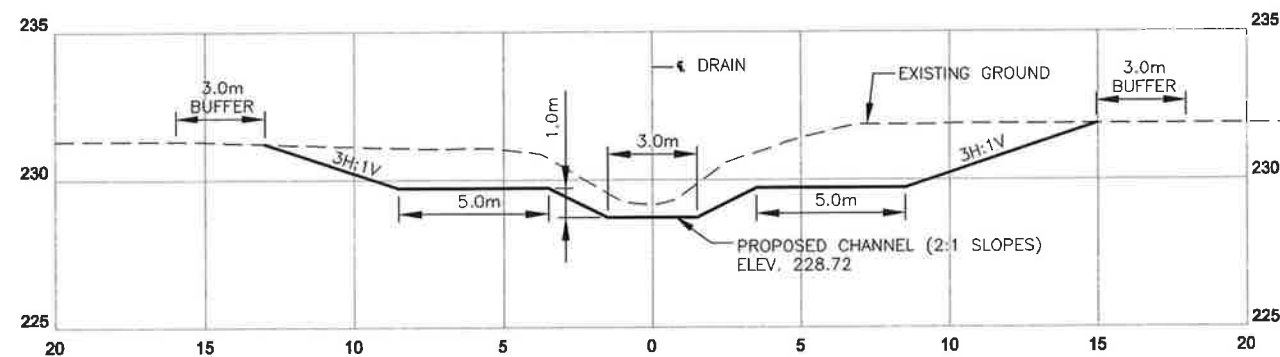
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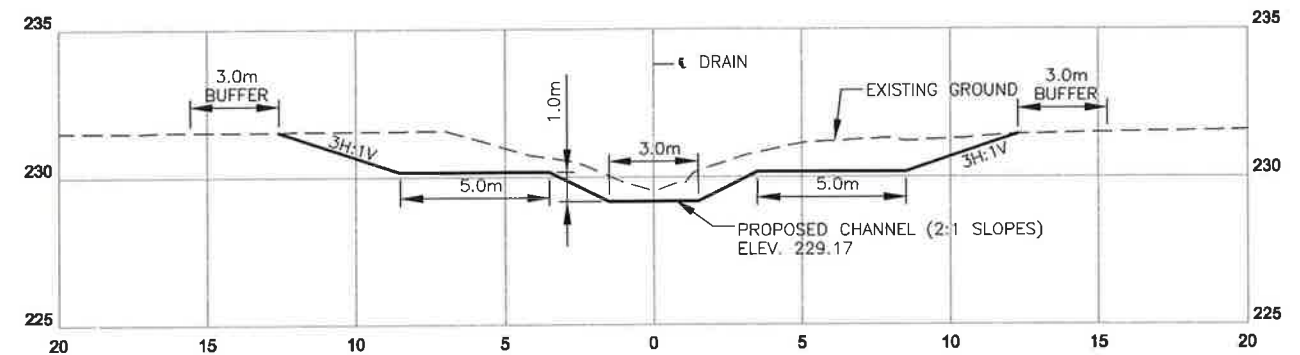
**STATION 7+400**



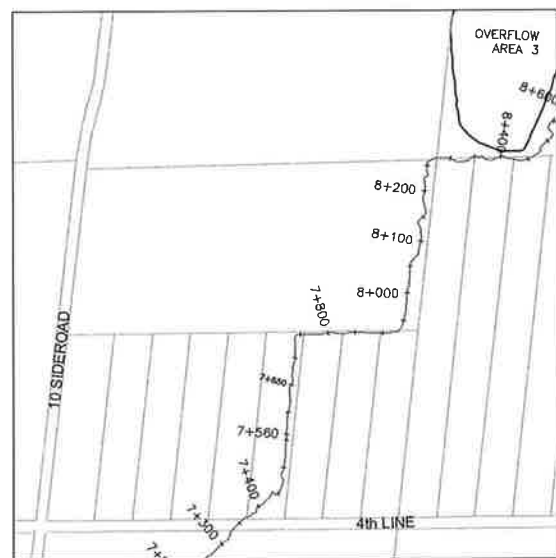
**STATION 7+560**



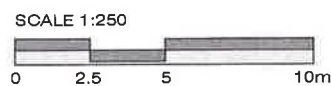
**STATION 7+650**



**STATION 7+800**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM



**DILLON CONSULTING**

SECTIONS 2-10

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

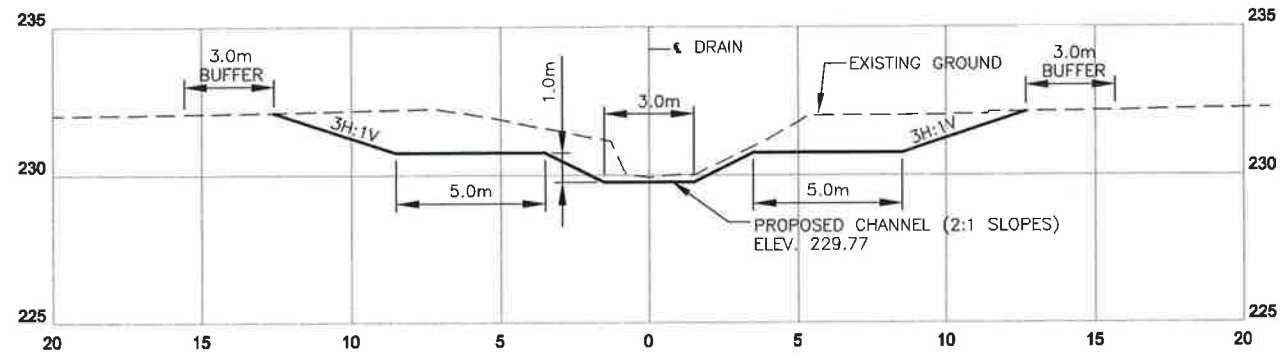
TOWN OF INNISFIL

1 MARCH 2013

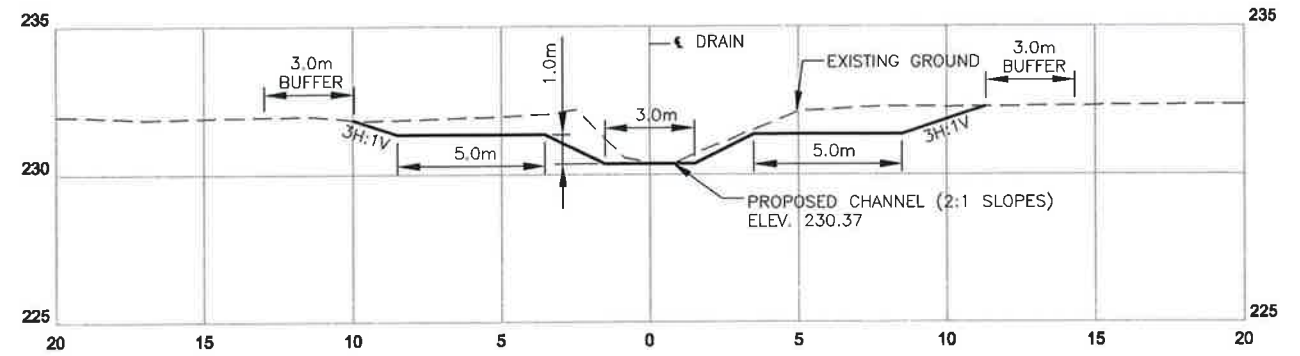
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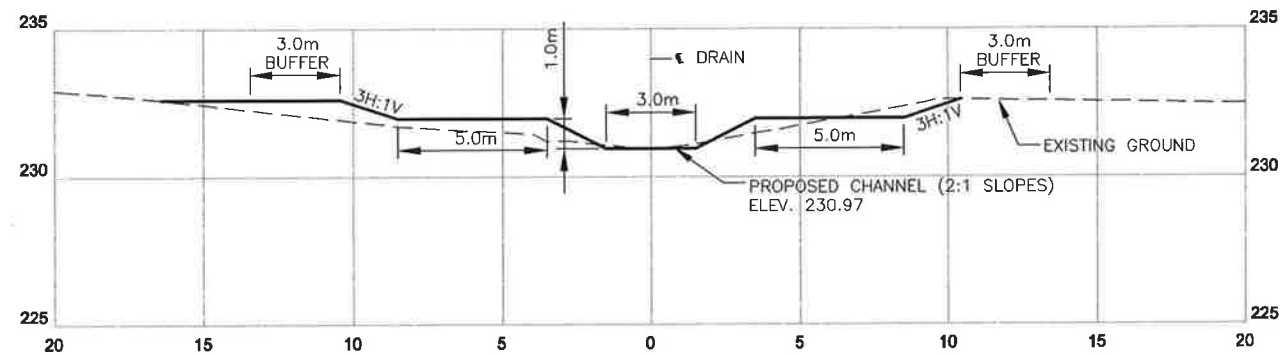


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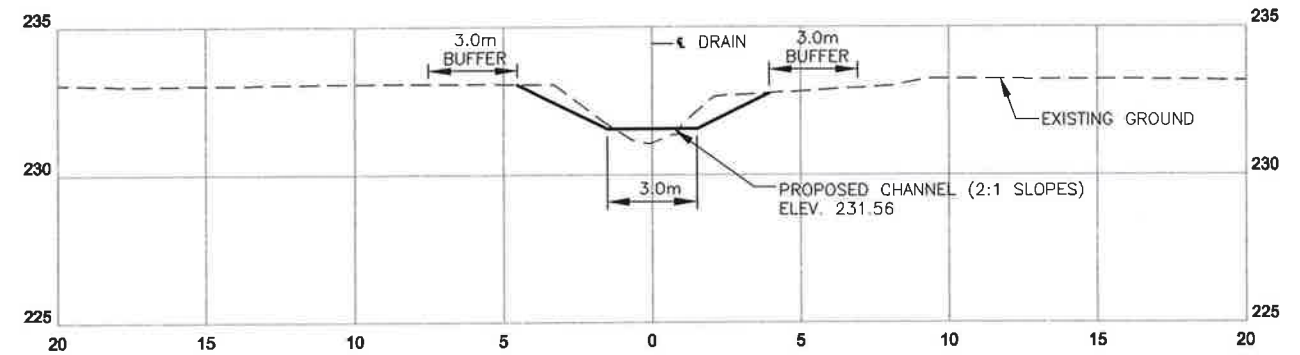
**STATION 8+200**

FUTURE MAINTENANCE ONLY



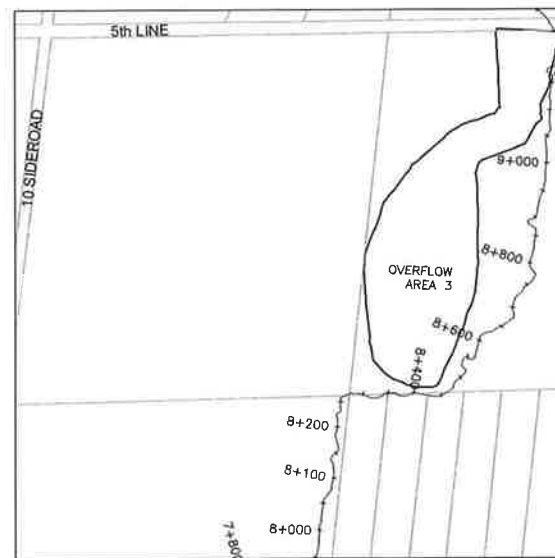
**STATION 8+400**

FUTURE MAINTENANCE ONLY

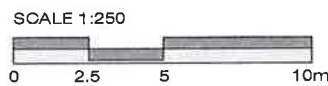


**STATION 8+600**

FUTURE MAINTENANCE ONLY



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM



**DILLON CONSULTING**

**SECTIONS 2-11**

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

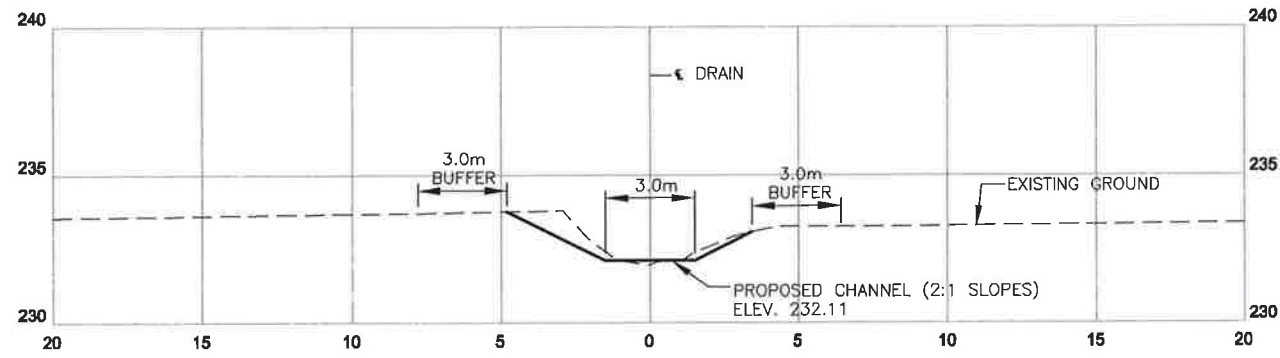
TOWN OF INNISFIL

1 MARCH 2013

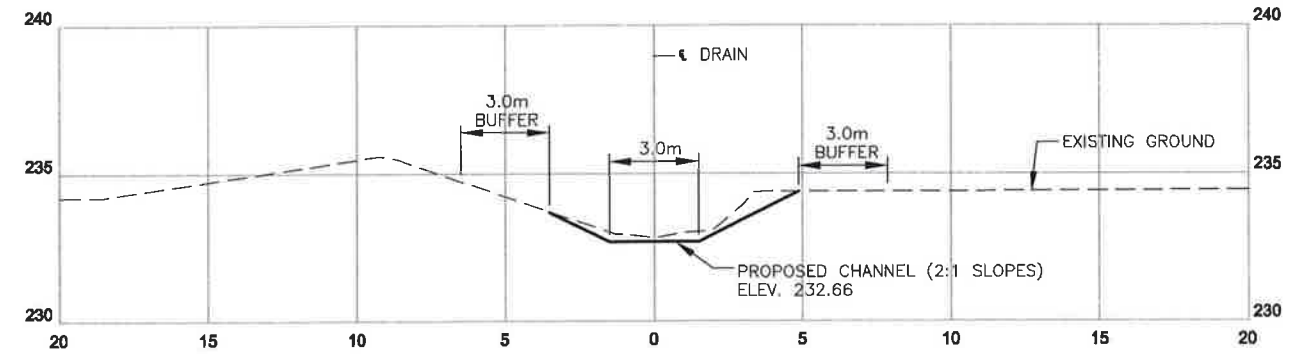
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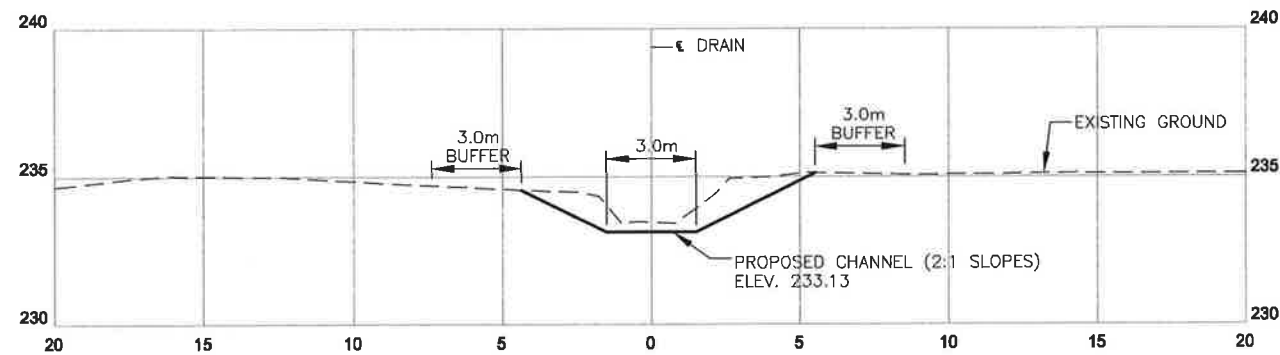
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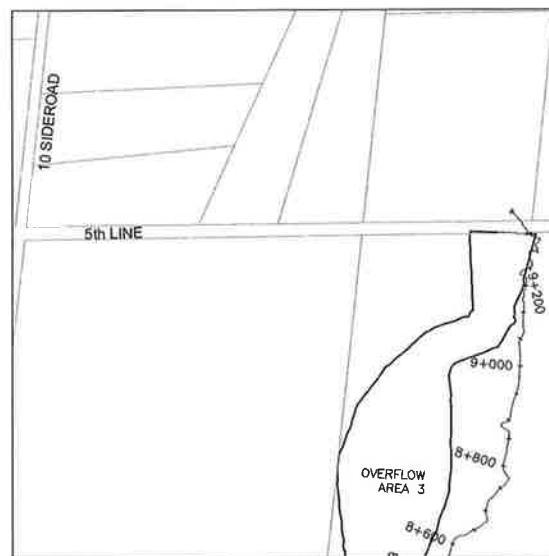
**STATION 8+800** FUTURE MAINTENANCE ONLY



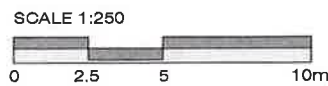
**STATION 9+000** FUTURE MAINTENANCE ONLY



**STATION 9+200** FUTURE MAINTENANCE ONLY



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM

SCHEDULE ' G '



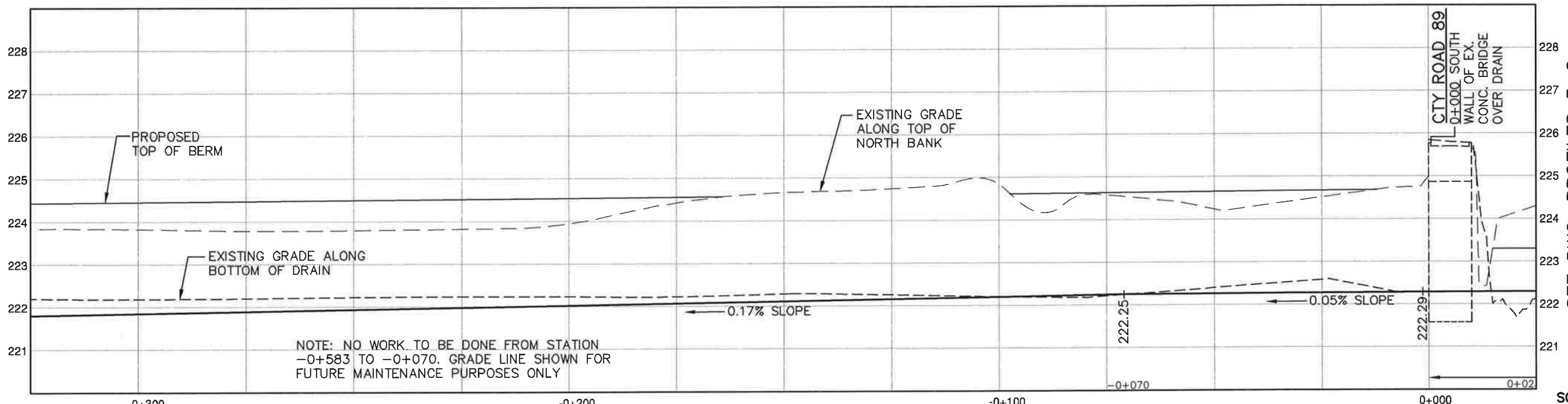
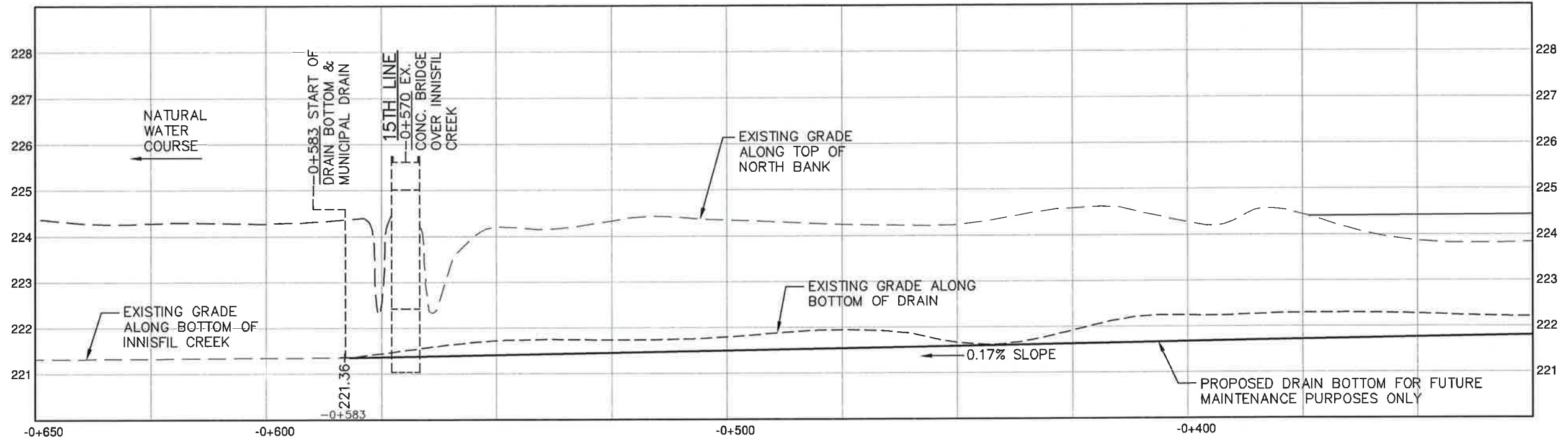
**DILLON CONSULTING**

**SECTIONS 2-12**

DRAWING SCALES BASED ON A 11"x17" SHEET

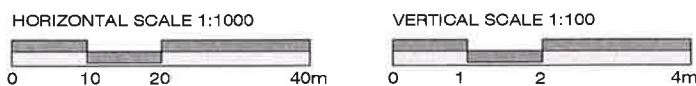
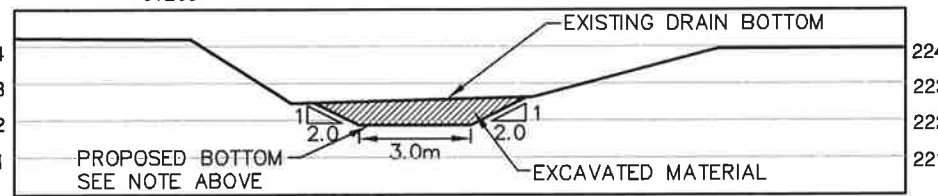
DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
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1 MARCH 2013	
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Mar 06, 2013 - 2:03pm C:\Users\33wib\appdata\local\temp\AcPublish\_672\054787 Profiles.dwg



PROFILE STA. -0+325 TO 0+000  
SCALE: HOR 1:1000 VER 1:100

SOUTH INNISFIL CREEK



**DILLON CONSULTING**

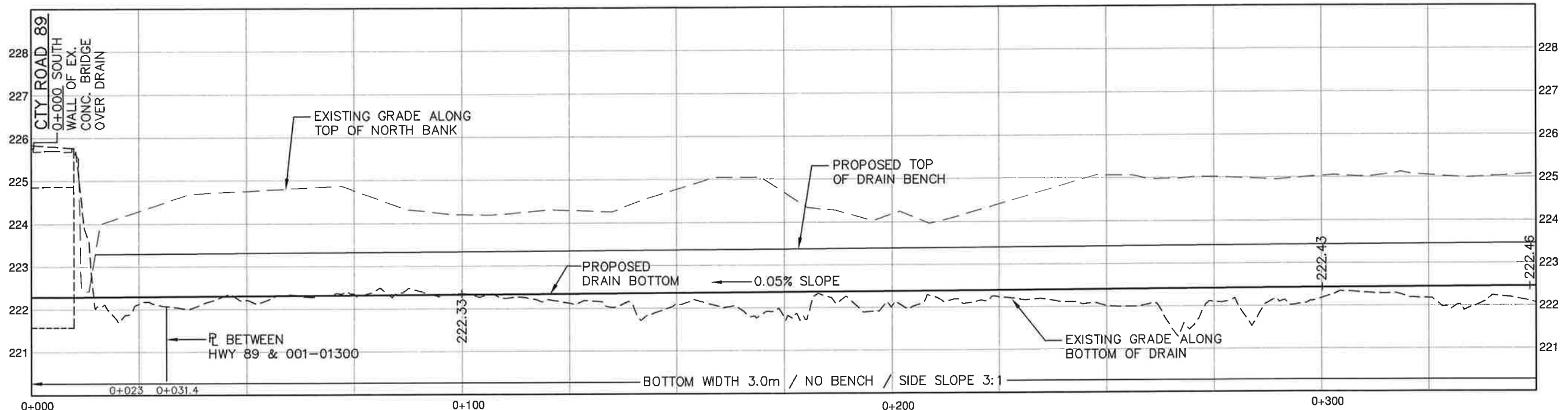
PROFILES 3-1  
-0+650 TO 0+000  
DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE " G "

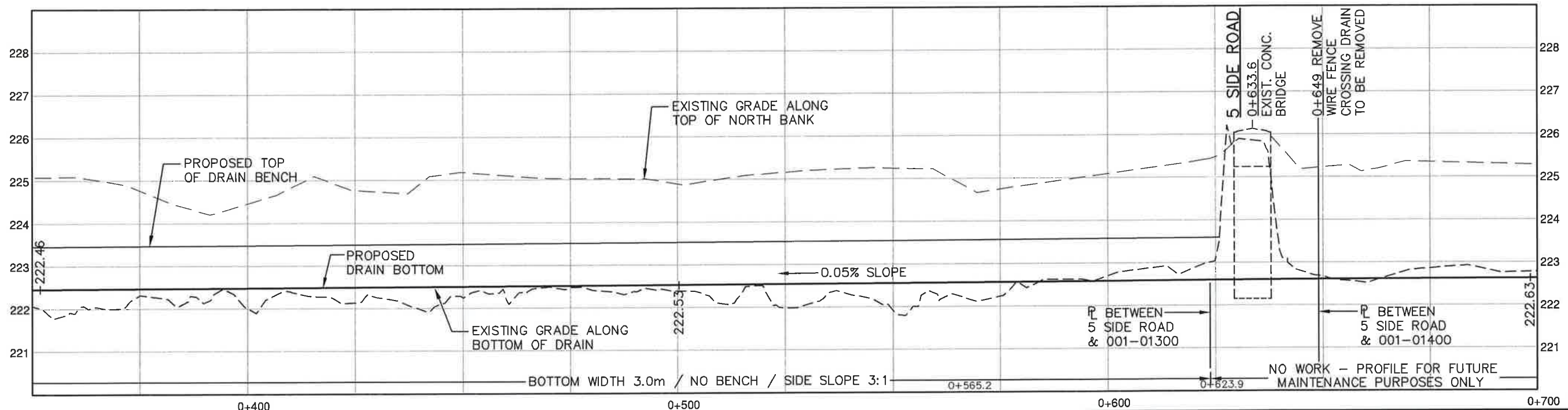
DRAINAGE REPORT FOR THE  
SOUTH INNISFIL CREEK DRAIN AND BRANCHES  
TOWN OF INNISFIL  
1 MARCH 2013  
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SEE DWG. PROFILES 3-2

Mar 06, 2013 - 2:04pm C:\Users\33\wb\appdata\local\temp\AcPublish\_672\054787 Profiles.dwg



PROFILE STA. 0+000 TO 0+350  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 0+350 TO 0+700  
SCALE: HOR 1:1000 VER 1:100

SEE DWG. PROFILES 3-2



SOUTH INNISFIL CREEK



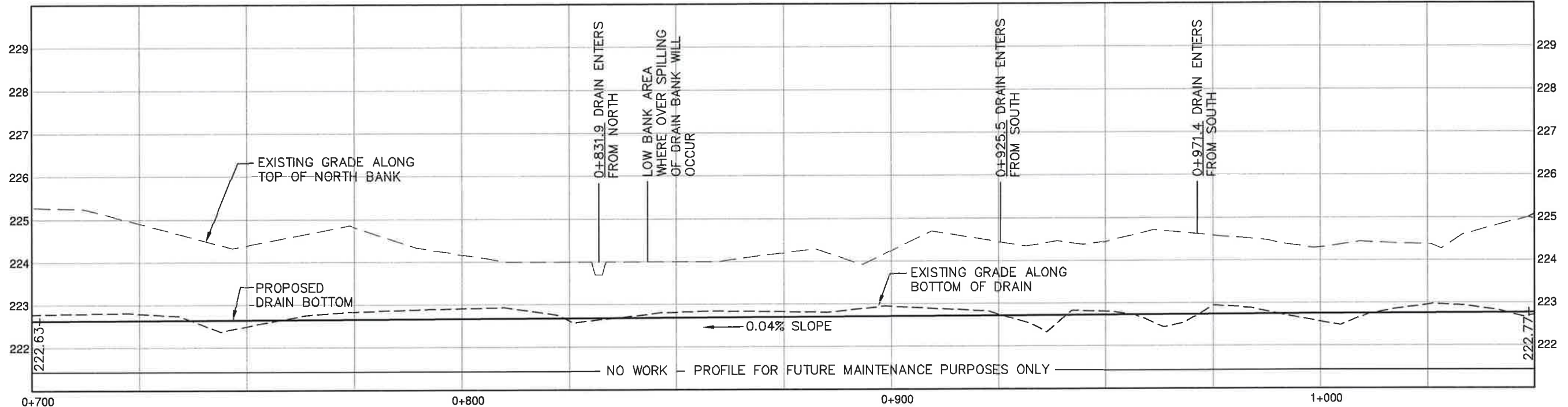
**DILLON CONSULTING**  
 PROFILES 3-2  
 0+000 TO 0+700  
 DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**  
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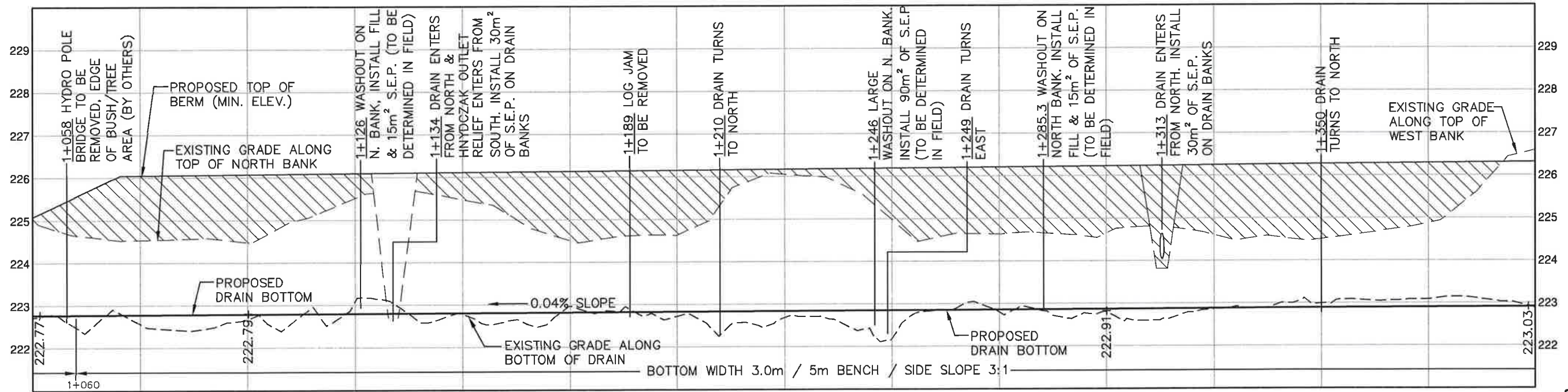
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SEE DWG. PROFILES 3-1



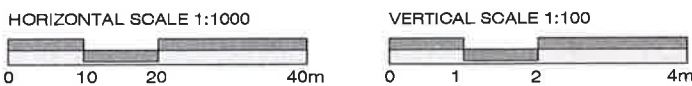
PROFILE STA. 0+700 TO 1+050  
SCALE: HOR 1:1000 VER 1:100



FILL AREAS

PROFILE STA. 1+050 TO 1+400  
SCALE: HOR 1:1000 VER 1:100

SOUTH INNISFIL CREEK



**DILLON CONSULTING**

PROFILES 3-3  
0+700 TO 1+400  
DRAWING SCALES BASED ON A 11"x17" SHEET

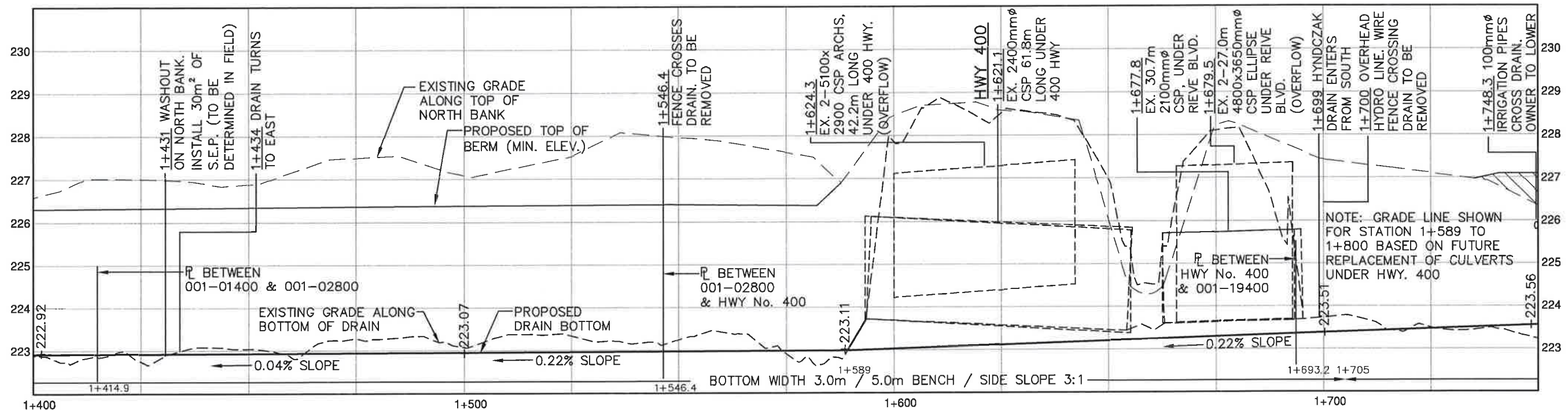
DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**  
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SEE DWG. PROFILES 3-3

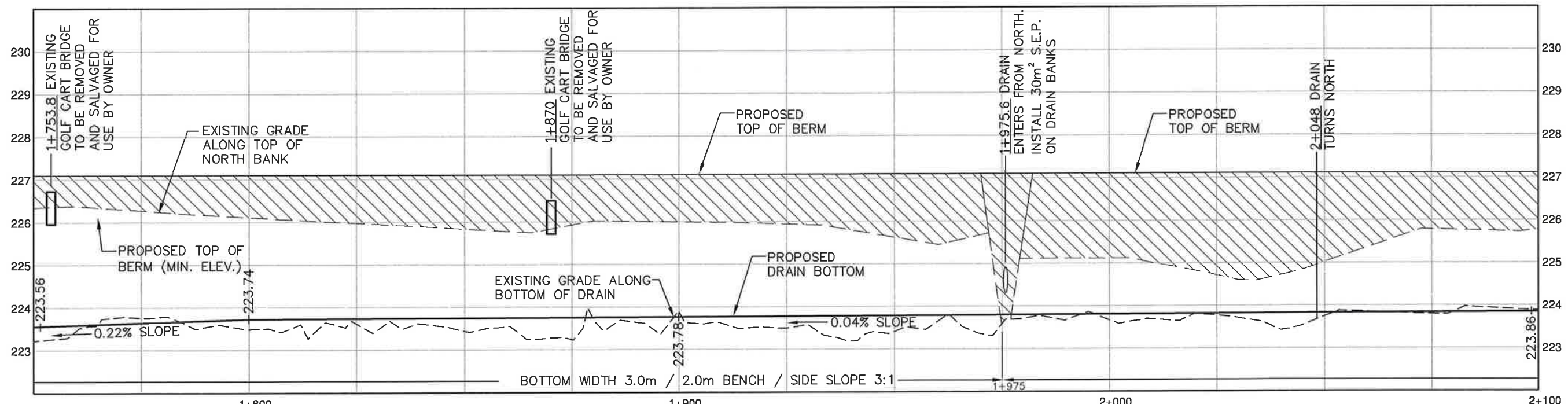
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SEE DWG. PROFILES 3-2



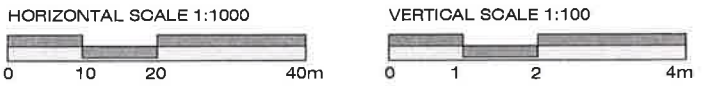
PROFILE STA. 1+400 TO 1+750  
 SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 1+750 TO 2+100  
 SCALE: HOR 1:1000 VER 1:100

FILL AREAS

SOUTH INNISFIL CREEK



**DILLON CONSULTING**

PROFILES 3-4  
 1+400 TO 2+100

DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE "G"

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL

1 MARCH 2013

PROJECT No. 05-4787

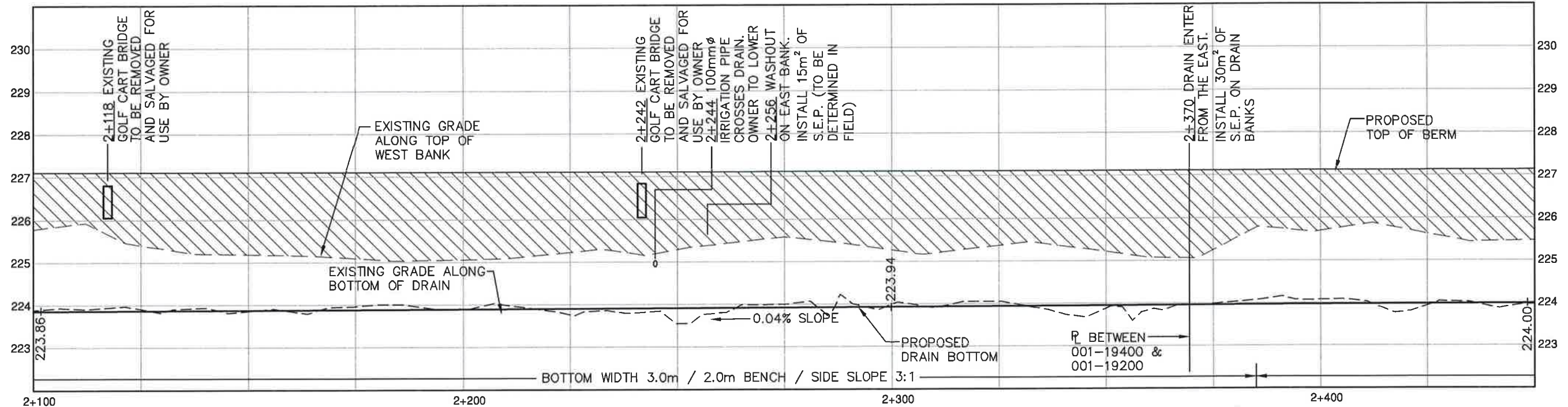
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SEE DWG. PROFILES 3-4

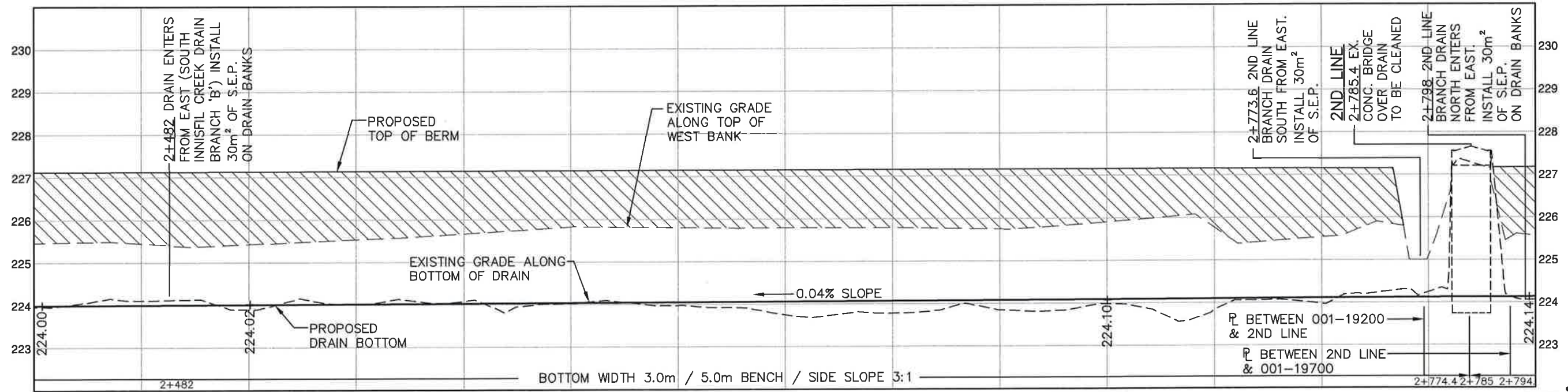


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SEE DWG. PROFILES 3-3



PROFILE STA. 2+100 TO 2+450  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 2+450 TO 2+800  
SCALE: HOR 1:1000 VER 1:100

FILL AREAS

SOUTH INNISFIL CREEK



**DILLON CONSULTING**  
**PROFILES 3-5**  
 2+100 TO 2+800  
 DRAWING SCALES BASED ON A 11"x17" SHEET

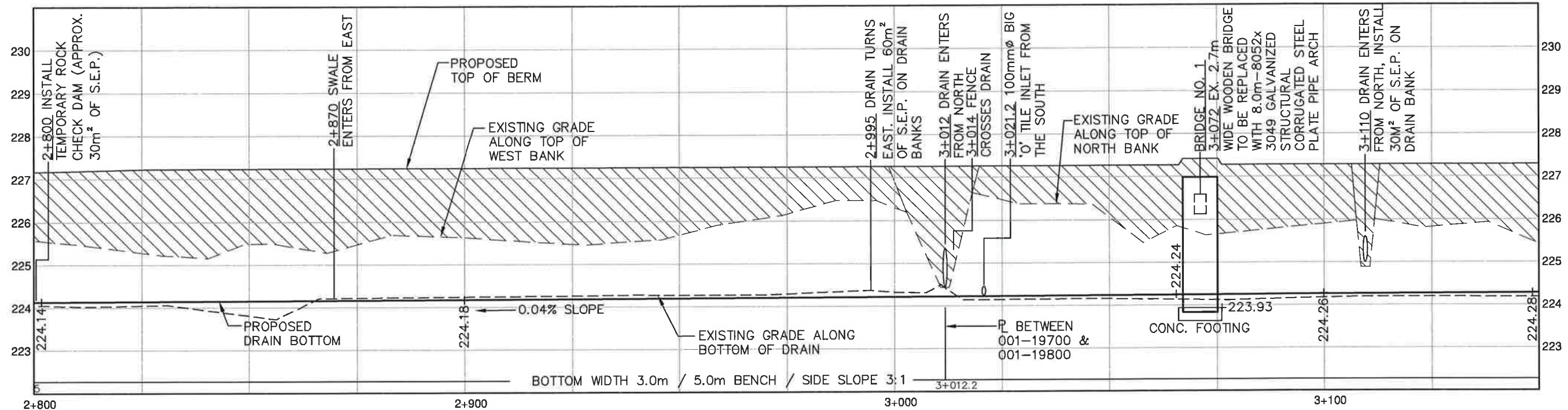
**DRAINAGE REPORT FOR THE SOUTH INNISFIL CREEK DRAIN AND BRANCHES**  
 TOWN OF INNISFIL  
 1 MARCH 2013  
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SEE DWG. PROFILES 3-5

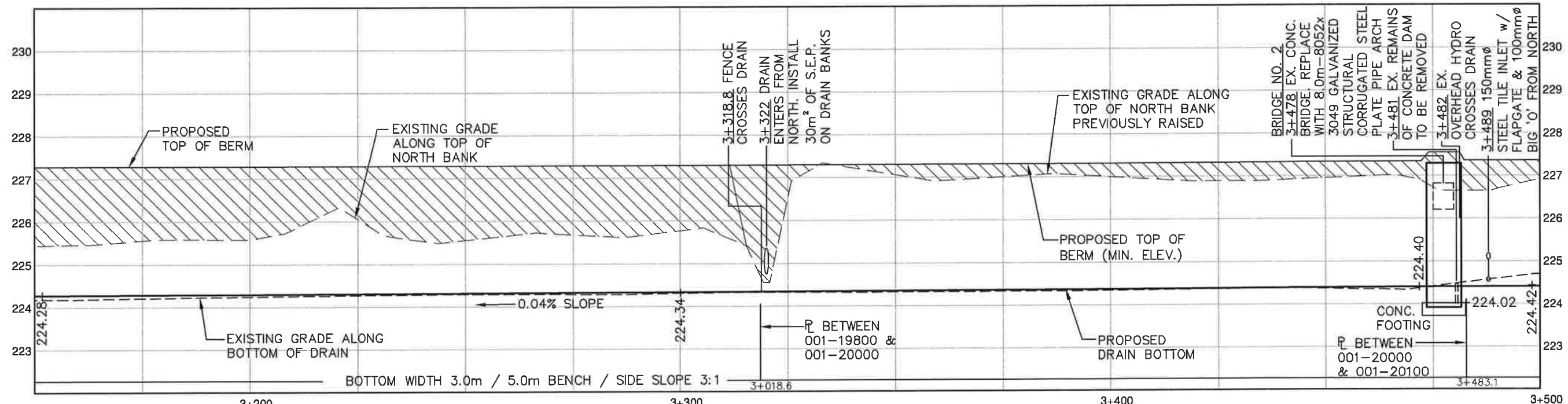
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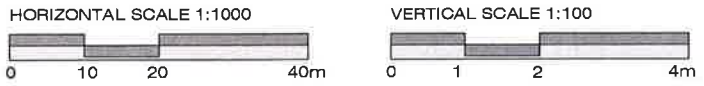
PROFILE STA. 2+800 TO 3+150  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 3+150 TO 3+500  
SCALE: HOR 1:1000 VER 1:100

FILL AREAS

SOUTH INNISFIL CREEK



**DILLON CONSULTING**

PROFILES 3-6  
2+800 TO 3+500

DRAWING SCALES BASED ON A 11"x17" SHEET

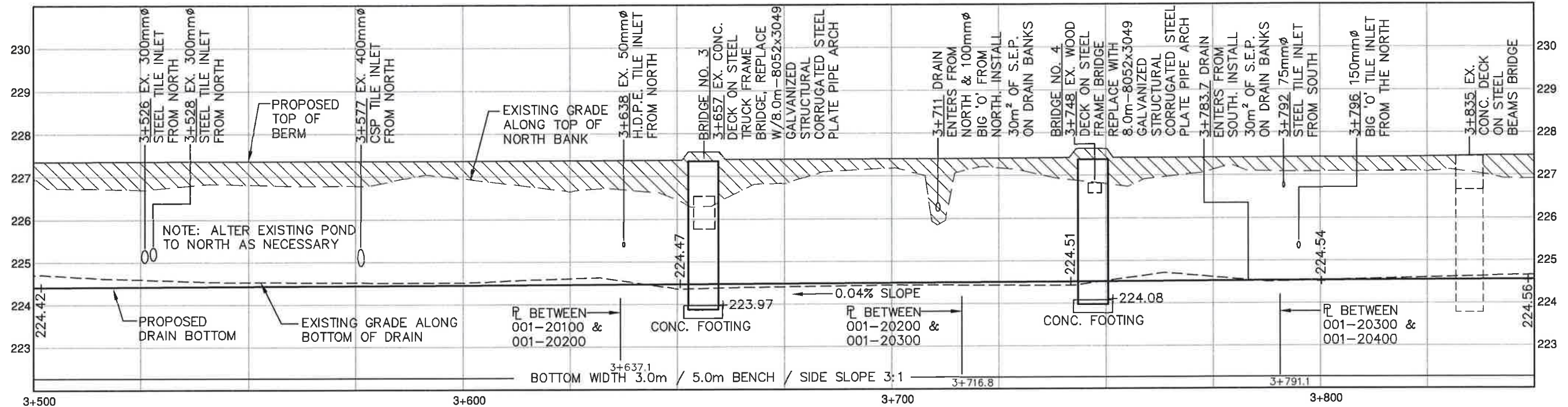
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SEE DWG. PROFILES 3-6

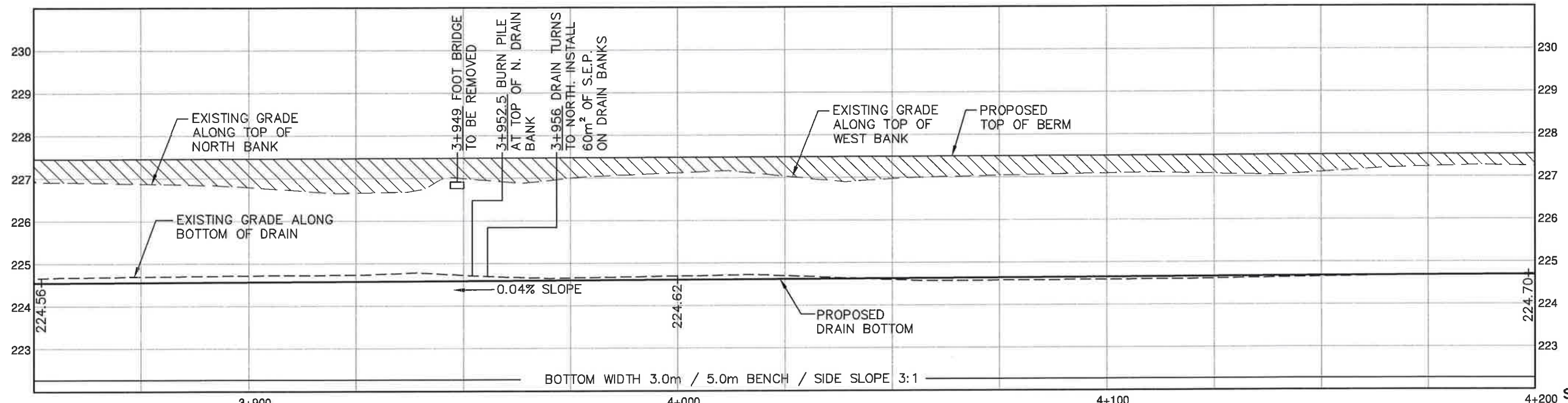
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SEE DWG. PROFILES 3-5



PROFILE STA. 3+500 TO 3+850  
 SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 3+850 TO 4+200  
 SCALE: HOR 1:1000 VER 1:100

FILL AREAS

SOUTH INNISFIL CREEK



SEE DWG. PROFILES 3-7

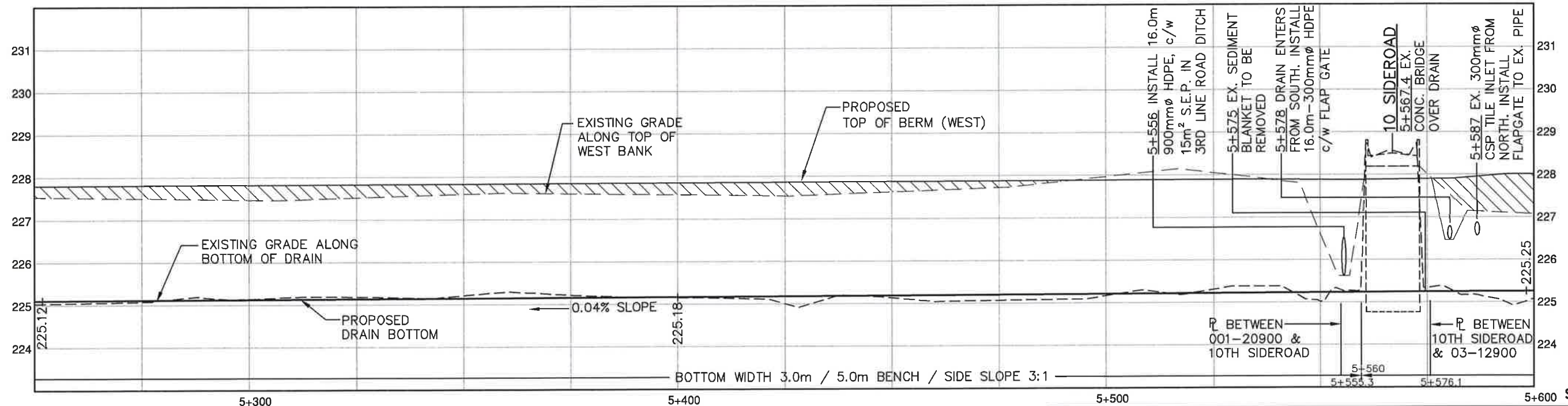
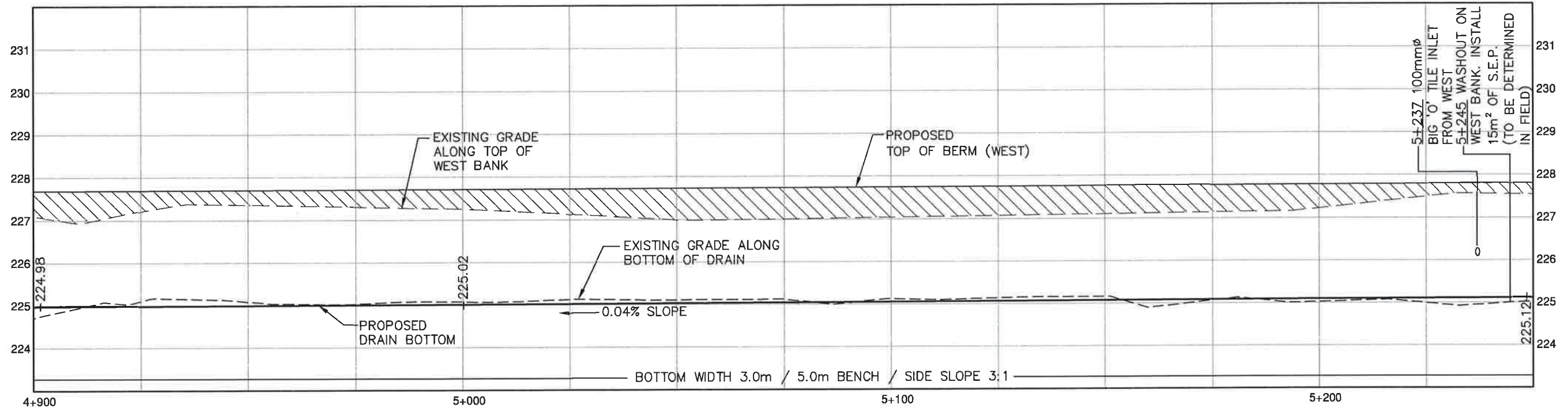
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		PROFILES 3-7 3+500 TO 4+200 DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE "G"



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SEE DWG. PROFILES 3-7



SEE DWG. PROFILES 3-9



FILL AREAS

PROFILE STA. 5+250 TO 5+600  
 SCALE: HOR 1:1000 VER 1:100

SOUTH INNISFIL CREEK



**DILLON**  
 CONSULTING

PROFILES 3-9  
 4+900 TO 5+600  
 DRAWING SCALES BASED  
 ON A 11"x17" SHEET

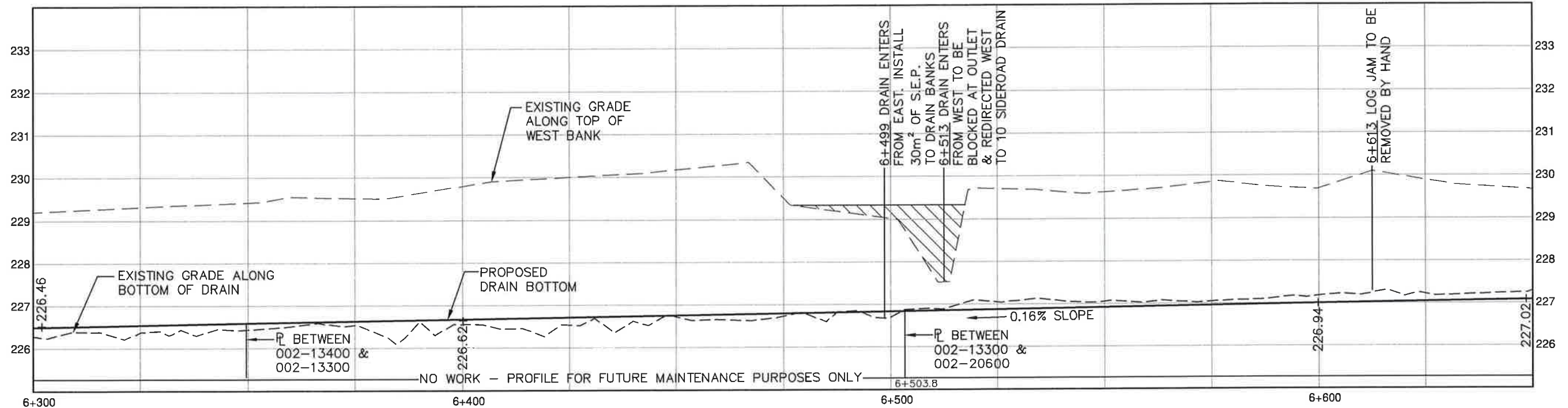
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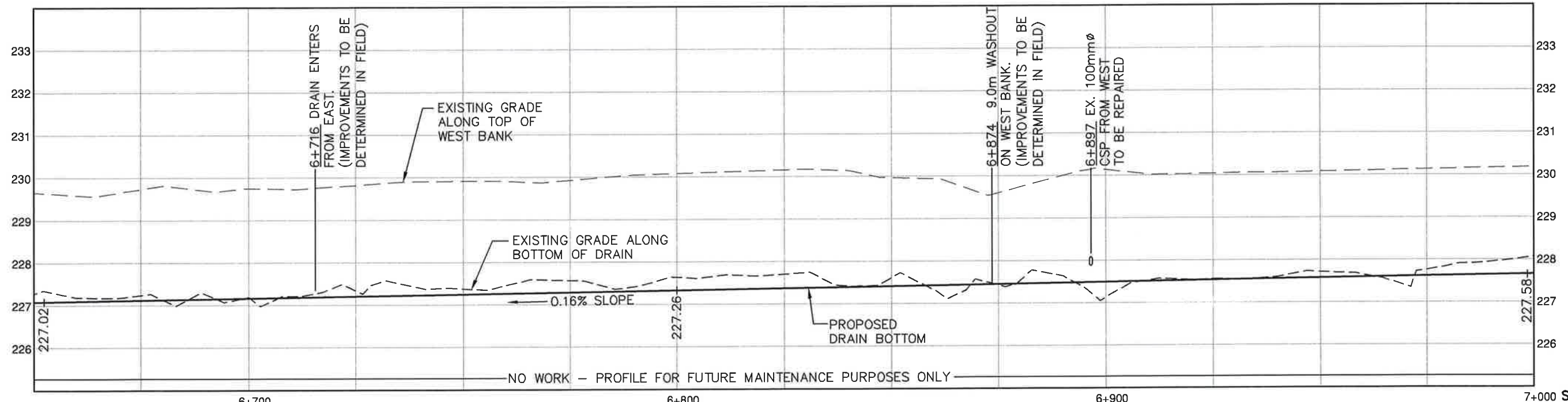


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SEE DWG. PROFILES 3-9



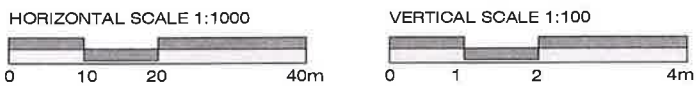
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SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 6+650 TO 7+000  
SCALE: HOR 1:1000 VER 1:100

FILL AREAS

SOUTH INNISFIL CREEK



**DILLON CONSULTING**  
PROFILES 3-11  
6+300 TO 7+000  
DRAWING SCALES BASED ON A 11"x17" SHEET

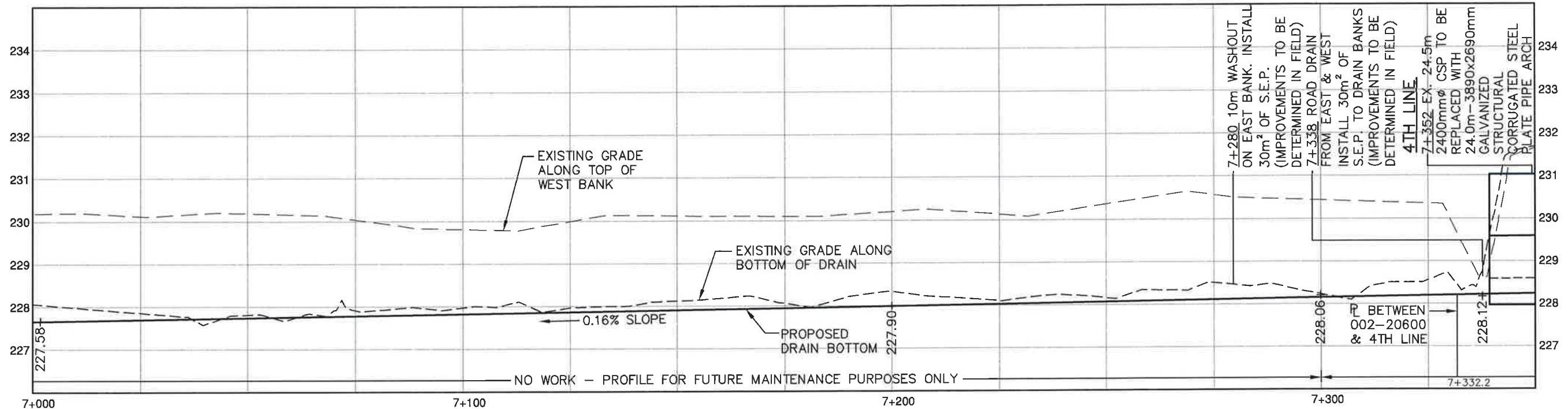
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SEE DWG. PROFILES 3-11

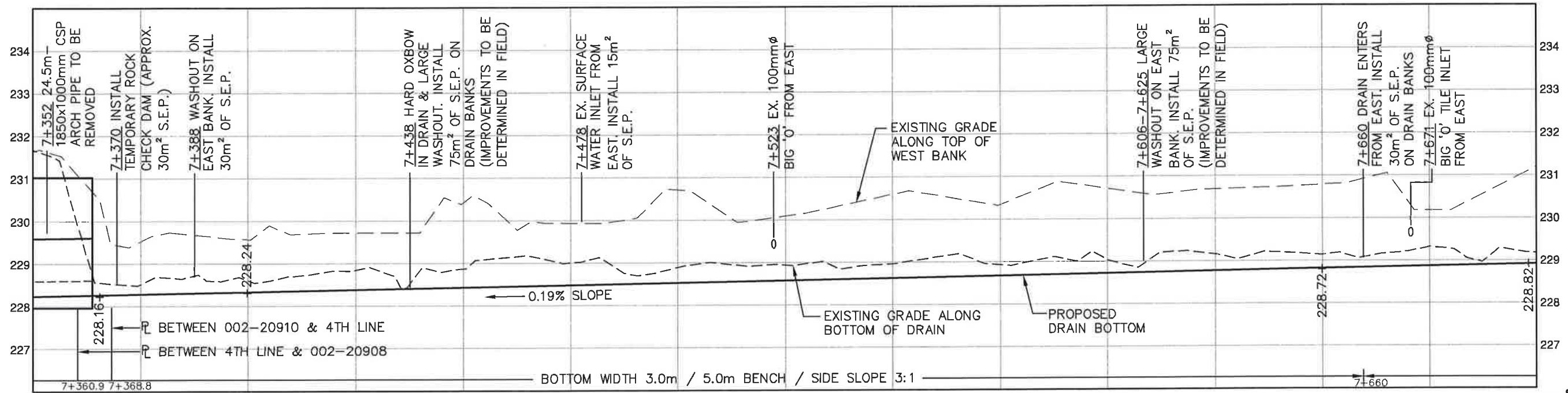
7+000 SCHEDULE "G"

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SEE DWG. PROFILES 3-10



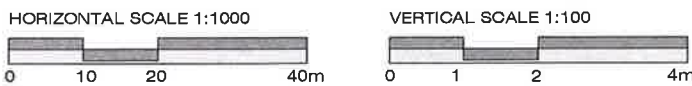
PROFILE STA. 7+000 TO 7+350  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 7+350 TO 7+700  
SCALE: HOR 1:1000 VER 1:100

SOUTH INNISFIL CREEK

SEE DWG. PROFILES 3-12



**DILLON CONSULTING**  
PROFILES 3-12  
7+000 TO 7+700  
DRAWING SCALES BASED ON A 11"x17" SHEET

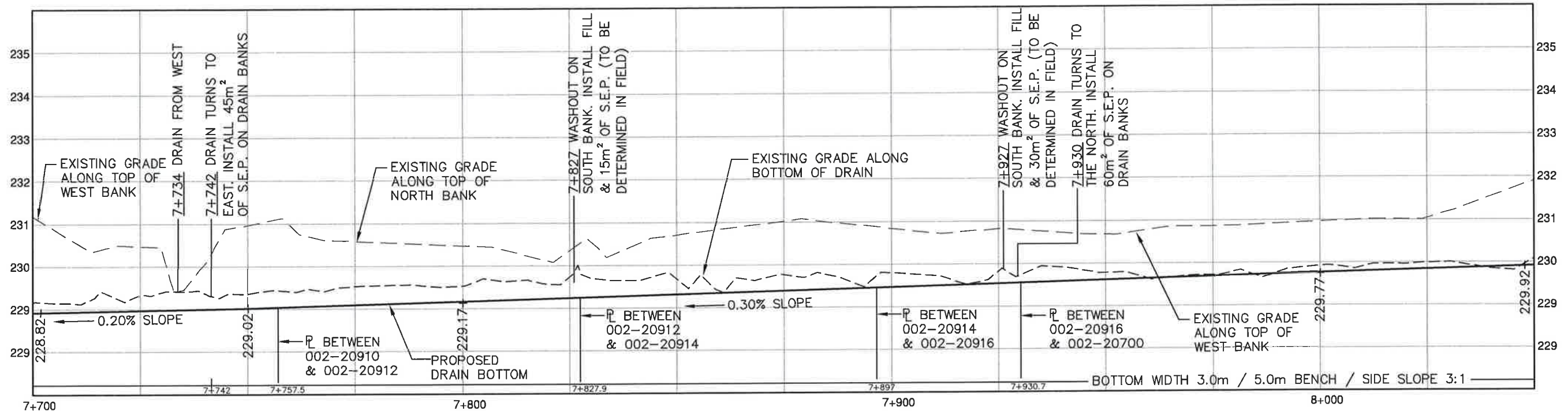
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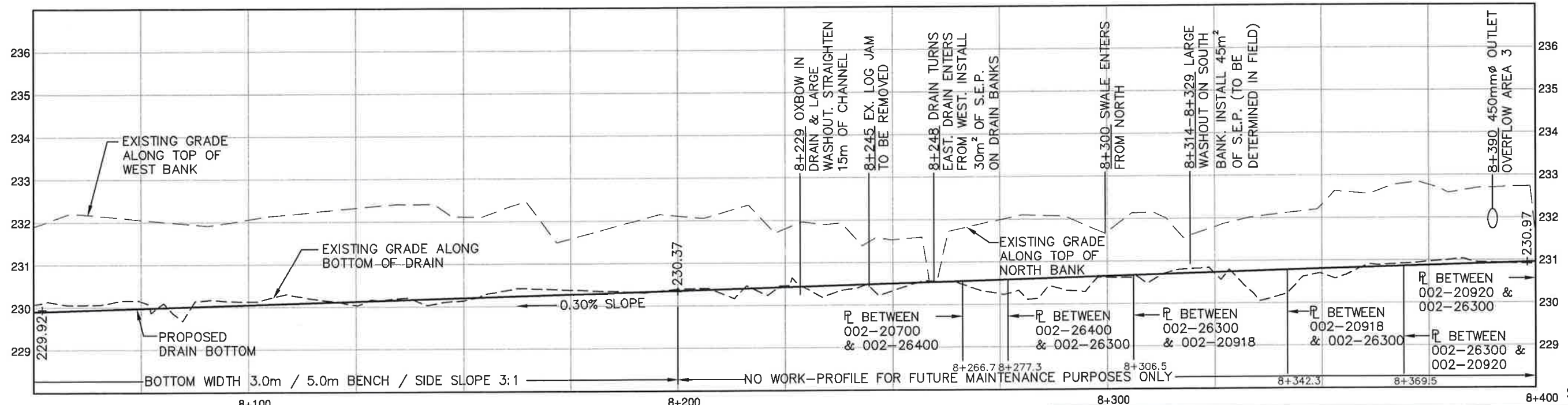


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SEE DWG. PROFILES 3-11



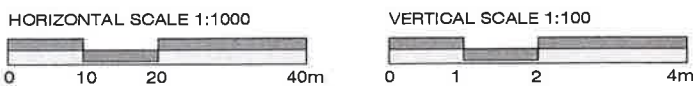
PROFILE STA. 7+700 TO 8+050  
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PROFILE STA. 8+050 TO 8+400  
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FILL AREAS

SOUTH INNISFIL CREEK



**DILLON CONSULTING**  
 PROFILES 3-13  
 7+700 TO 8+400  
 DRAWING SCALES BASED ON A 11"x17" SHEET

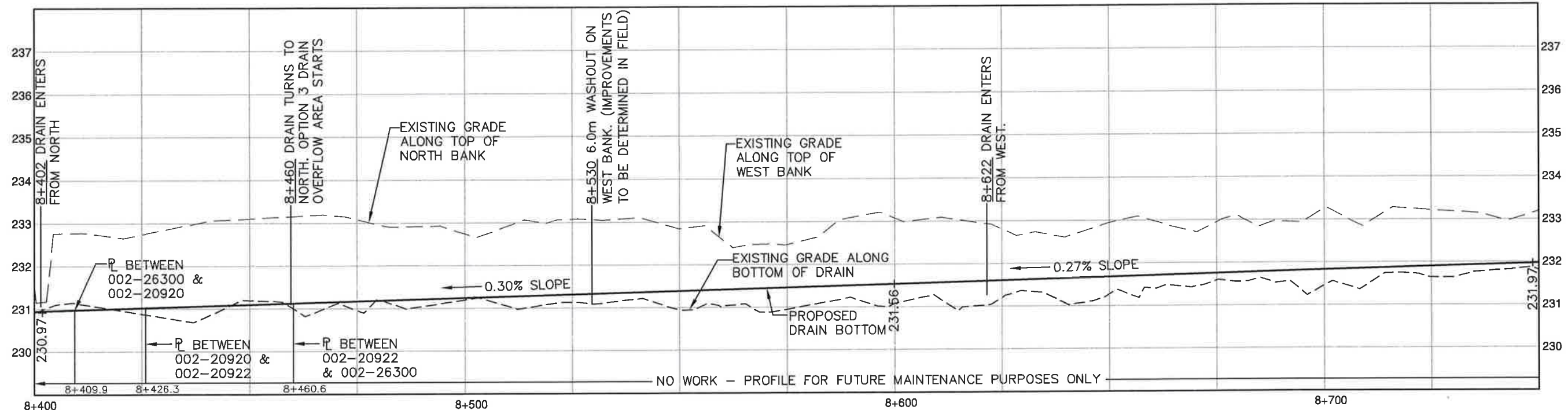
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SEE DWG. PROFILES 3-13

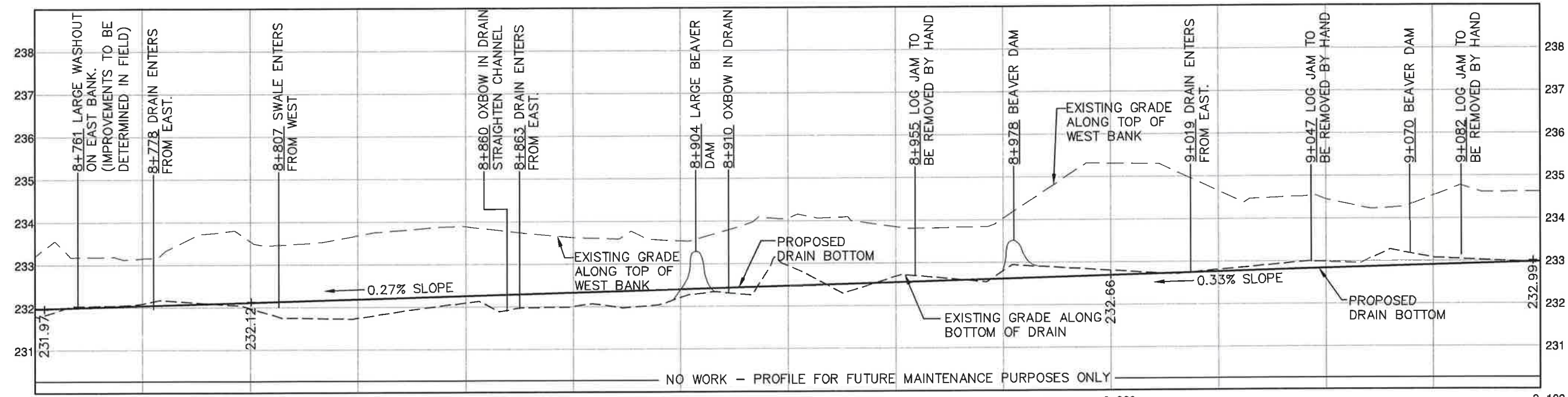
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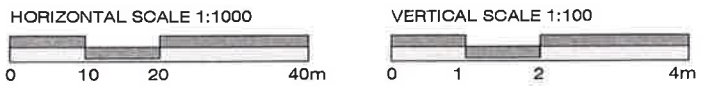


PROFILE STA. 8+400 TO 8+750  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 8+750 TO 9+100  
SCALE: HOR 1:1000 VER 1:100

SEE DWG. PROFILES 3-14



SOUTH INNISFIL CREEK



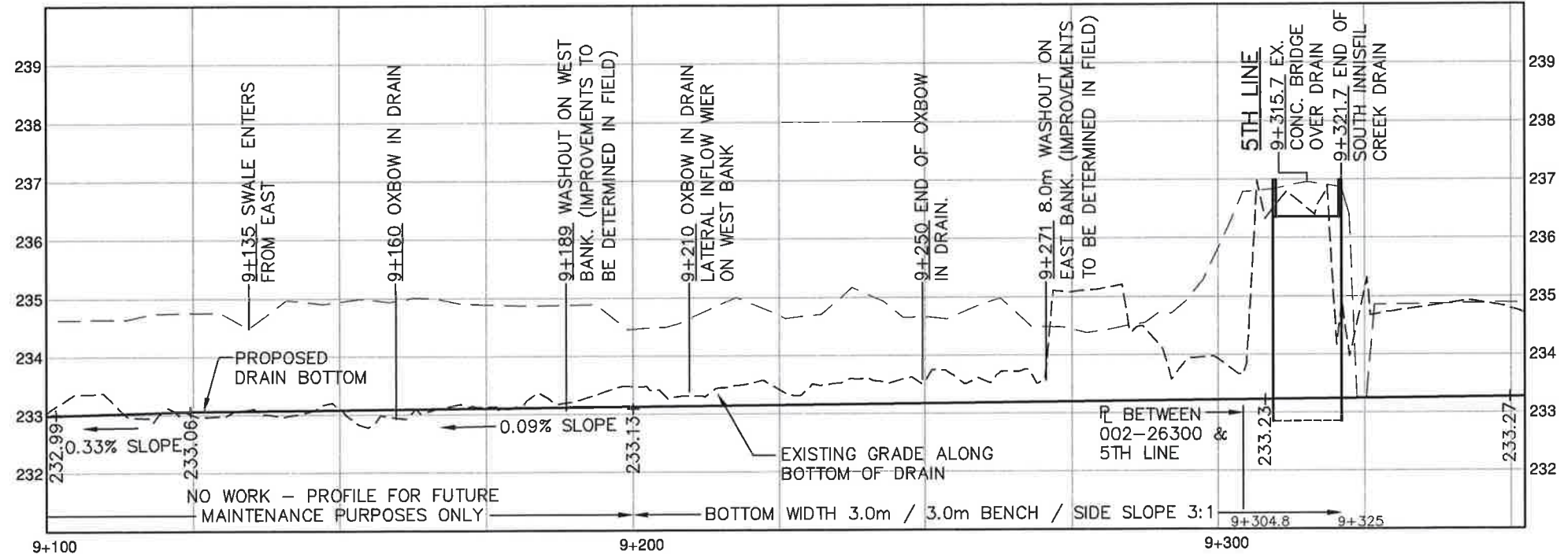
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 PROFILES 3-14  
 8+400 TO 9+100  
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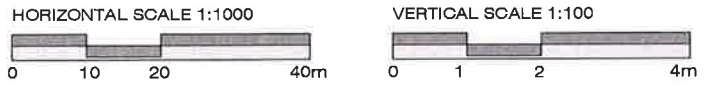
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SEE DWG. PROFILES 3-13



PROFILE STA. 9+100 TO 9+325  
SCALE: HOR 1:1000 VER 1:100

SOUTH INNISFIL CREEK



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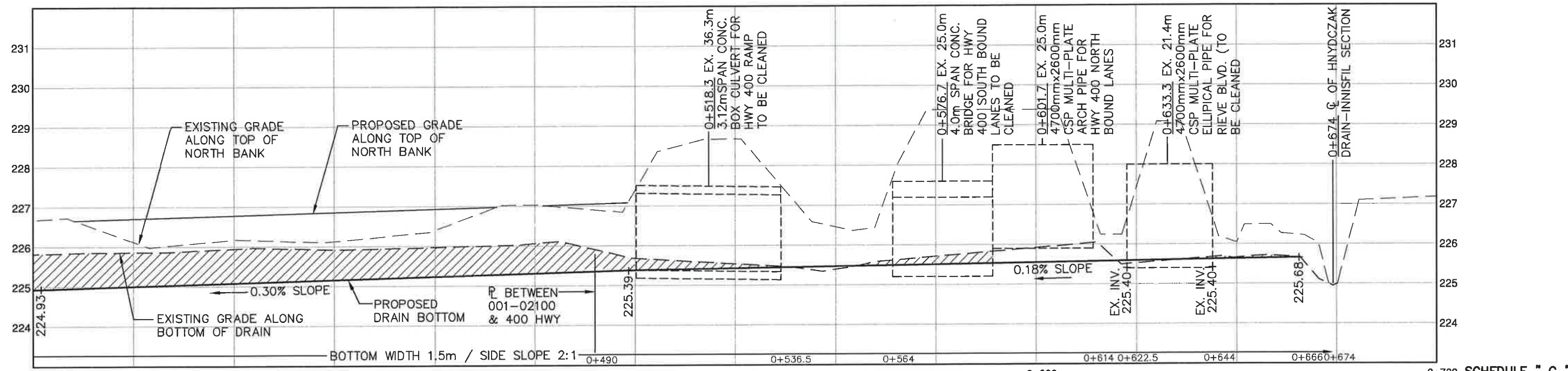
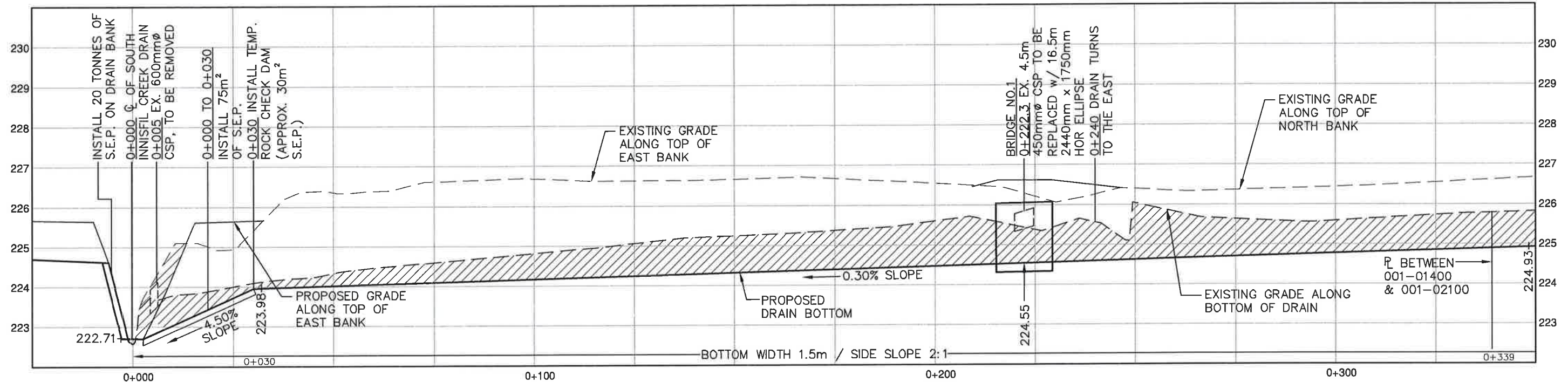
PROFILES 3-15  
9+100 TO 9+325

DRAWING SCALES BASED  
ON A 11"x17" SHEET

SCHEDULE " G "

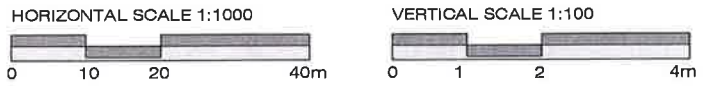
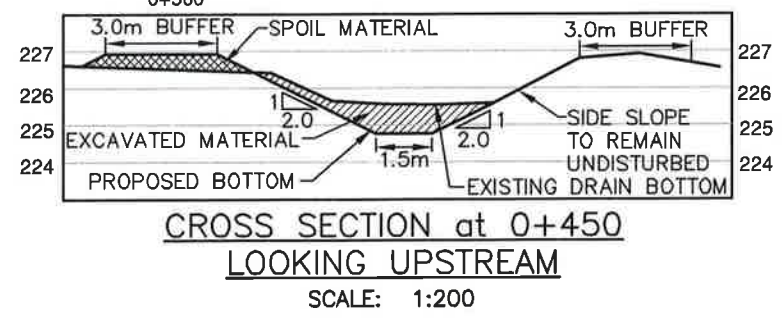
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CUT AREAS

HNYDCZAK OUTLET RELIEF DRAIN

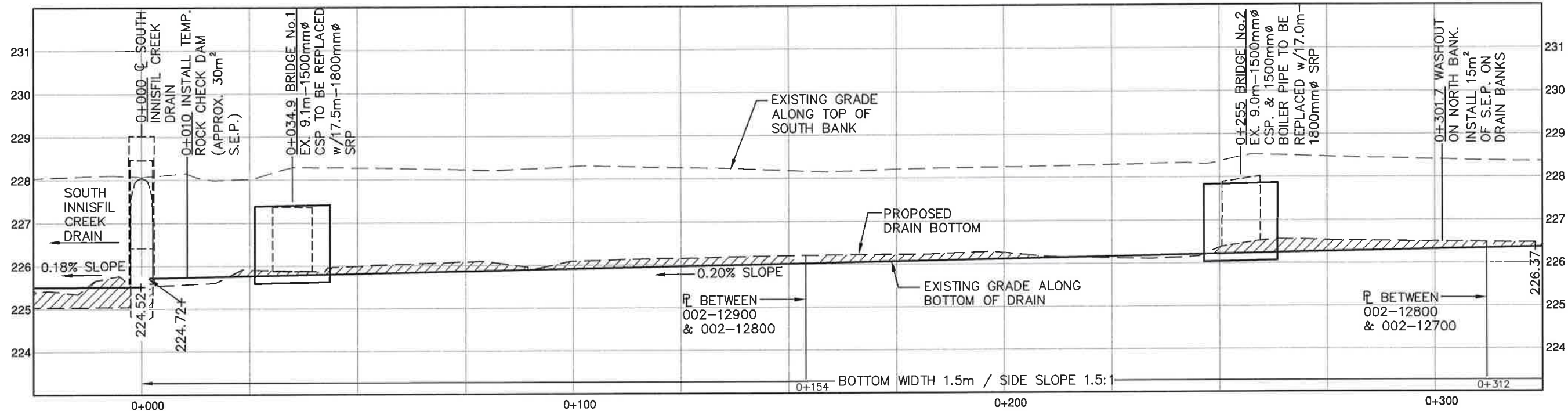


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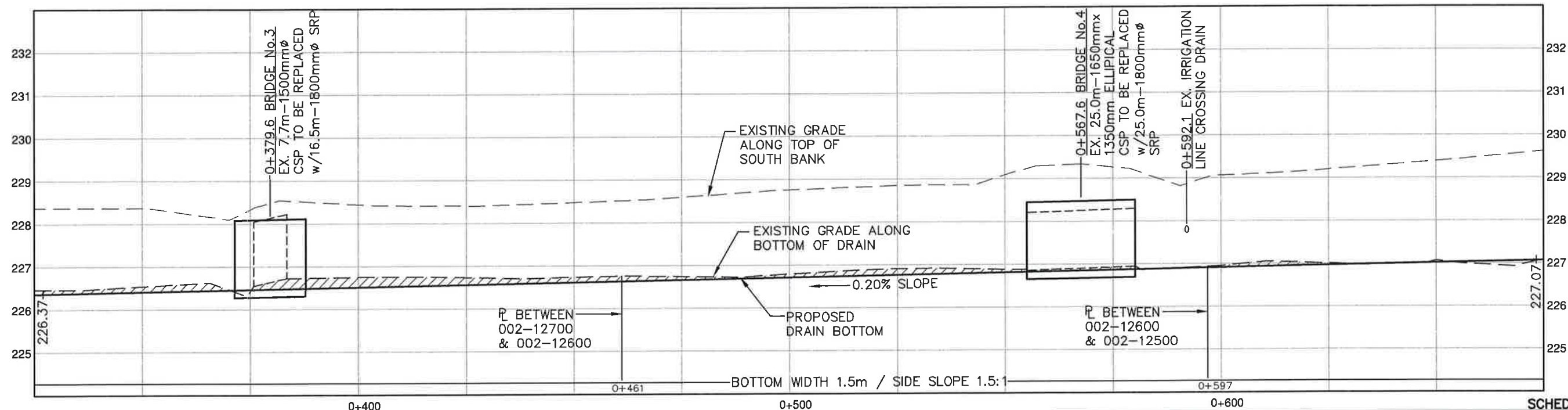
PROFILES 4-1  
 0+000 TO 0+700  
 DRAWING SCALES BASED ON A 11"x17" SHEET

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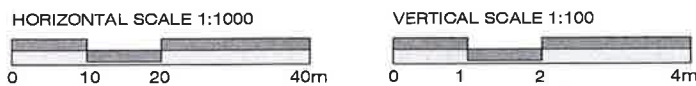
PROFILE STA. 0+000 TO 0+325  
 SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 0+325 TO 0+675  
 SCALE: HOR 1:1000 VER 1:100

CUT AREAS

3RD LINE BRANCH DRAIN



**DILLON CONSULTING**  
 PROFILES 5-1  
 0+000 TO 0+675  
 DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE "G"

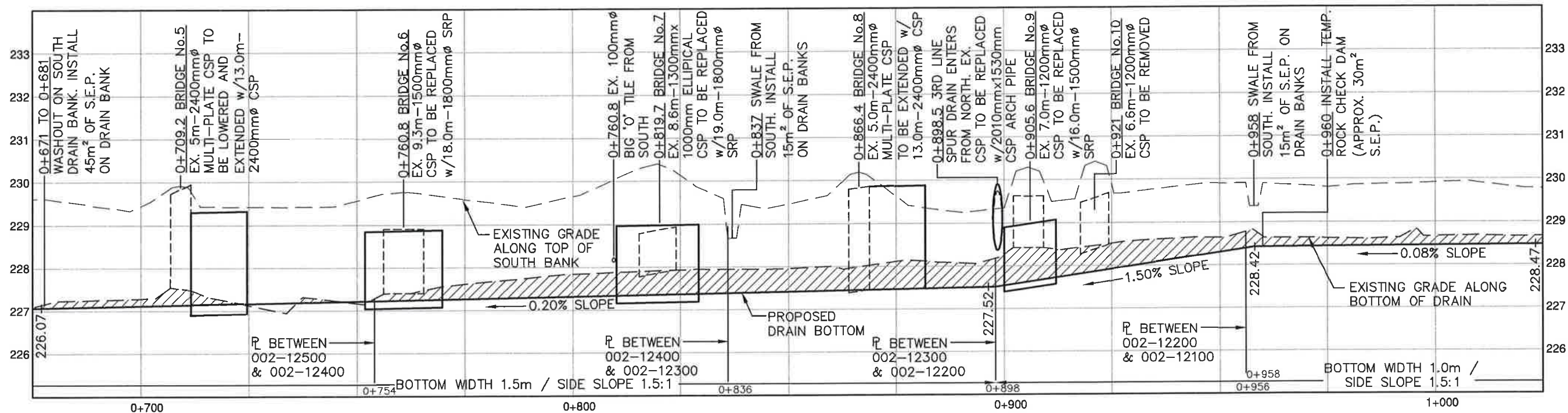
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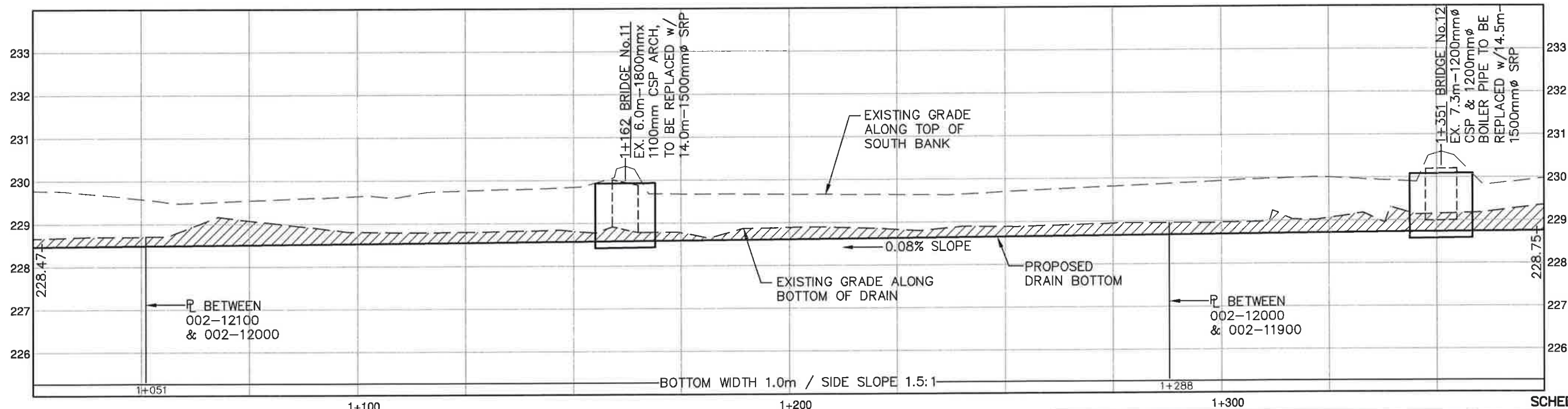
SEE DWG. PROFILES 5-2

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SEE DWG. PROFILES 5-1



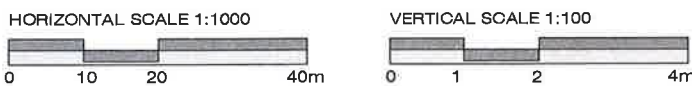
PROFILE STA. 0+675 TO 1+025  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 1+025 TO 1+375  
SCALE: HOR 1:1000 VER 1:100

CUT AREAS

3RD LINE BRANCH DRAIN



**DILLON CONSULTING**  
 PROFILES 5-2  
 0+675 TO 1+375  
 DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE "G"

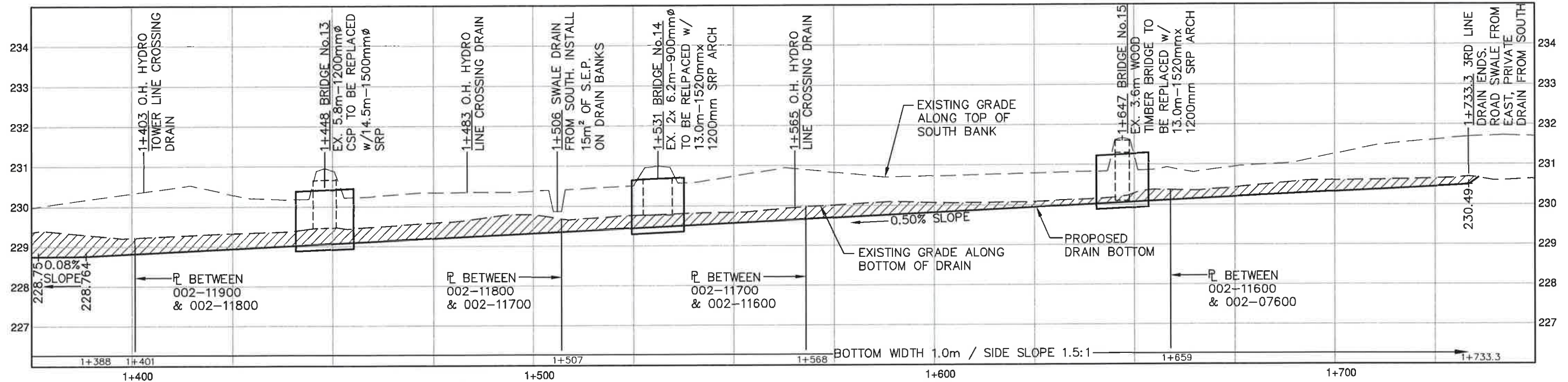
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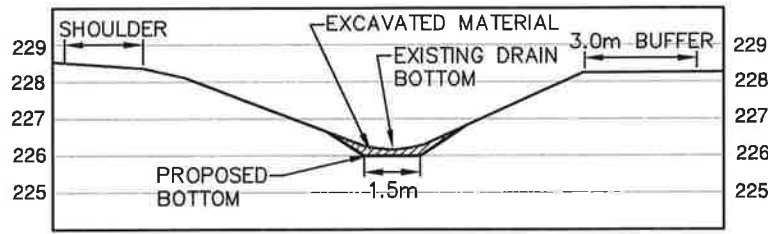
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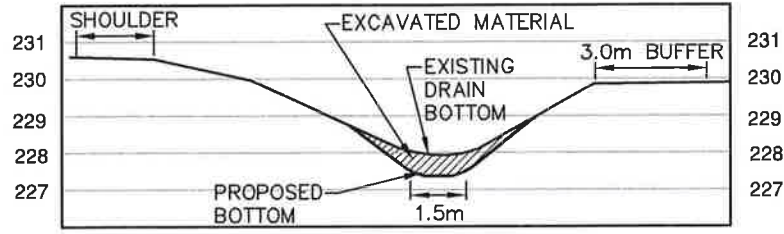
SEE DWG. PROFILES 5-2



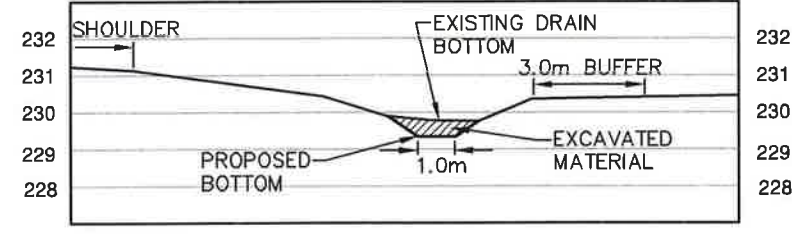
PROFILE STA. 1+375 TO 1+750  
SCALE: HOR 1:1000 VER 1:100



CROSS SECTION BETWEEN 0+140  
LOOKING UPSTREAM  
SCALE: 1:200



CROSS SECTION BETWEEN 0+830  
LOOKING UPSTREAM  
SCALE: 1:200



CROSS SECTION BETWEEN 1+505  
LOOKING UPSTREAM  
SCALE: 1:200

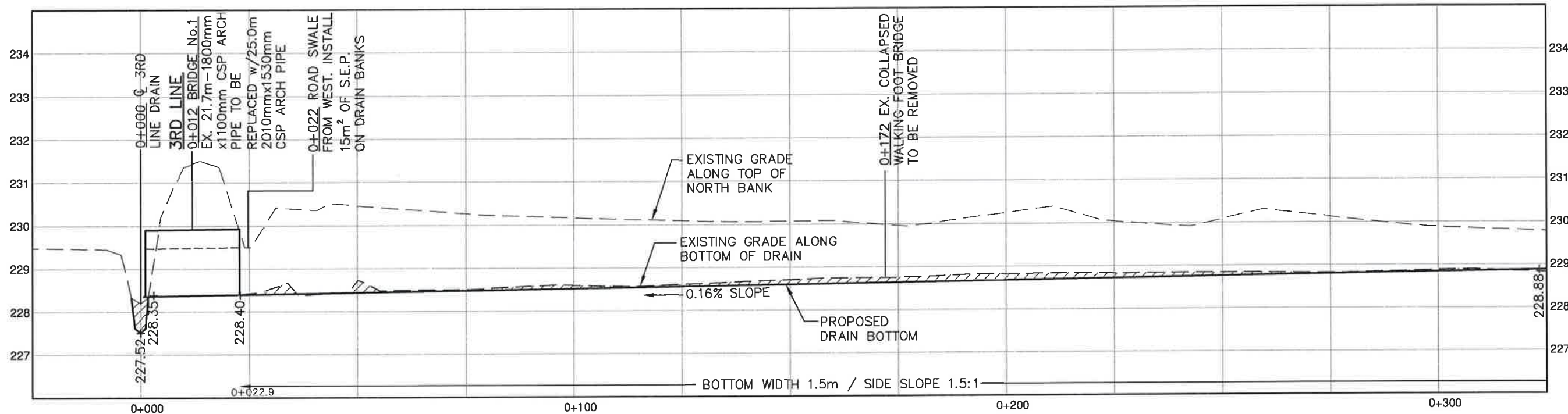


3RD LINE BRANCH DRAIN

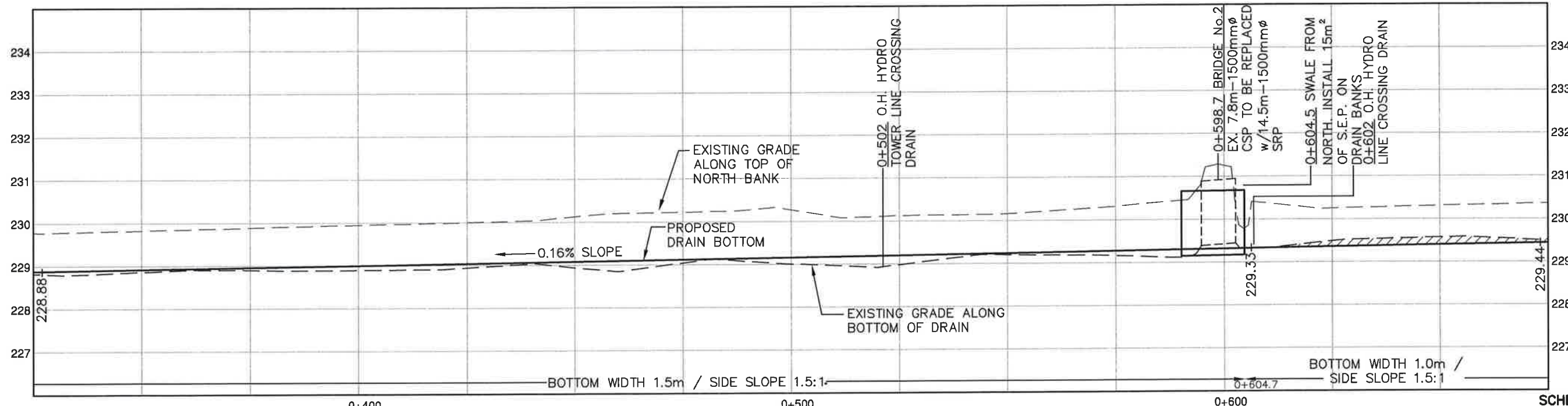


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PROFILE STA. 0+000 TO 0+325  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 0+325 TO 0+675  
SCALE: HOR 1:1000 VER 1:100

SEE DWG. PROFILES 6-2



3RD LINE SPUR DRAIN



**DILLON CONSULTING**  
**PROFILES 6-1**  
 0+000 TO 0+675  
 DRAWING SCALES BASED ON A 11"x17" SHEET

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# SOUTH INNISFIL CREEK DRAIN AND BRANCHES

## SCHEDULE G

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- 6 PLAN 1-4 - SOUTH INNISFIL CREEK DRAIN
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- 12 3RD LINE SPUR DRAIN
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- 18 SECTIONS 2-5 - SOUTH INNISFIL CREEK
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- 46 PROFILES 6-2 - 3RD LINE SPUR DRAIN STA. 0+675 to 0+800
- 47 PROFILES 7-1 - 10 SIDEROAD BRANCH STA. 0+000 to 0+675
- 48 PROFILES 7-2 - 10 SIDEROAD BRANCH STA. 0+675 to 1+375
- 49 PROFILES 7-3 - 10 SIDEROAD BRANCH STA. 1+375 to 1+525

### DRAWINGS

- 50 PLAN 8-1 - OVERFLOW AREA 1
- 51 DETAILS 8-2 - OVERFLOW AREA 1
- 52 PLAN 8-3 - OVERFLOW AREA 3
- 53 SECTIONS 8-4 - OVERFLOW AREA 3
- 54 DETAILS 8-5 - OVERFLOW AREA 3
- 55 DETAILS 9-1A - FARM ACCESS CULVERTS
- 56 DETAILS 9-1B - FARM ACCESS CULVERTS
- 57 DETAILS 9-1C - FARM ACCESS CULVERTS PILE INFORMATION
- 58 DETAILS 9-1D - FARM ACCESS CULVERTS NOTES
- 59 DETAILS 9-2 - 4th LINE BRIDGE
- 60 DETAILS 9-3 - BRANCH DRAINS ACCESS CULVERTS
- 61 CULVERT TABLES 9-4 - BRANCH DRAINS
- 62 DETAILS 10-1 - GENERAL DETAILS
- 63 DETAILS 10-2 - GENERAL DETAILS

### SCHEDULE " G "

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL  
CREEK DRAIN  
AND BRANCHES**

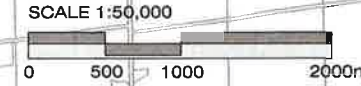
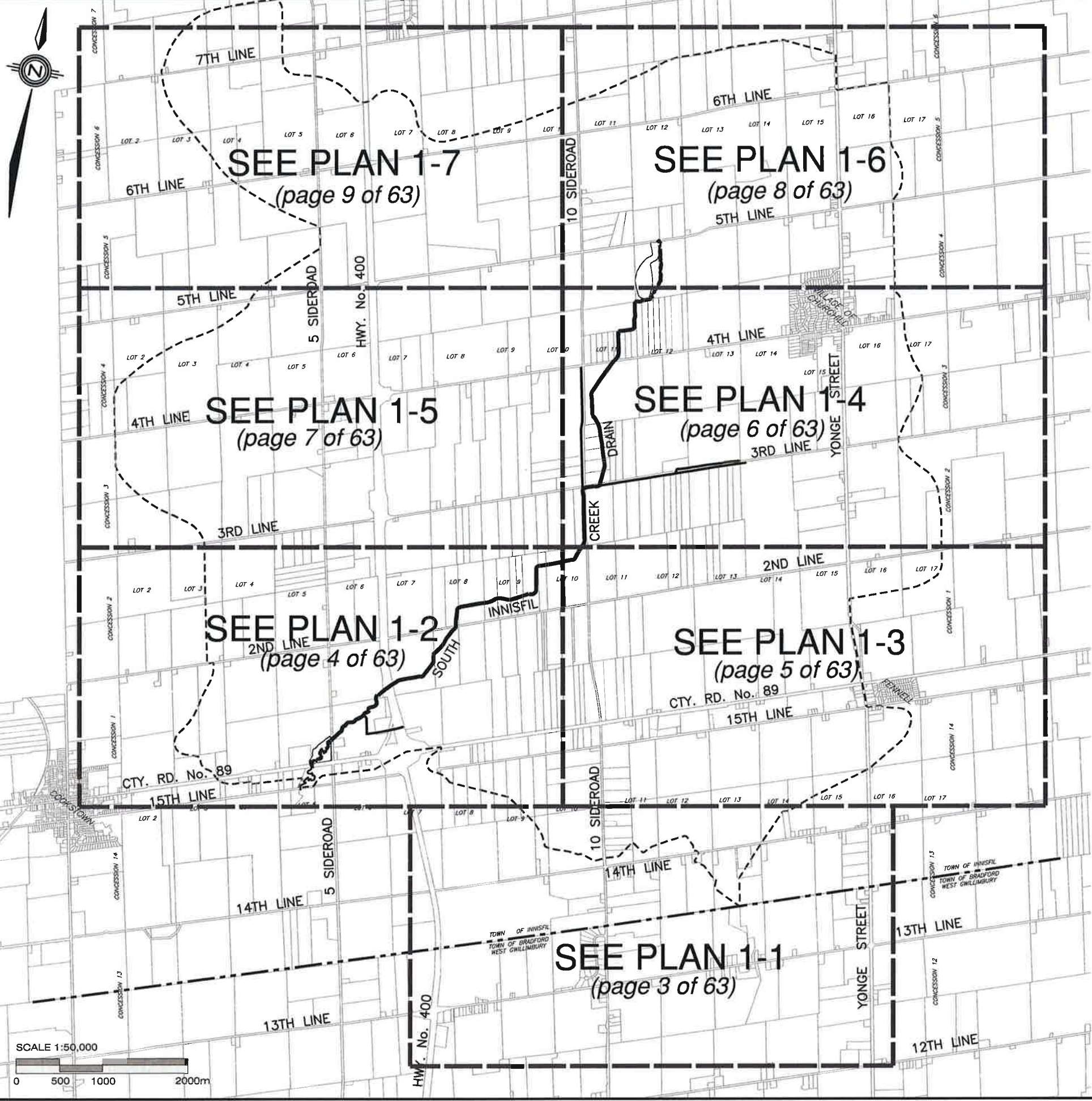
TOWN OF INNISFIL

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**BENCHMARKS**

BM1	TEMPORARY BENCH MARK BM1 (225.85m) TOP & CONC. CURB, SOUTH END OF HWY. 89 BRIDGE OVER INNISFIL DRAIN. SEE PLAN 1-2
BM7	TEMPORARY BENCH MARK BM7 (227.66m) TOP & CONC. CURB, NORTH END OF 2nd LINE BRIDGE OVER INNISFIL DRAIN. SEE PLAN 1-2
BM10	TEMPORARY BENCH MARK BM10 (228.18m) TOP & CONC. CURB, EAST END OF 10th SIDEROAD BRIDGE OVER INNISFIL DRAIN. SEE PLAN 1-4
BM11	TEMPORARY BENCH MARK BM11 (229.03m) TOP & CONC. CURB, NORTH END OF 10th SIDEROAD BRIDGE OVER INNISFIL DRAIN. SEE PLAN 1-4
BM16	TEMPORARY BENCH MARK BM16 (236.98m) TOP & CONC. CURB, SOUTH END OF 5th LINE BRIDGE OVER INNISFIL DRAIN. SEE PLAN 1-6

**LEGEND**

	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
PLAN 1-1	DRAWING REFERENCE NUMBER



**DILLON CONSULTING**

OVERALL PLAN

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

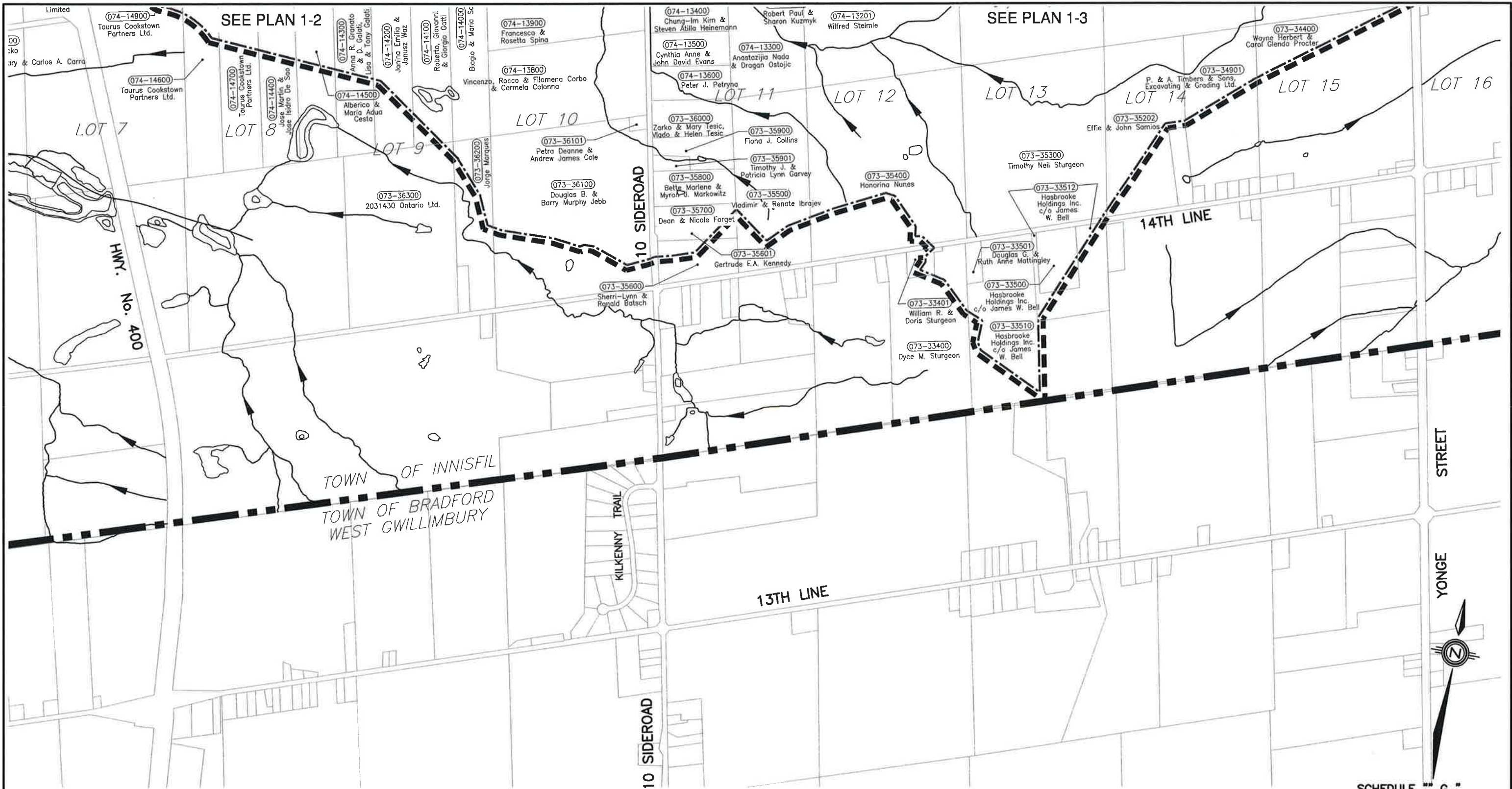
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**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

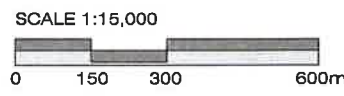
TOWN OF INNISFIL

1 MARCH 2013
PROJECT No. 05-4787
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May 16, 2013 - 4:07pm \\dillon.ca\dfs\Oakville\CAD\cad\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Drain Dwg 1-1.dwg



SCHEDULE "G"



LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
PLAN 1-1	DRAWING REFERENCE NUMBER
	OTHER MUNICIPAL DRAINS
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED



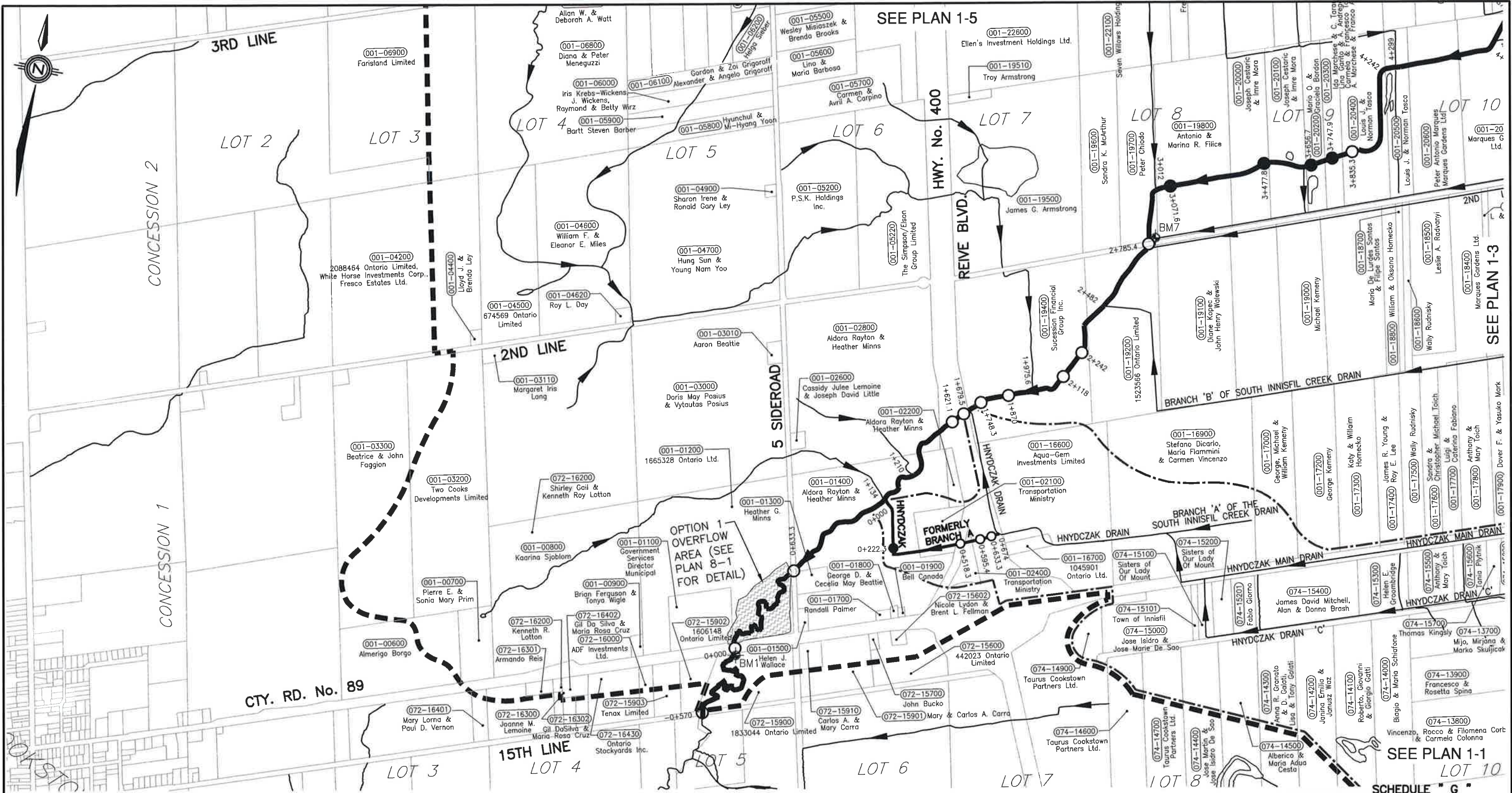
**DILLON CONSULTING**

PLAN 1-1

DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
1 MARCH 2013	
PROJECT No. 05-4787	
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May 16, 2013 4:10pm \\dillon.ca\dillon\dfs\Oakville\CAD\cad\2005\05 4787 South Innisfil Creek Drain\02-Sheets\054787 Drain Dwg 1-2.dwg



BM1 TEMPORARY BENCH MARK BM1 (225.85m)  
 TOP OF CONC. CURB, SOUTH END OF  
 HWY. 89 BRIDGE OVER INNISFIL DRAIN  
  
 BM7 TEMPORARY BENCH MARK BM7 (227.66m)  
 TOP OF CONC. CURB, NORTH END OF  
 2nd LINE BRIDGE OVER INNISFIL DRAIN  
  
 SCALE 1:15,000  
 0 150 300 600m

LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	PLAN 1-1 DRAWING REFERENCE NUMBER
	OTHER MUNICIPAL DRAINS
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED



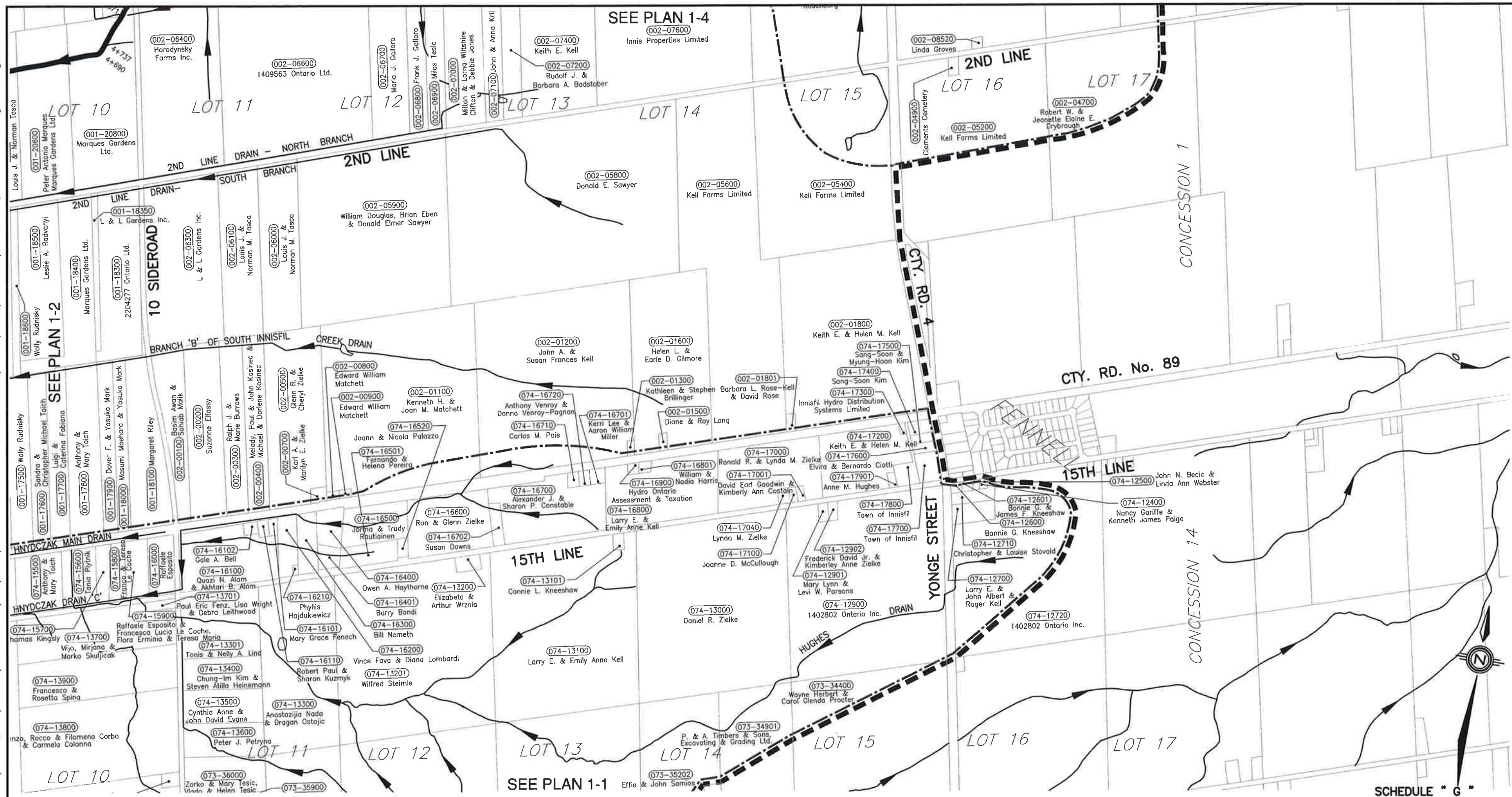
**DILLON CONSULTING**  
 PLAN 1-2  
 DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**  
 TOWN OF INNISFIL  
 1 MARCH 2013  
 PROJECT No. 05-4787  
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SEE PLAN 1-1  
LOT 10  
SCHEDULE "G"

SEE PLAN 1-3

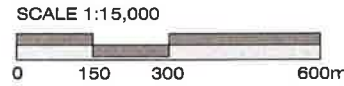
SEE PLAN 1-5



SEE PLAN 1-4

SEE PLAN 1-1

SCHEDULE "G"



LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	PLAN 1-1 DRAWING REFERENCE NUMBER
	OTHER MUNICIPAL DRAINS
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED

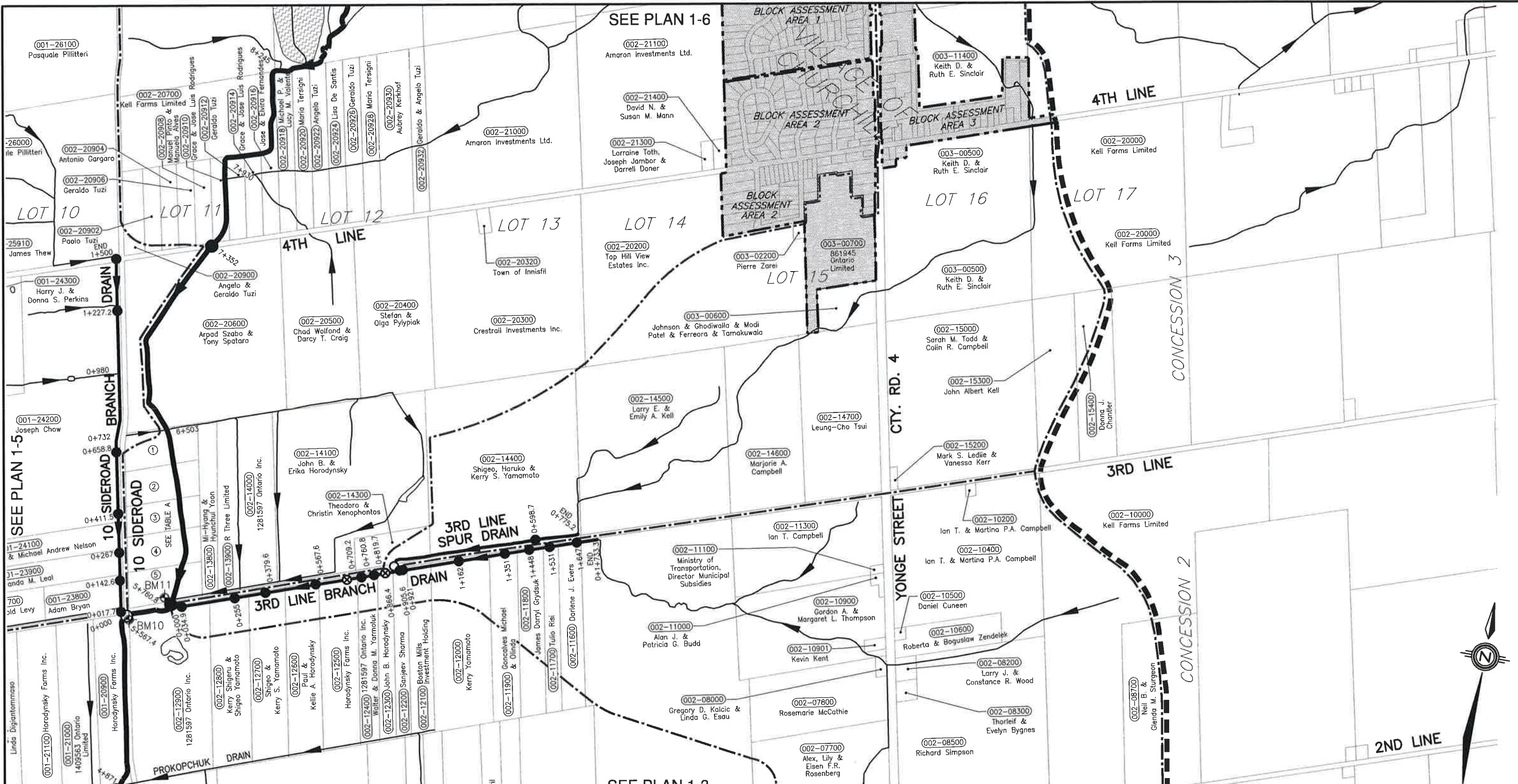


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PLAN 1-3

DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
1 MARCH 2013	
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TEMPORARY BENCH MARK  
 BM10 (228.18m) TOP € CONC.  
 CURB, EAST END OF 10th SIDEROAD  
 BRIDGE OVER INNISFIL DRAIN  
 TEMPORARY BENCH MARK  
 BM11 (229.03m) TOP € CONC.  
 CURB, NORTH END OF 10th  
 SIDEROAD BRIDGE OVER  
 INNISFIL DRAIN

SCALE 1:15,000

**TABLE A**

No.	ROLL No.	OWNER NAMES
1	002-13300	Christina Bova & Susan Liberatore
2	002-13400	Gina Norrie
3	002-13500	Michael J. & Brenda J. McCarthy
4	002-13600	Eugenio Carbone & Iris Curtis
5	002-13700	Lubica & Danny Martinovski, Peter & Diana Efstathiadis

**LEGEND**

- SOUTH INNISFIL CREEK DRAIN
- MUNICIPAL BRANCH DRAINS
- SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
- TOWNSHIP BOUNDARY
- DRAWING REFERENCE NUMBER
- DRAIN NAME
- OTHER MUNICIPAL DRAINS
- NATURAL TRIBUTARIES
- BRANCH DRAIN WATERSHED
- EXISTING BRIDGE
- BRIDGE TO BE REPLACED
- BRIDGE TO BE LOWERED



**DILLON CONSULTING**

PLAN 1-4

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE "G"**

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL

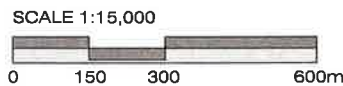
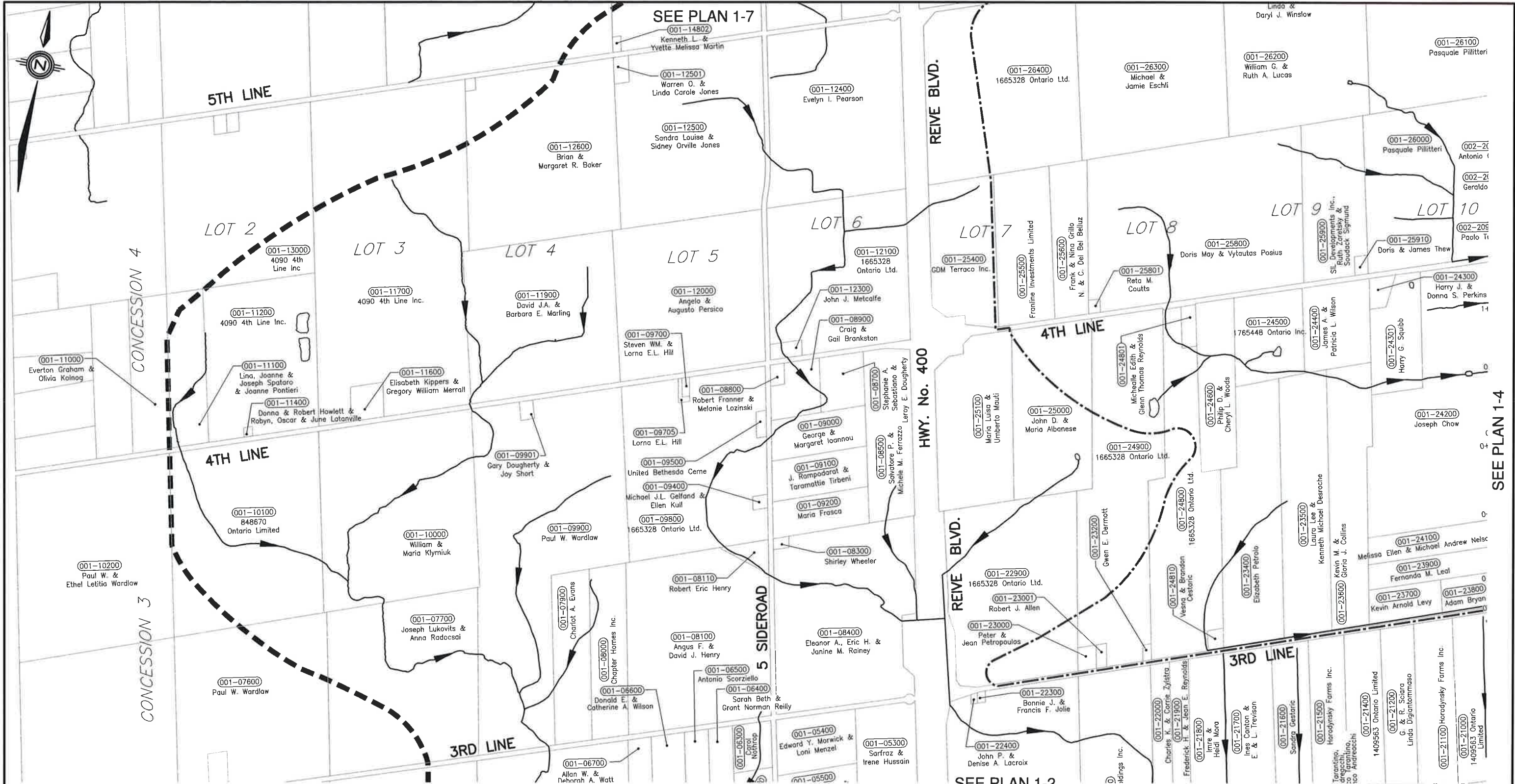
1 MARCH 2013

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May 16, 2013 - 4:16pm \\dillon\_cad\dfs\Oakville\CAD\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Drain Dwg 1-5.dwg



**LEGEND**

- SOUTH INNISFIL CREEK DRAIN
- MUNICIPAL BRANCH DRAINS
- SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
- TOWNSHIP BOUNDARY
- PLAN 1-1 DRAWING REFERENCE NUMBER
- DRAIN NAME
- OTHER MUNICIPAL DRAINS
- NATURAL TRIBUTARIES
- BRANCH DRAIN WATERSHED
- EXISTING BRIDGE
- BRIDGE TO BE REPLACED
- BRIDGE TO BE LOWERED

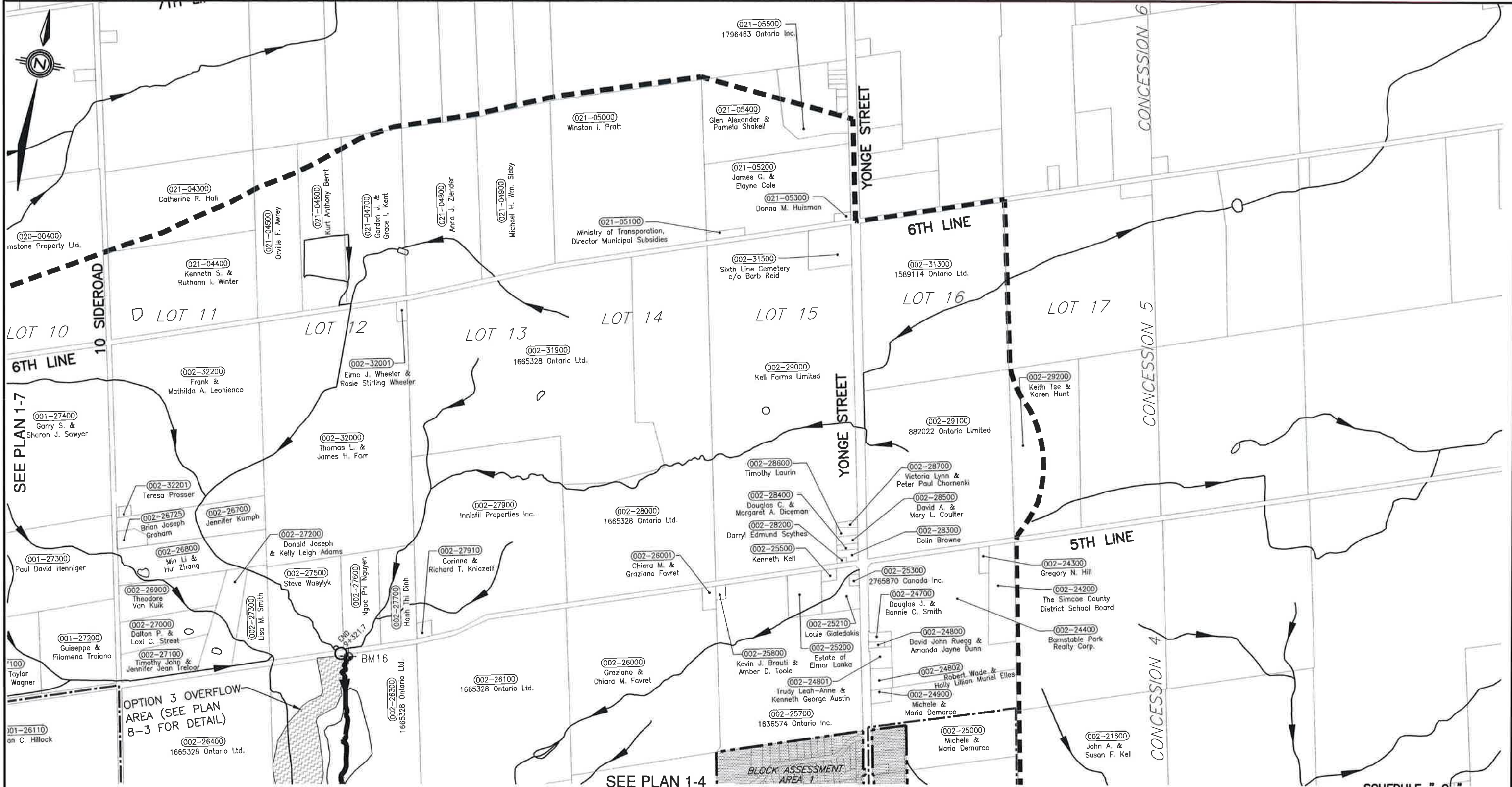


**DILLON CONSULTING**  
PLAN 1-5  
DRAWING SCALES BASED ON A 11"x17" SHEET

**DRAINAGE REPORT FOR THE SOUTH INNISFIL CREEK DRAIN AND BRANCHES**  
TOWN OF INNISFIL  
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May 16, 2013 - 4:17pm \\dillon.ca\dillon\dfs\Oakville\CAD\cad\2005\05 4787 South Innisfil Creek Drain\02-Sheets\054787 Drain Dwg 1-6.dwg



BM16  
 TEMPORARY BENCH MARK BM16 (236.98m)  
 TOP € CONC. CURB, SOUTH END OF  
 5th LINE BRIDGE OVER INNISFIL DRAIN



LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	PLAN 1-1 DRAWING REFERENCE NUMBER
	DRAIN NAME
	OTHER MUNICIPAL DRAINS
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED



**DILLON**  
 CONSULTING

PLAN 1-6

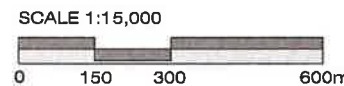
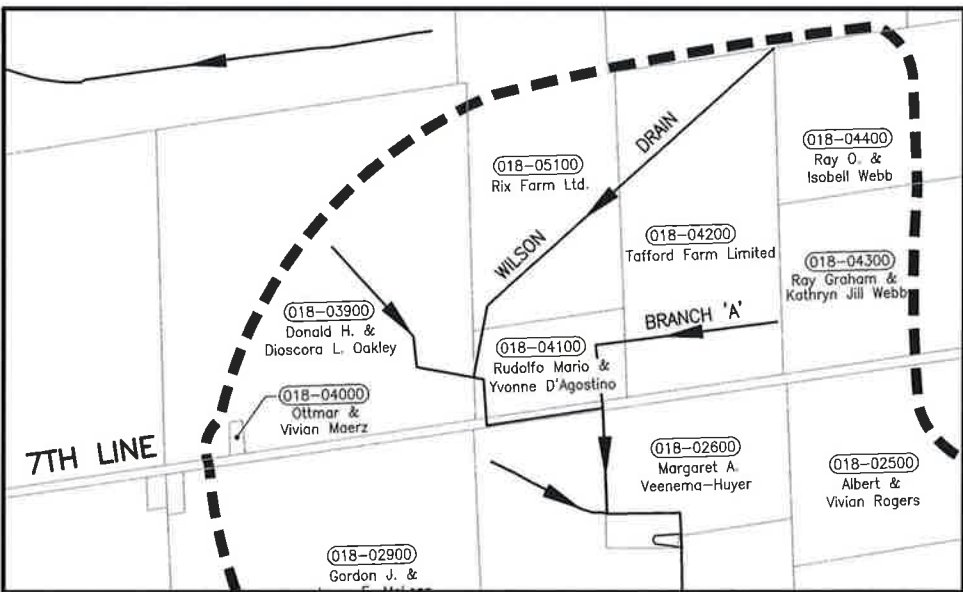
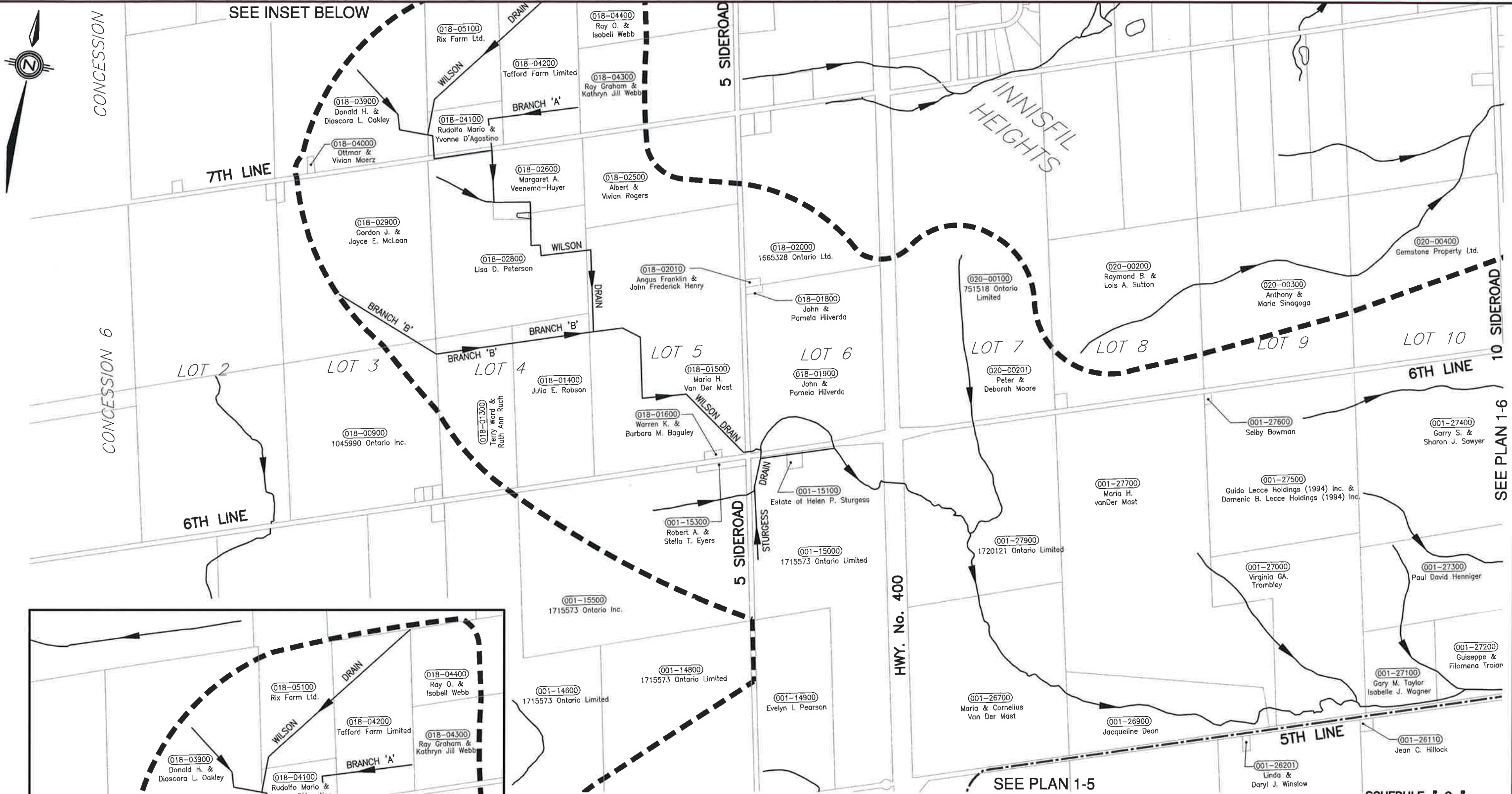
DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
1 MARCH 2013	
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SCHEDULE "G"



May 16, 2013 - 4:18pm \\dillon.ca\dillon\_efs\Oakville\CAD\cod\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Drain Dwg 1-7.dwg



LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	OTHER MUNICIPAL DRAINS
	PLAN 1-1 DRAWING REFERENCE NUMBER



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PLAN 1-7

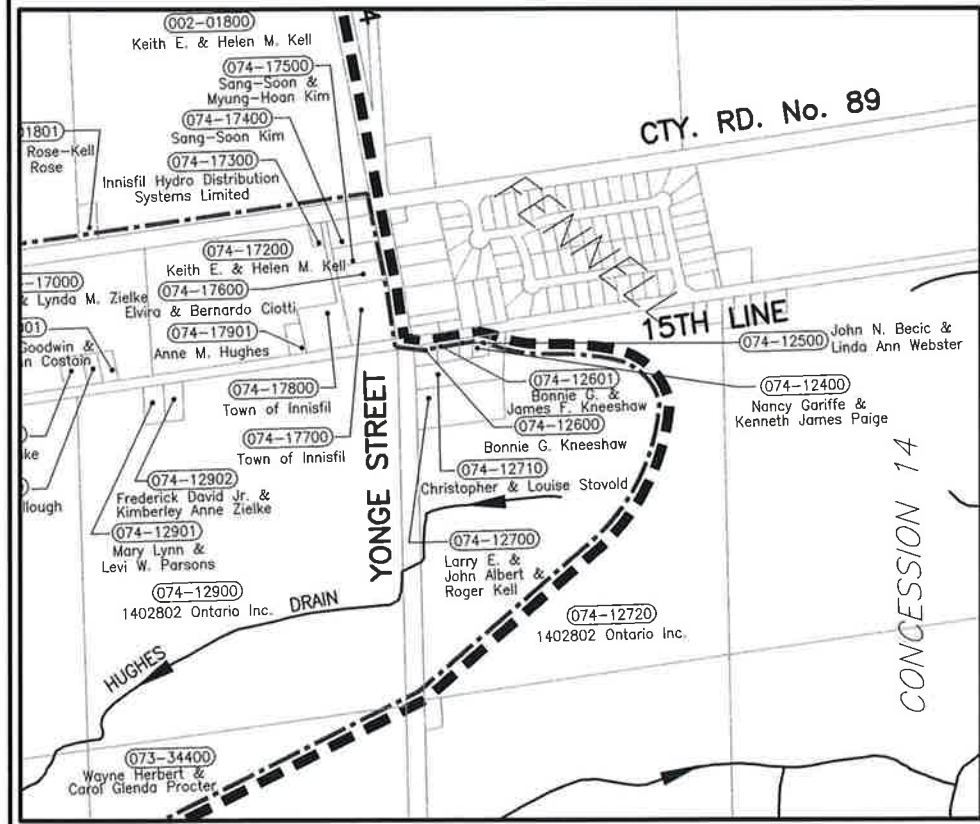
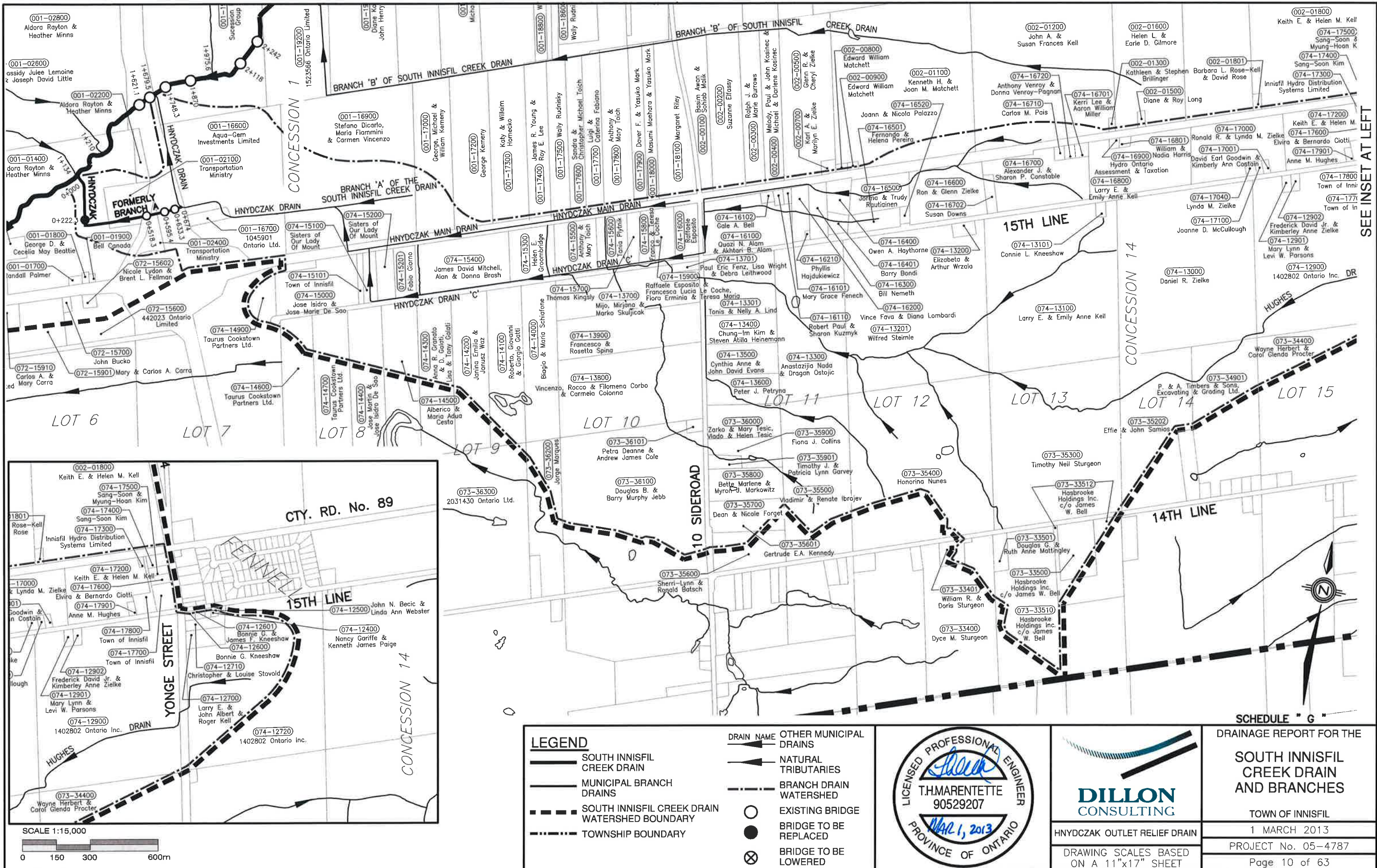
DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE "G"	
DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
1 MARCH 2013	
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SEE PLAN 1-6

SEE PLAN 1-5

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**LEGEND**

	SOUTH INNISFIL CREEK DRAIN		OTHER MUNICIPAL DRAINS
	MUNICIPAL BRANCH DRAINS		NATURAL TRIBUTARIES
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY		BRANCH DRAIN WATERSHED
	TOWNSHIP BOUNDARY		EXISTING BRIDGE
			BRIDGE TO BE REPLACED
			BRIDGE TO BE LOWERED



**DILLON CONSULTING**

HNYDCZAK OUTLET RELIEF DRAIN

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE "G"**

**DRAINAGE REPORT FOR THE SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

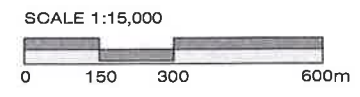
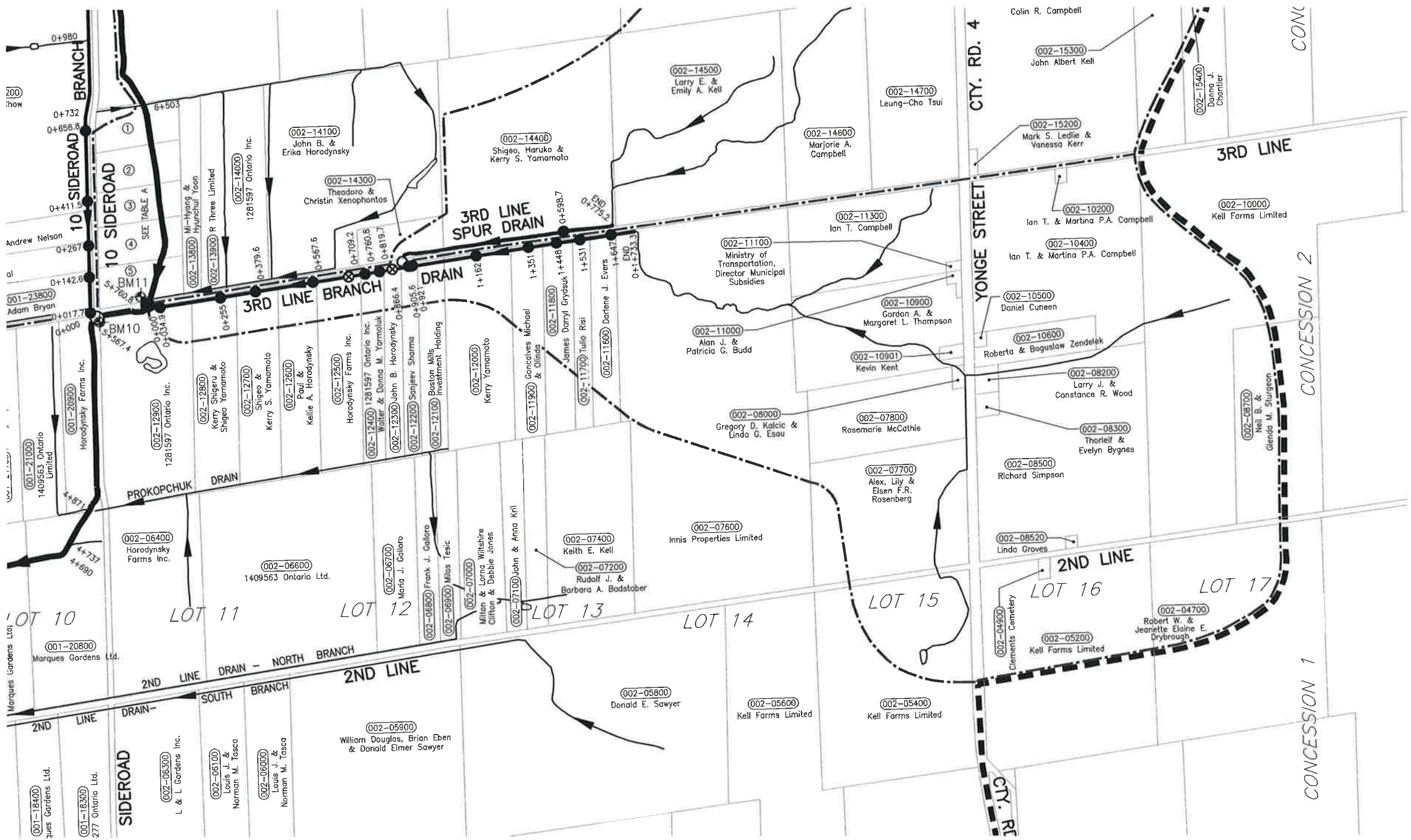
TOWN OF INNISFIL

1 MARCH 2013

PROJECT No. 05-4787

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SEE INSET AT LEFT



LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	OTHER MUNICIPAL DRAINS
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED



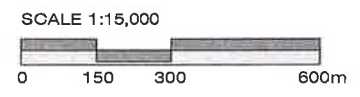
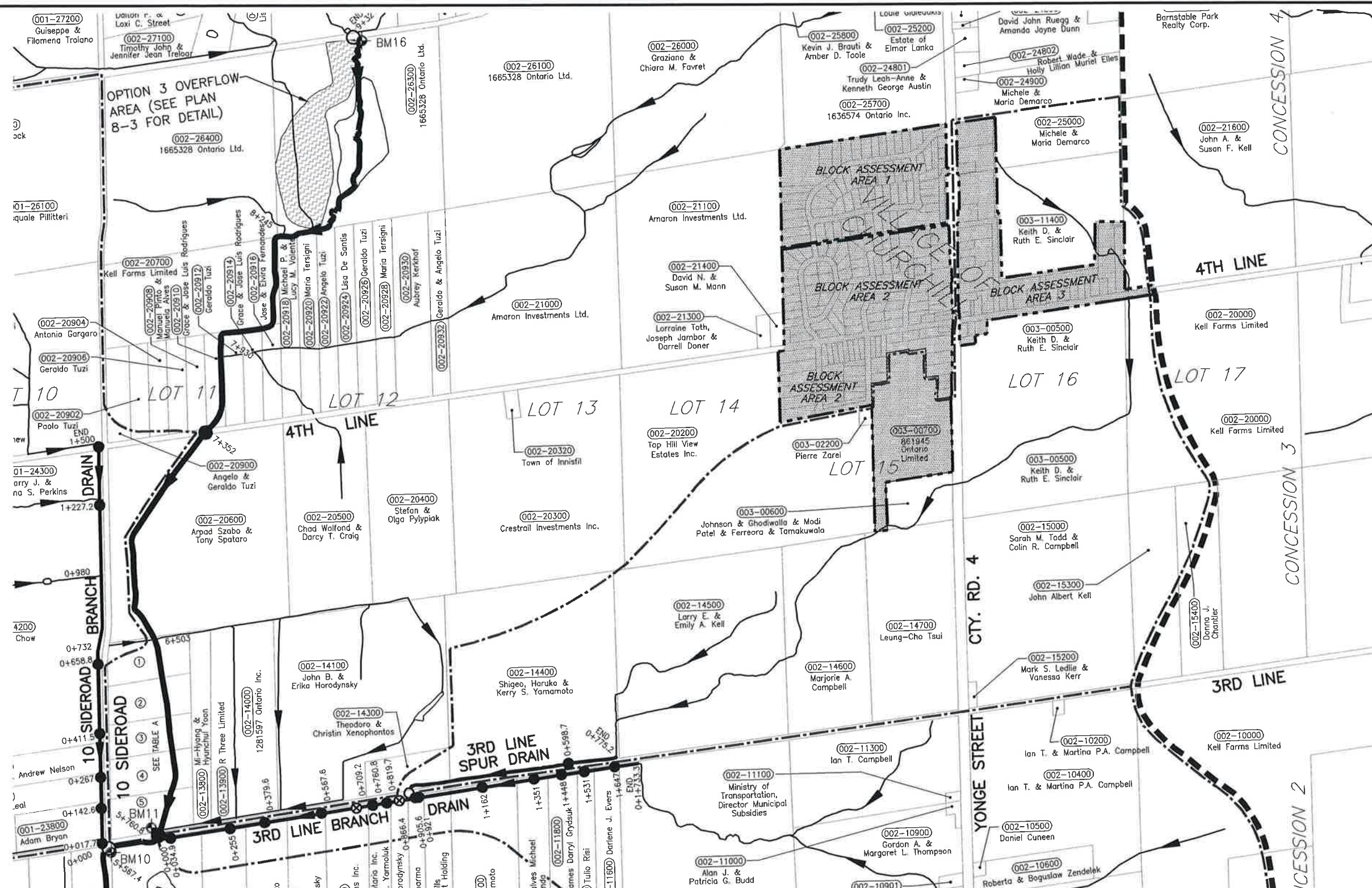
**DILLON CONSULTING**

**3RD LINE BRANCH DRAIN**

DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE " G "	
DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
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Mar 06, 2013 - 2:41pm \\dillon.ca\DILLON\_DFS\Oakville\CAD\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Drain 1-10.dwg



LEGEND	
	SOUTH INNISFIL CREEK DRAIN
	MUNICIPAL BRANCH DRAINS
	SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
	TOWNSHIP BOUNDARY
	DRAIN NAME
	NATURAL TRIBUTARIES
	BRANCH DRAIN WATERSHED
	EXISTING BRIDGE
	BRIDGE TO BE REPLACED
	BRIDGE TO BE LOWERED



**DILLON CONSULTING**

**3RD LINE SPUR DRAIN**

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

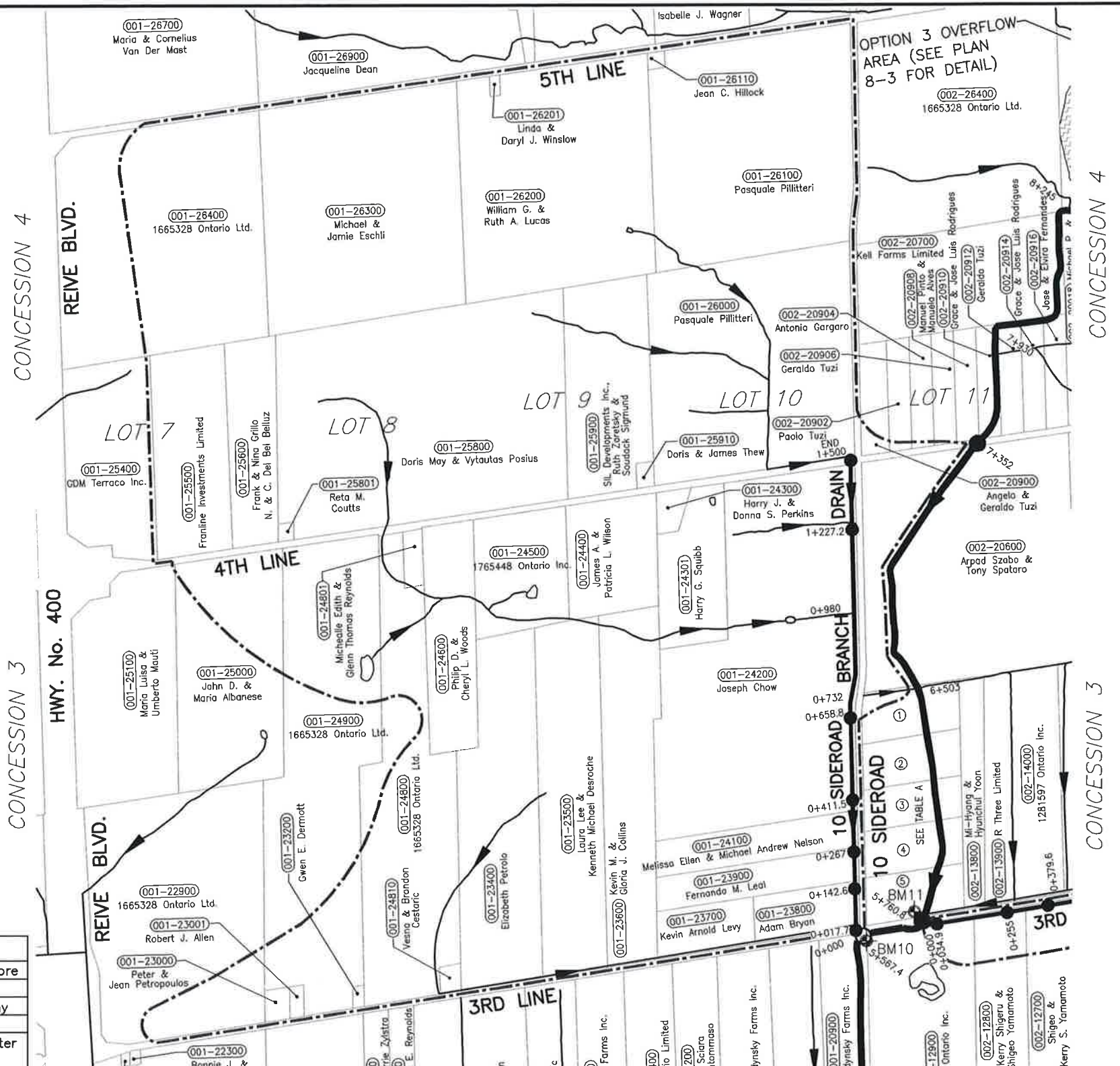
**DRAINAGE REPORT FOR THE SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL

1 MARCH 2013

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**TABLE A**

No.	ROLL No.	OWNER NAMES
1	002-13300	Christina Bova & Susan Liberatore
2	002-13400	Gina Norrie
3	002-13500	Michael J. & Brenda J. McCarthy
4	002-13600	Eugenio Carbone & Iris Curtis
5	002-13700	Lubica & Danny Martinovski, Peter & Diana Efstathiadis

**BM10** TEMPORARY BENCH MARK BM10 (228.18m)  
 TOP € CONC. CURB, EAST END OF 10th  
 SIDEROAD BRIDGE OVER INNISFIL DRAIN  
  
**BM11** TEMPORARY BENCH MARK BM11 (229.03m)  
 TOP € CONC. CURB, NORTH END OF 10th  
 SIDEROAD BRIDGE OVER INNISFIL DRAIN  
  
 SCALE 1:15,000

**LEGEND**

- SOUTH INNISFIL CREEK DRAIN
- MUNICIPAL BRANCH DRAINS
- SOUTH INNISFIL CREEK DRAIN WATERSHED BOUNDARY
- TOWNSHIP BOUNDARY
- DRAIN NAME
- OTHER MUNICIPAL DRAINS
- NATURAL TRIBUTARIES
- BRANCH DRAIN WATERSHED
- EXISTING BRIDGE
- BRIDGE TO BE REPLACED
- BRIDGE TO BE LOWERED



**DILLON CONSULTING**

10 SIDEROAD BRANCH DRAIN

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

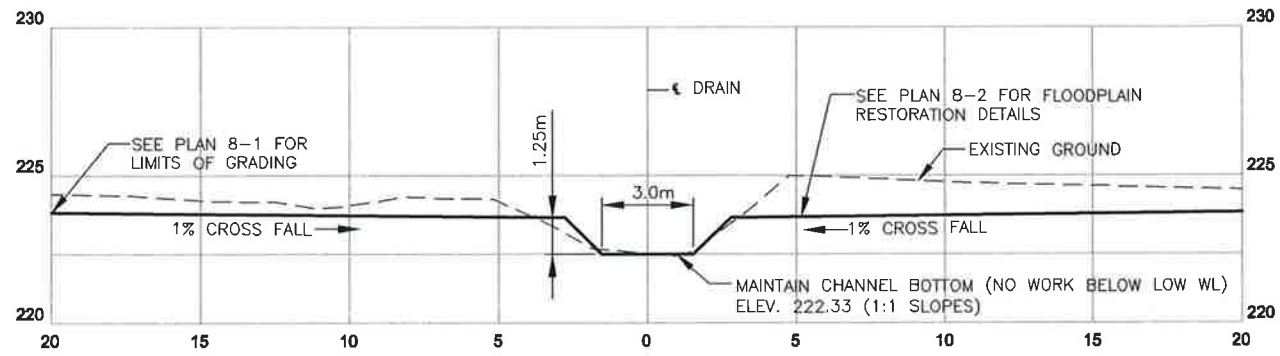
TOWN OF INNISFIL

1 MARCH 2013

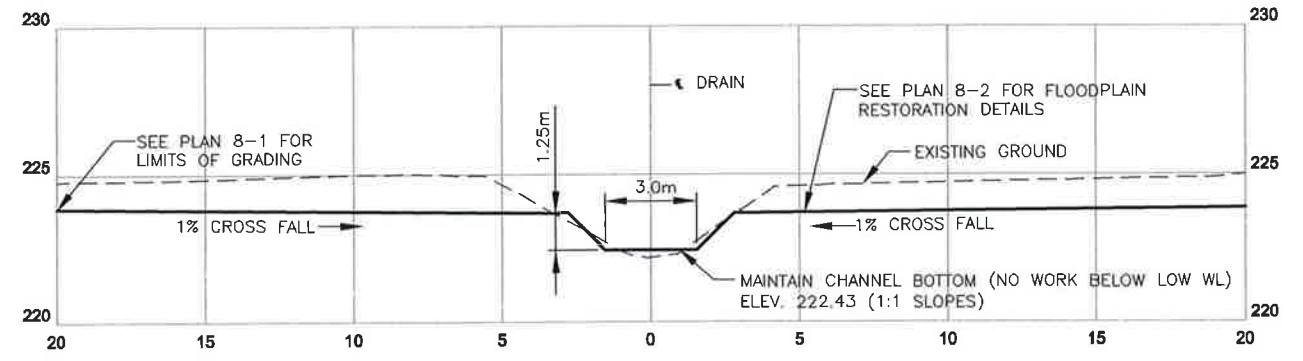
PROJECT No. 05-4787

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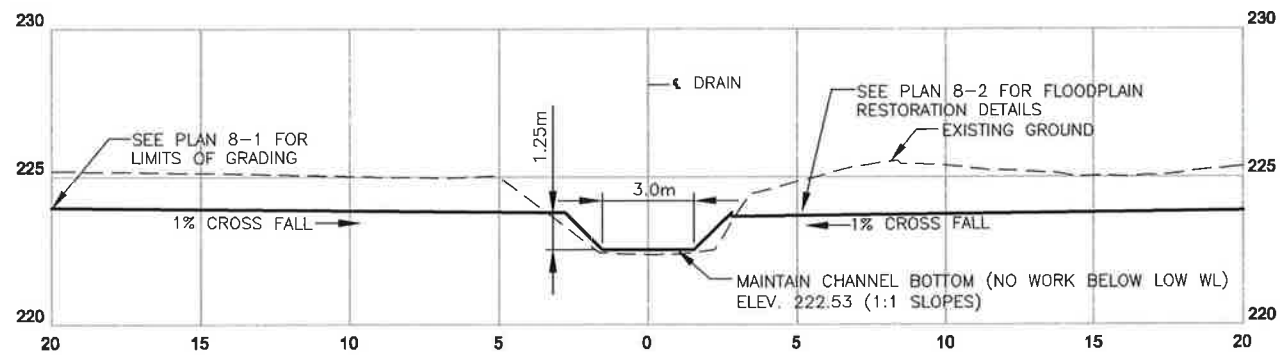
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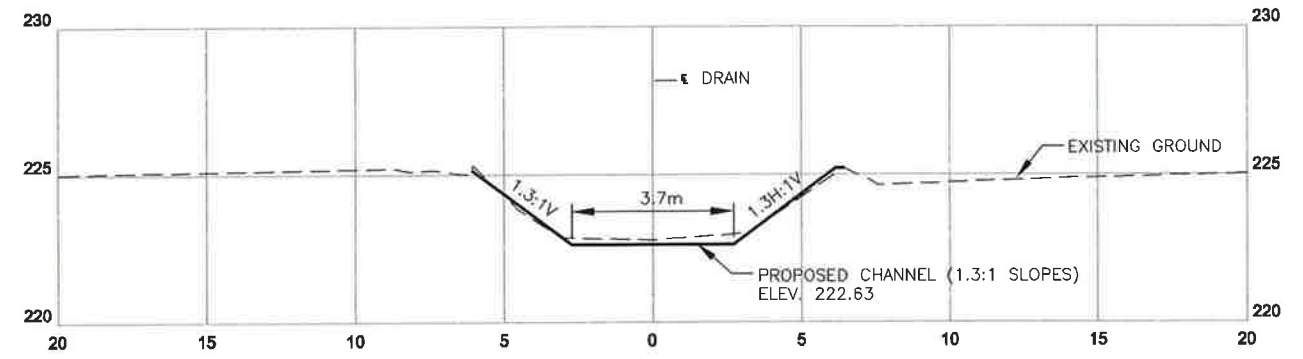
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**STATION 0+300**



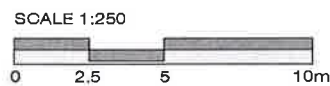
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**STATION 0+700**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM

SCHEDULE " G "



**DILLON CONSULTING**

**SECTIONS 2-1**

DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

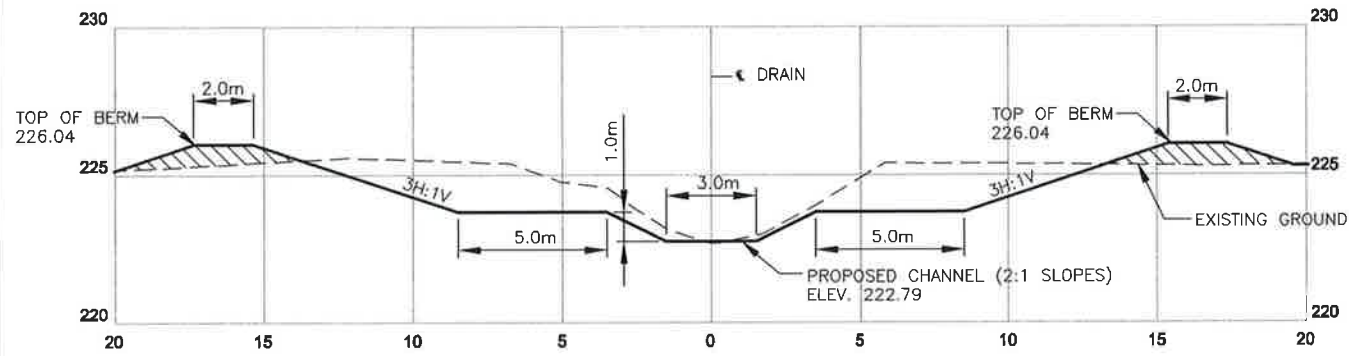
TOWN OF INNISFIL

1 MARCH 2013

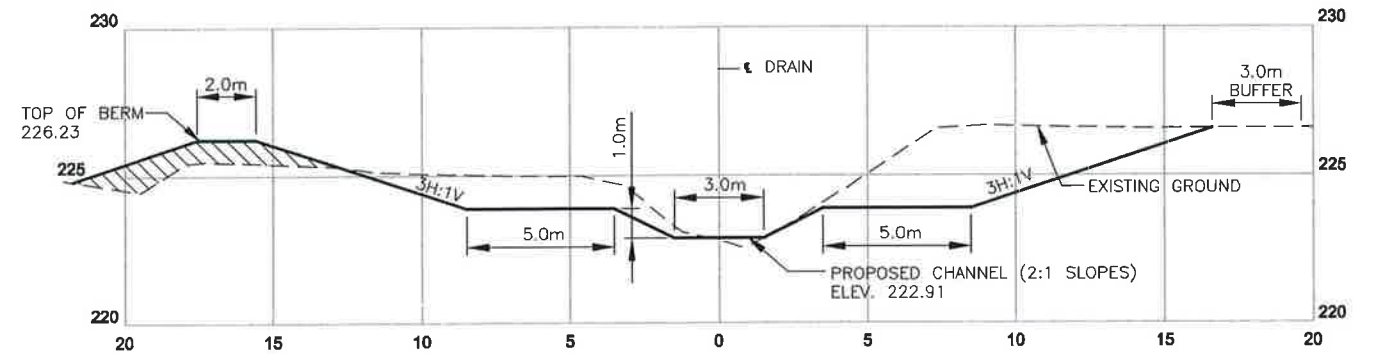
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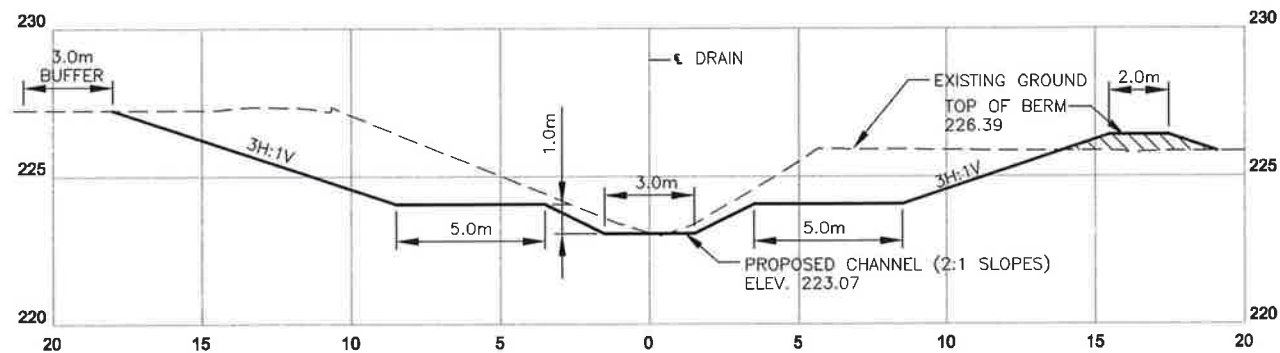
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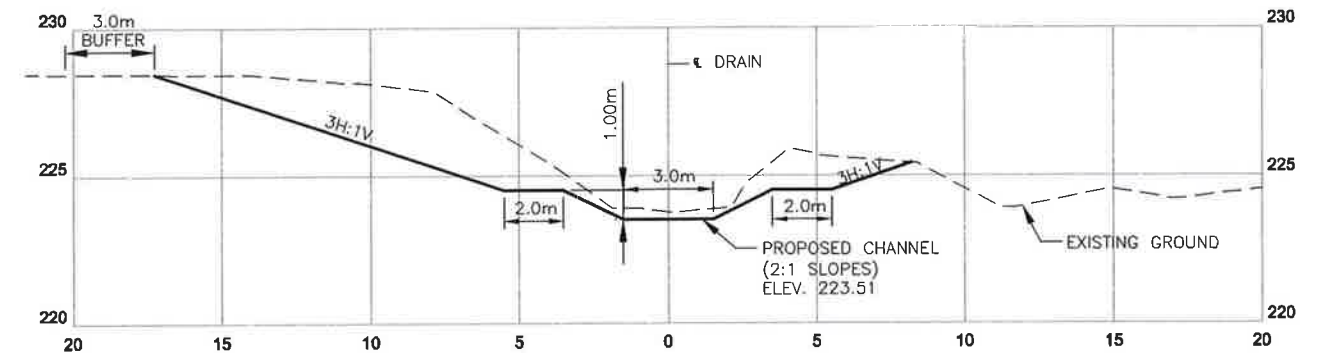
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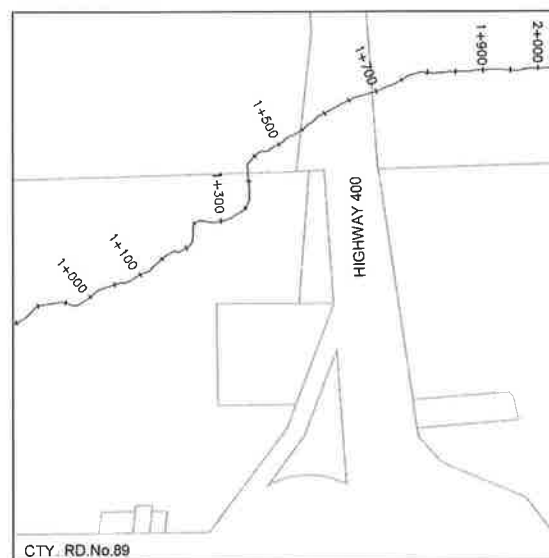
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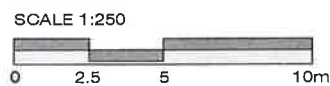
**STATION 1+500**



**STATION 1+700**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM



**DILLON CONSULTING**

SECTIONS 2-2

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

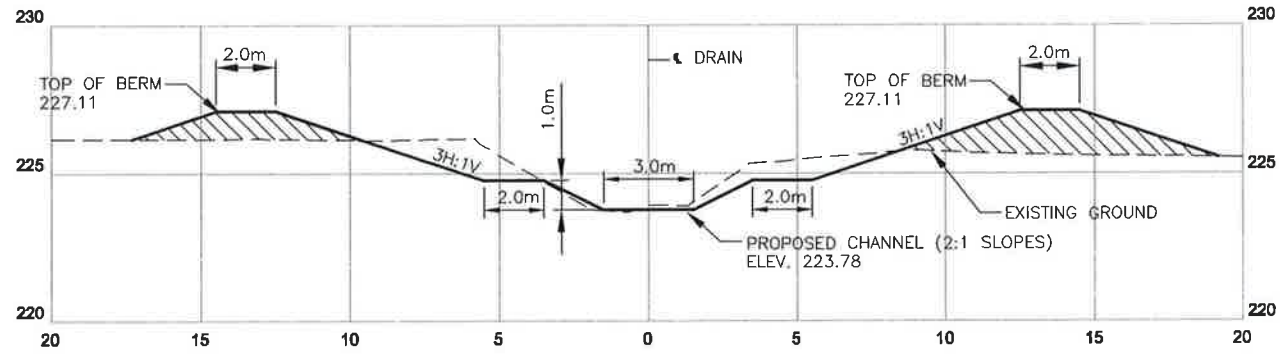
TOWN OF INNISFIL

1 MARCH 2013

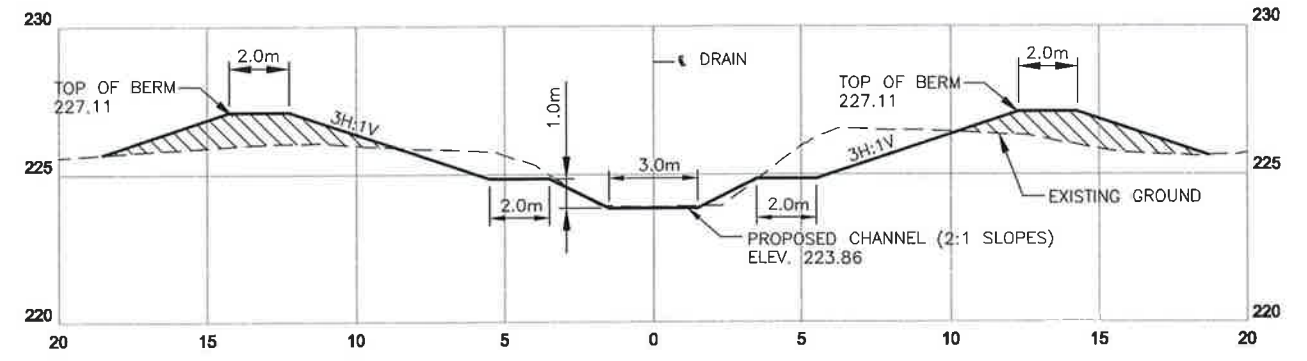
PROJECT No. 05-4787

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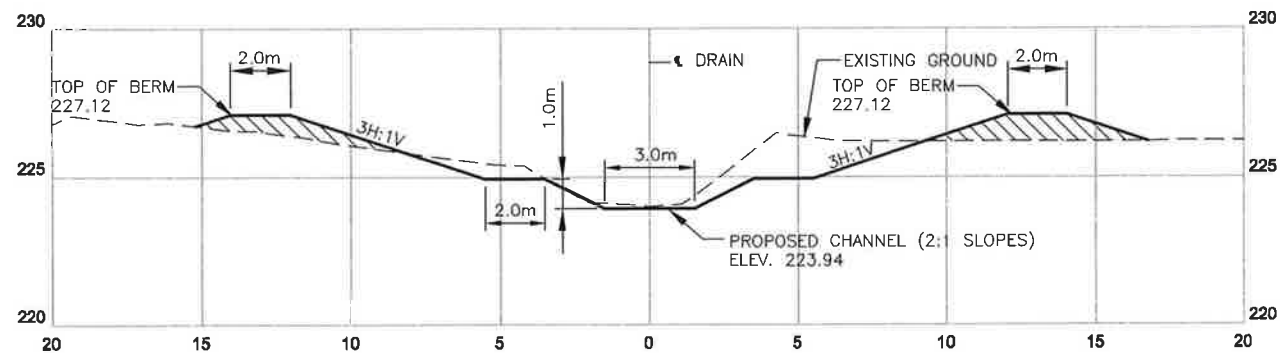
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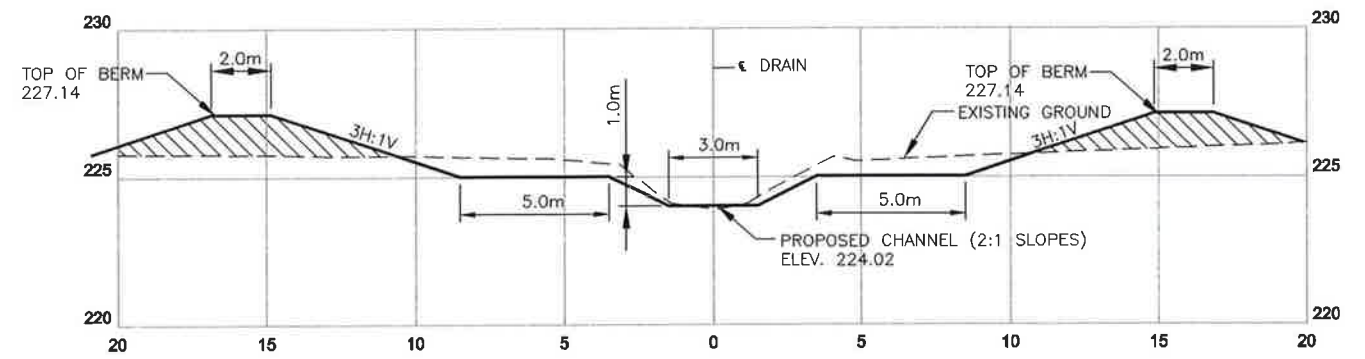
**STATION 1+900**



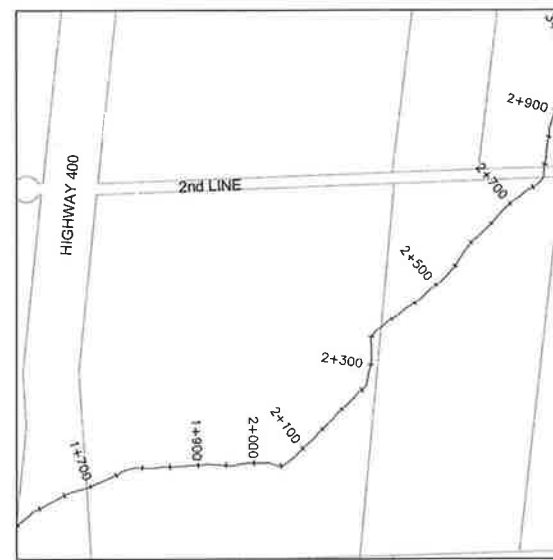
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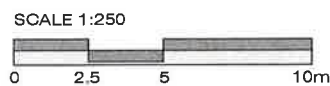
**STATION 2+300**



**STATION 2+500**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM



**DILLON CONSULTING**

**SECTIONS 2-3**

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL

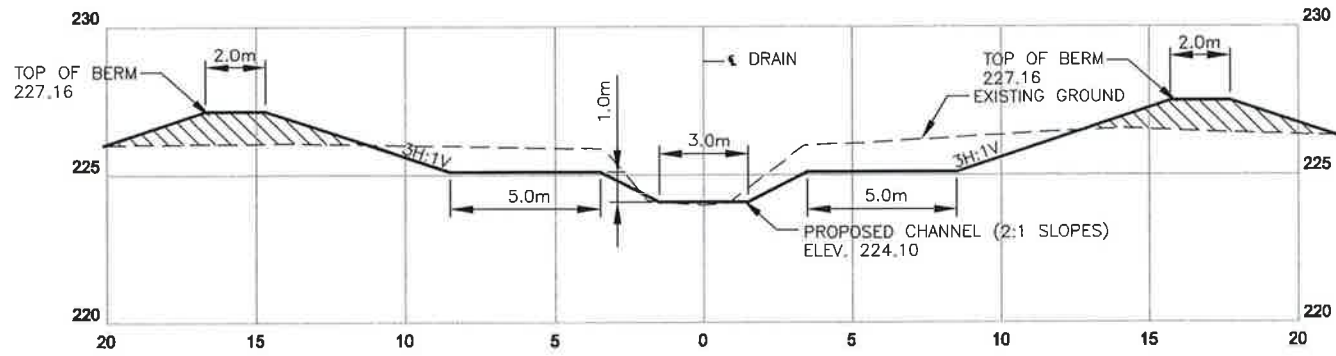
1 MARCH 2013

PROJECT No. 05-4787

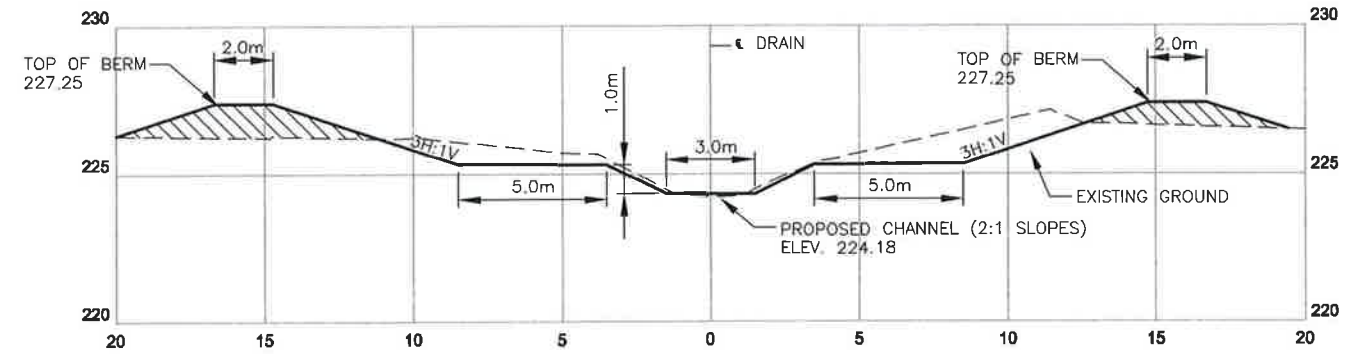
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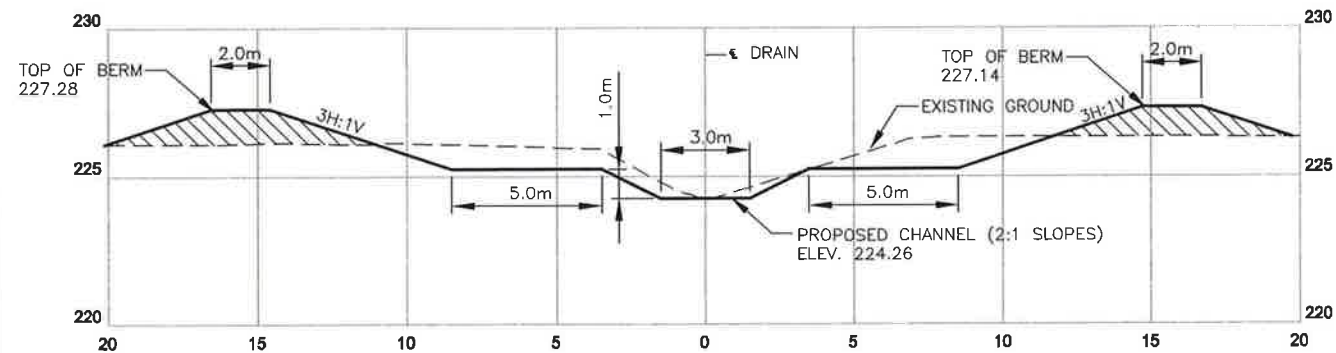
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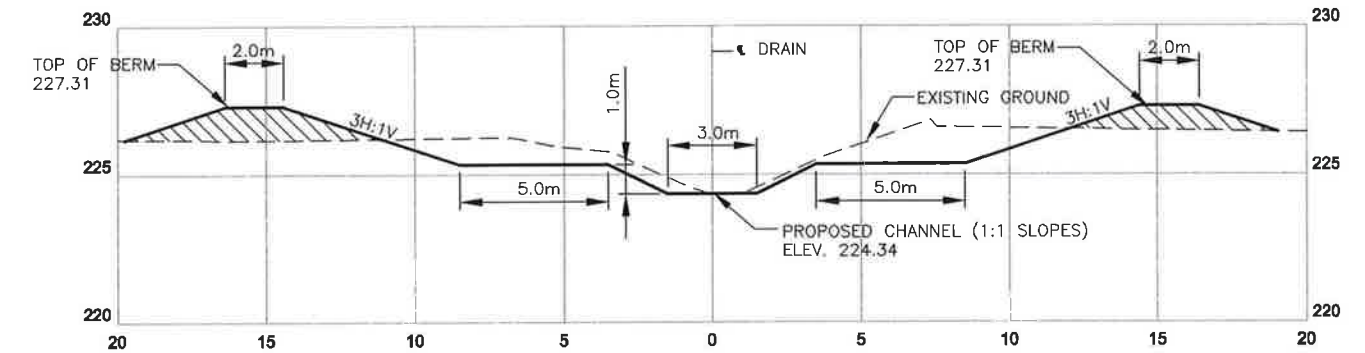
**STATION 2+700**



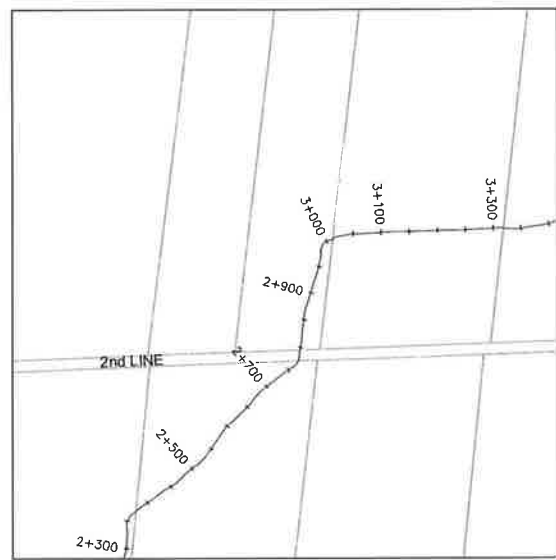
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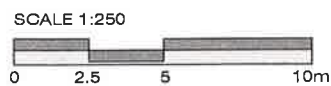
**STATION 3+100**



**STATION 3+300**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM

SCHEDULE " G "



**DILLON CONSULTING**

**SECTIONS 2-4**

DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE

**SOUTH INNISFILL CREEK DRAIN AND BRANCHES**

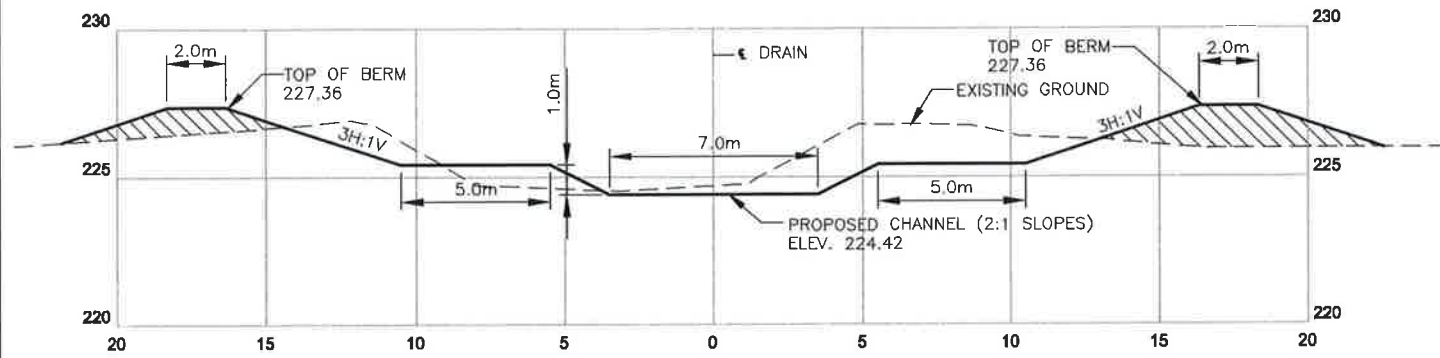
TOWN OF INNISFILL

1 MARCH 2013

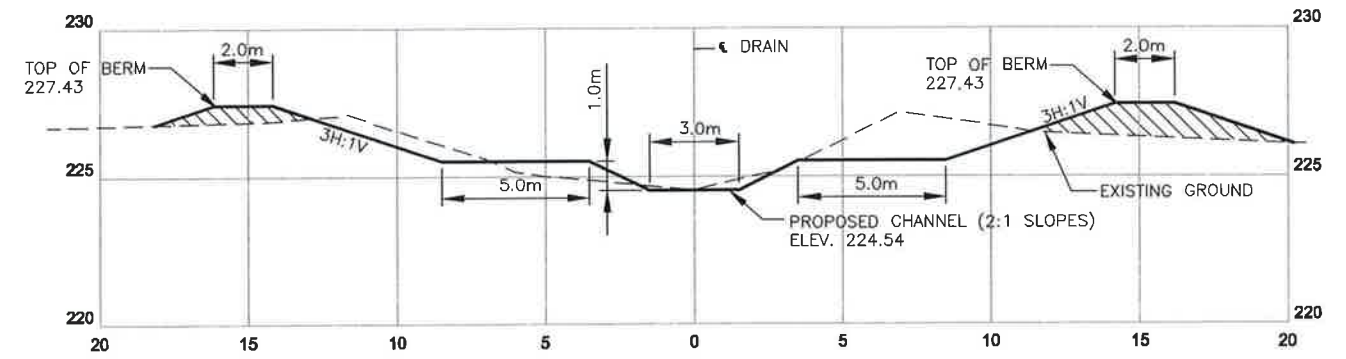
PROJECT No. 05-4787

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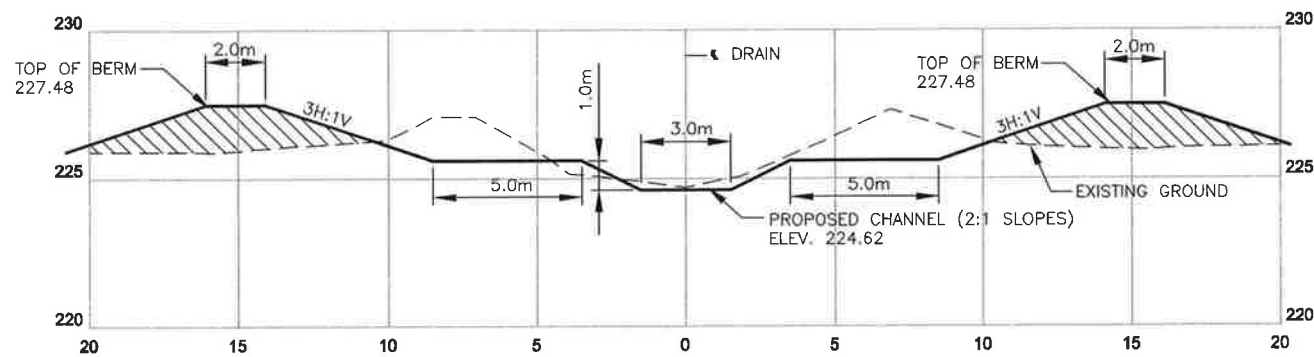
Mar 06, 2013 - 3:07pm \\dillon.ca\DILLON\_DFS\Oakville\CAD\cad\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Sections.dwg



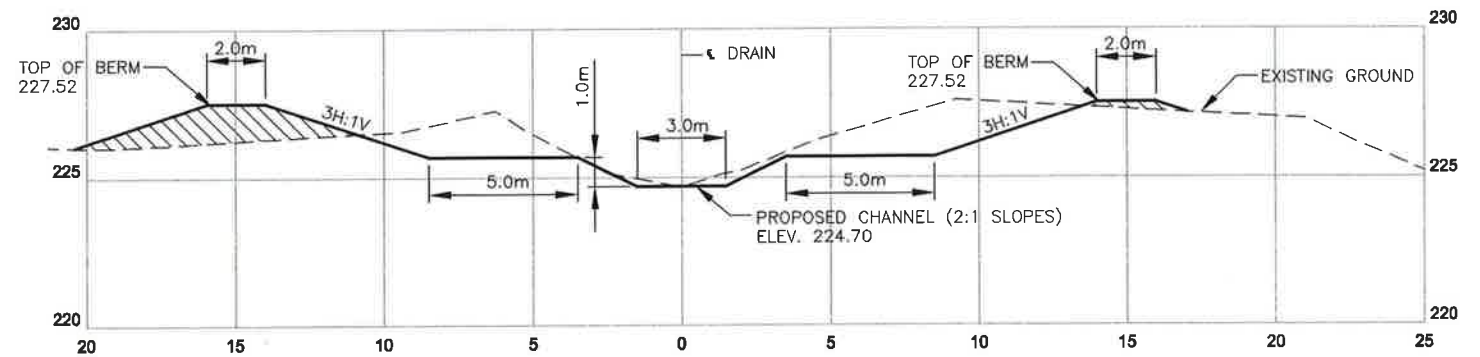
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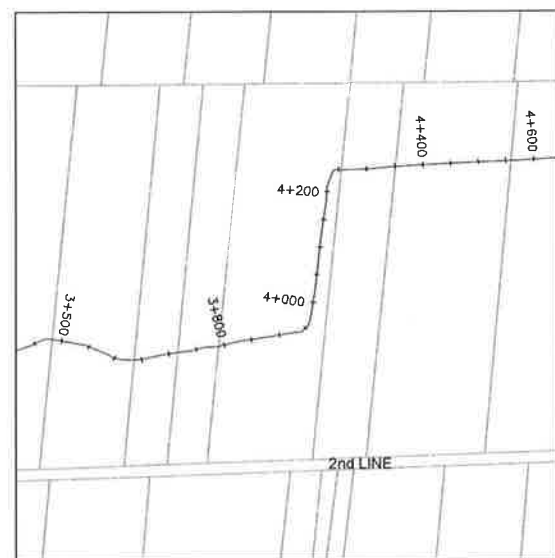
**STATION 3+800**



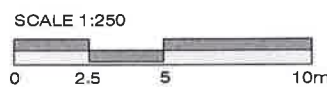
**STATION 4+000**



**STATION 4+200**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM



**DILLON CONSULTING**

**SECTIONS 2-5**

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

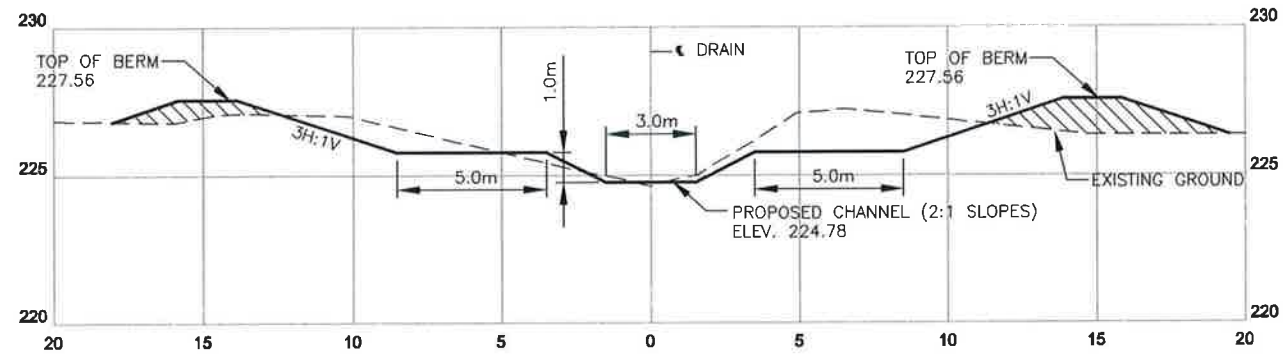
TOWN OF INNISFIL

1 MARCH 2013

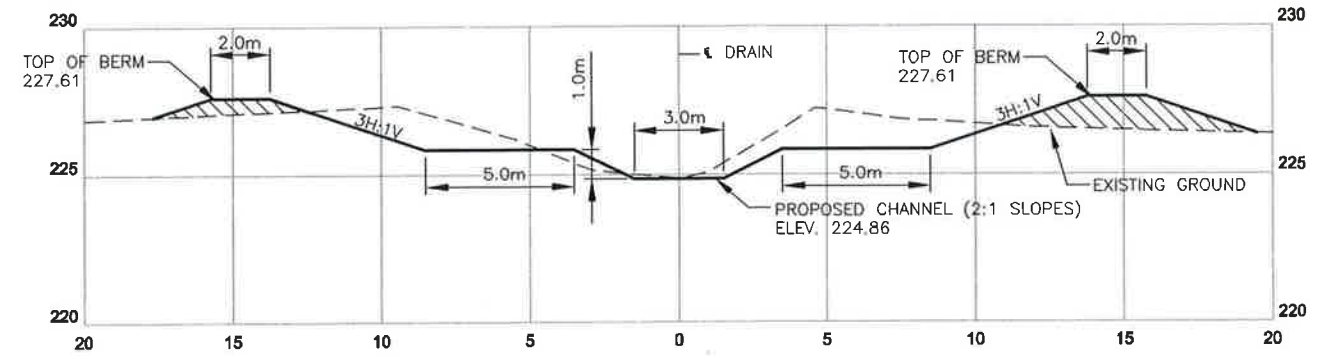
PROJECT No. 05-4787

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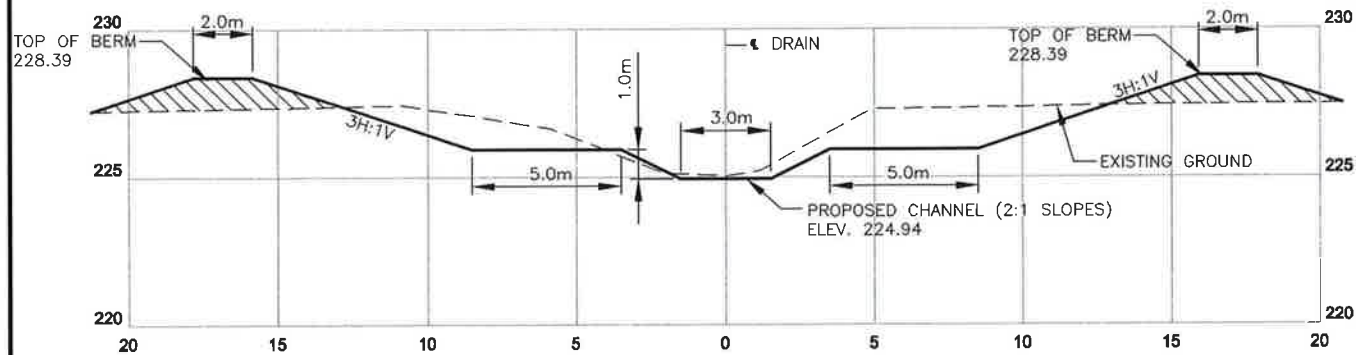
Mar 06, 2013 - 3:07pm \\dillon.ca\DILLON\_DFS\Oakville\Oakville CAD\cad\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Sections.dwg



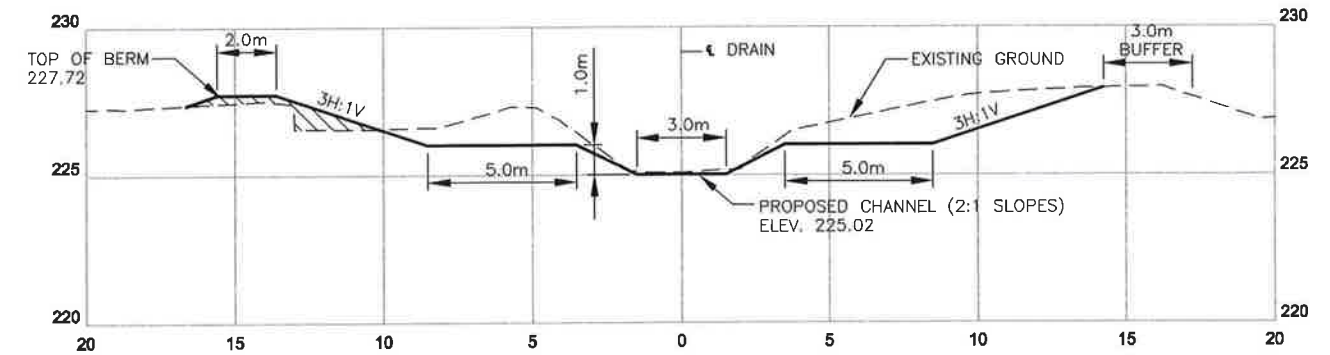
**STATION 4+400**



**STATION 4+600**



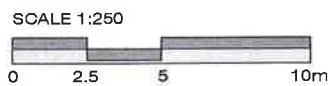
**STATION 4+800**



**STATION 5+000**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM



**DILLON CONSULTING**

**SECTIONS 2-6**

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

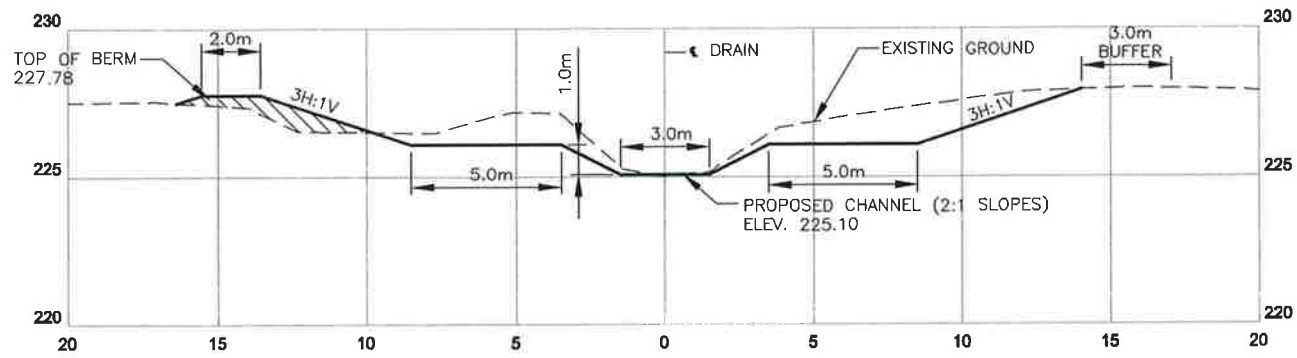
TOWN OF INNISFIL

1 MARCH 2013

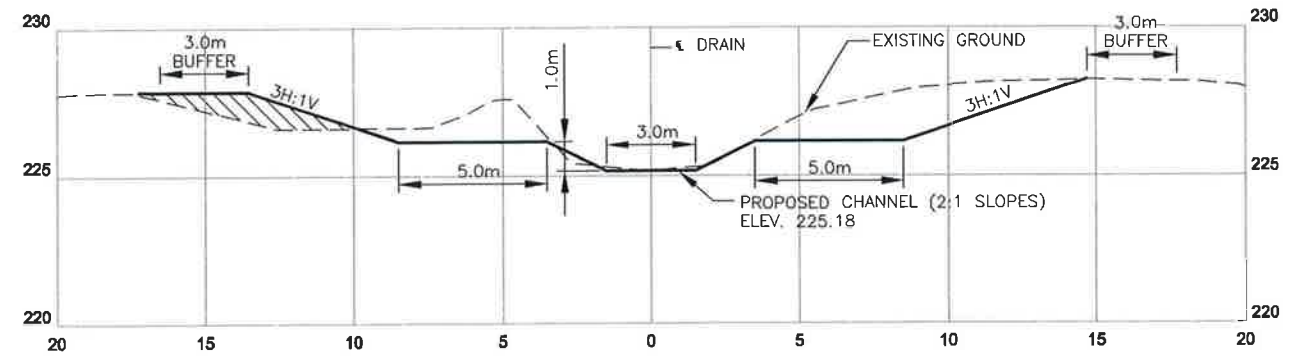
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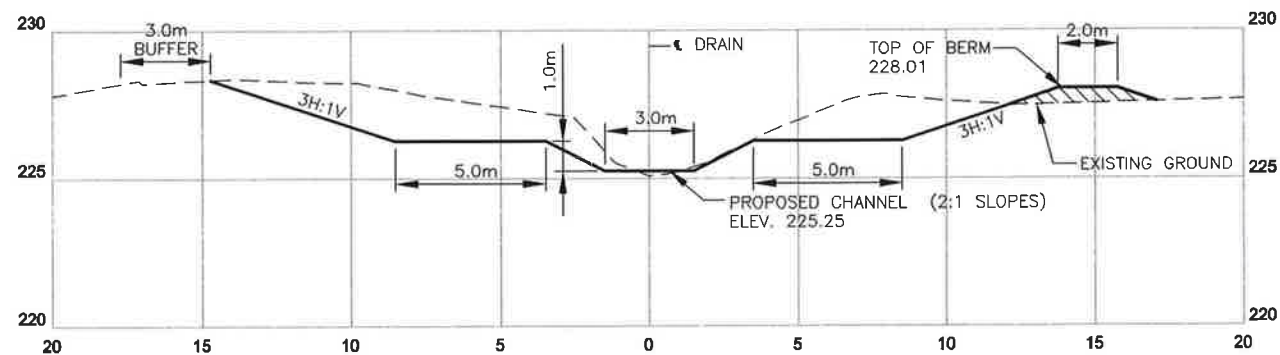
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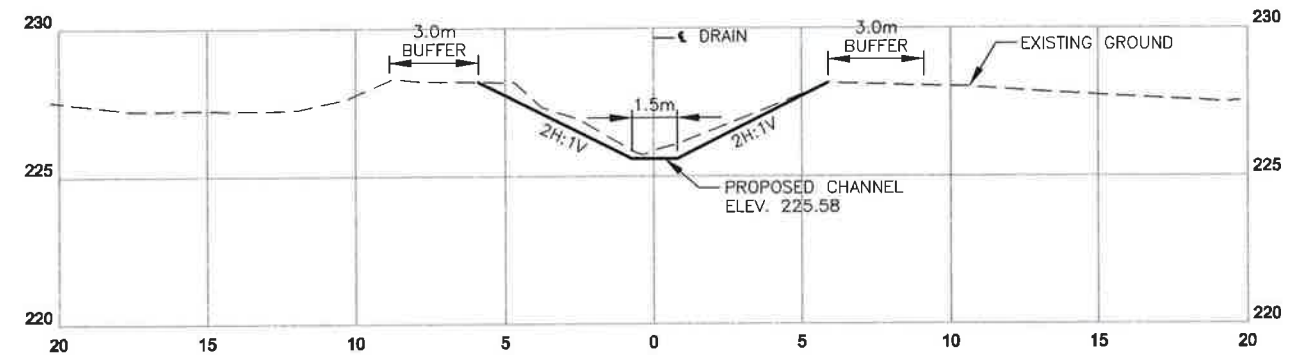
**STATION 5+200**



**STATION 5+400**



**STATION 5+600**

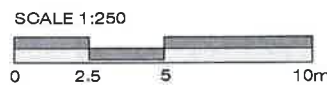


**STATION 5+800**

FUTURE MAINTENANCE ONLY



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM

SCHEDULE " G "



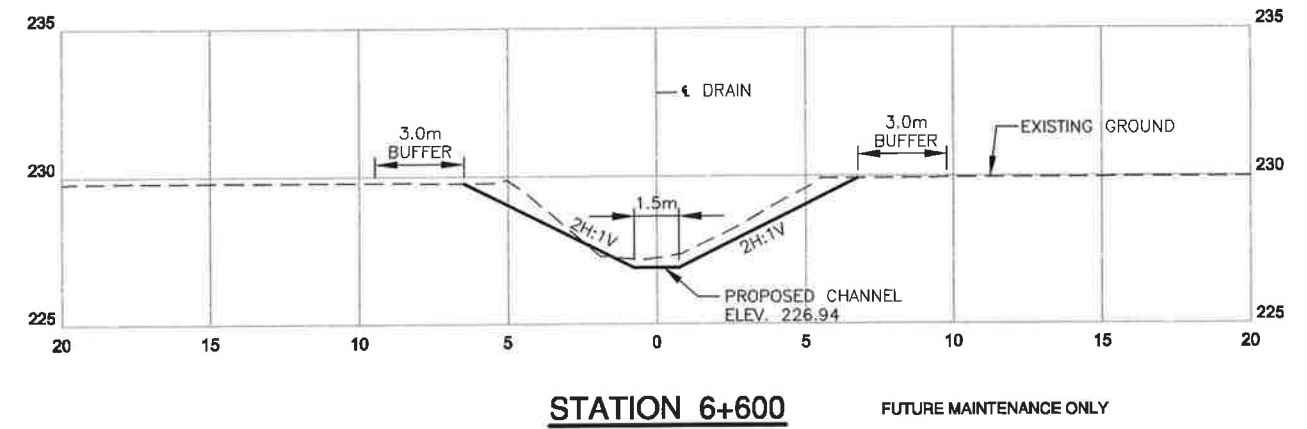
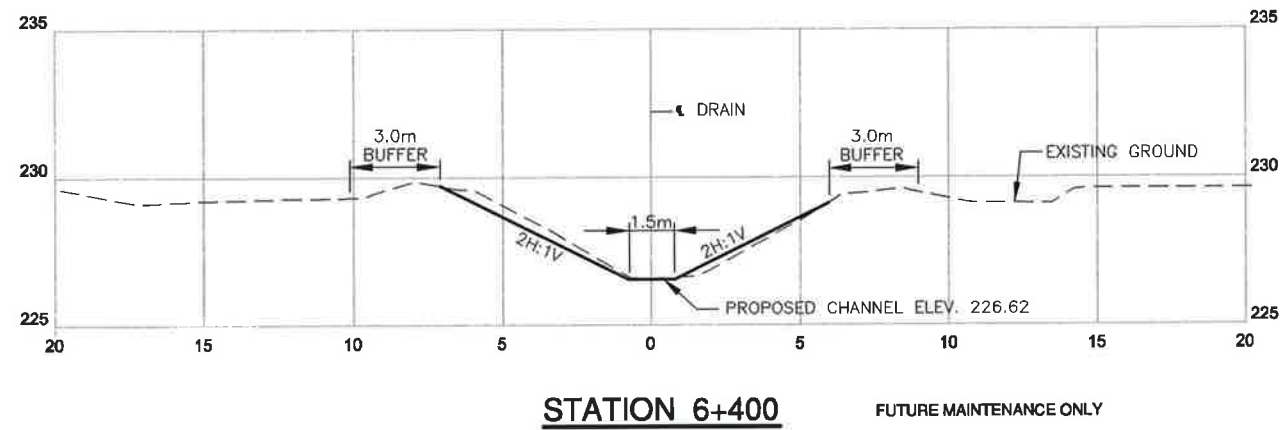
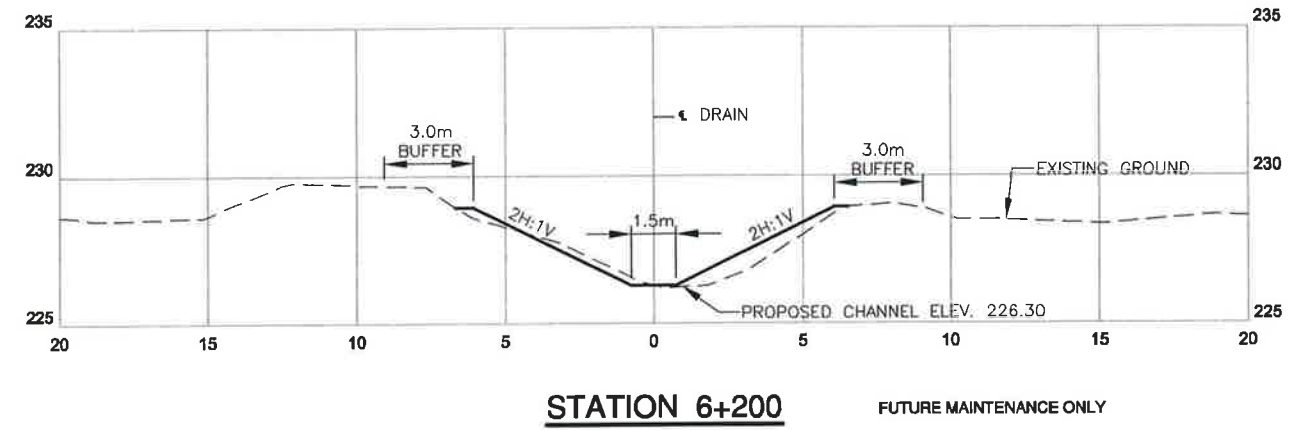
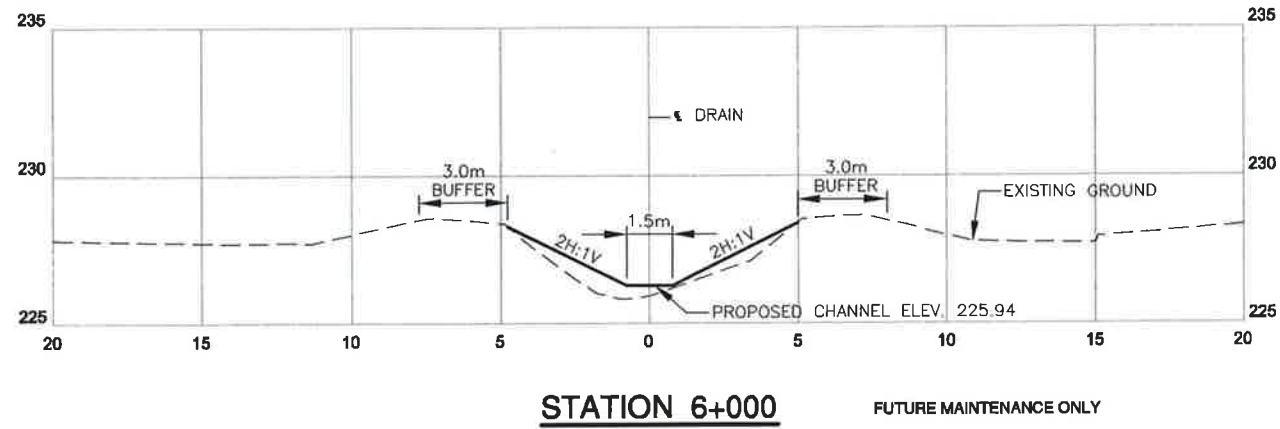
**DILLON CONSULTING**

**SECTIONS 2-7**

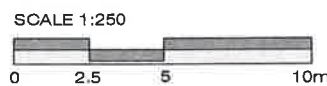
DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
1 MARCH 2013	
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**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM

SCHEDULE " G "



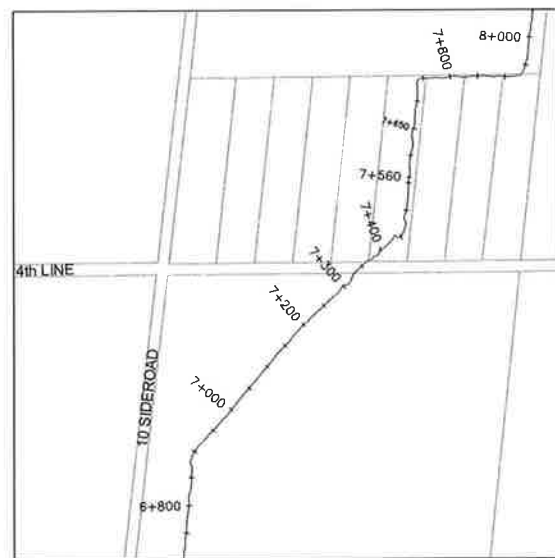
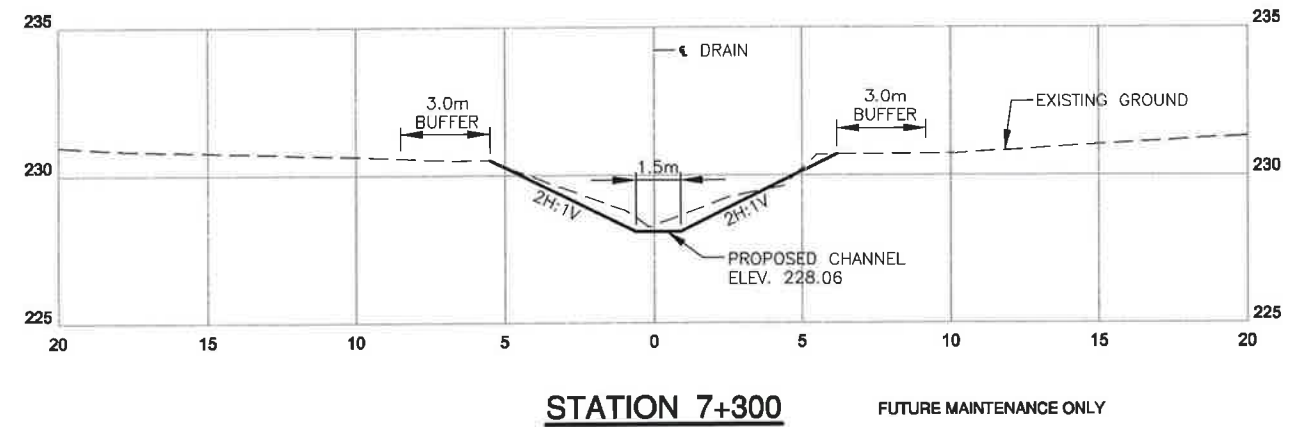
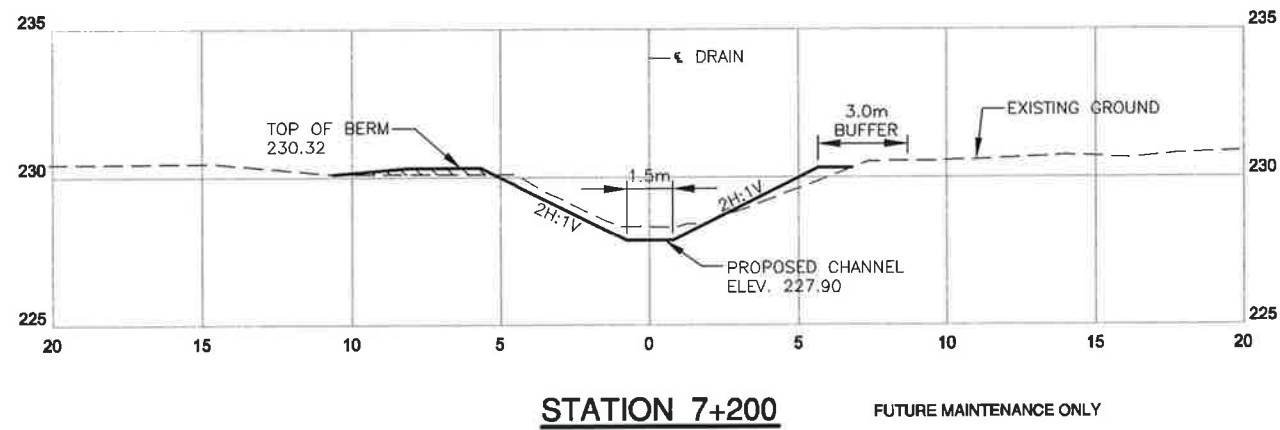
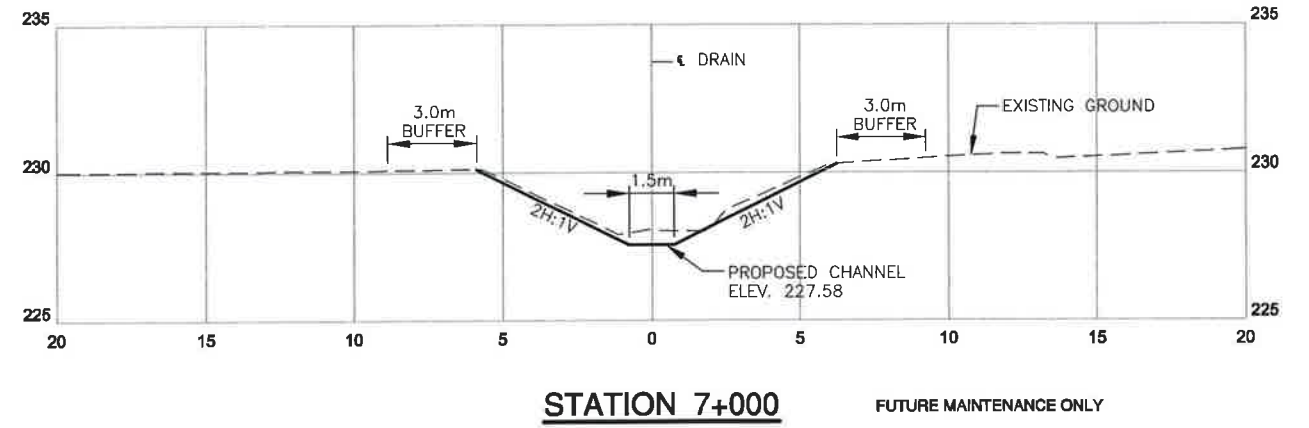
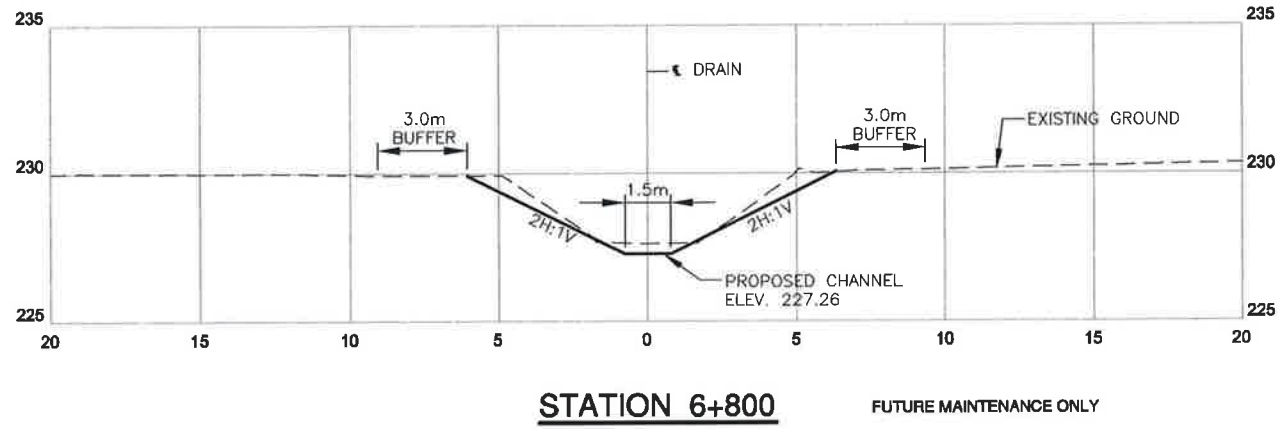
**DILLON CONSULTING**

**SECTIONS 2-8**

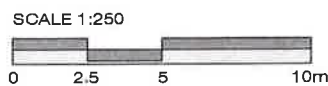
DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE  
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**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM

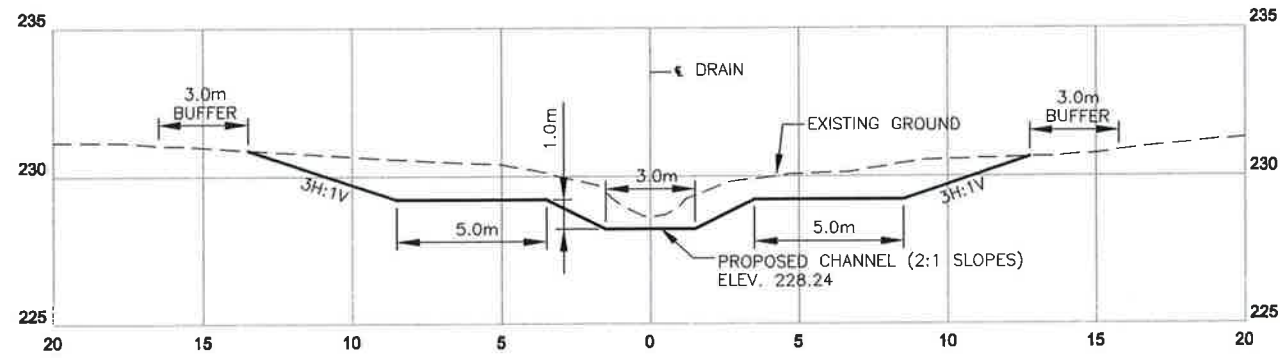
SCHEDULE " G "



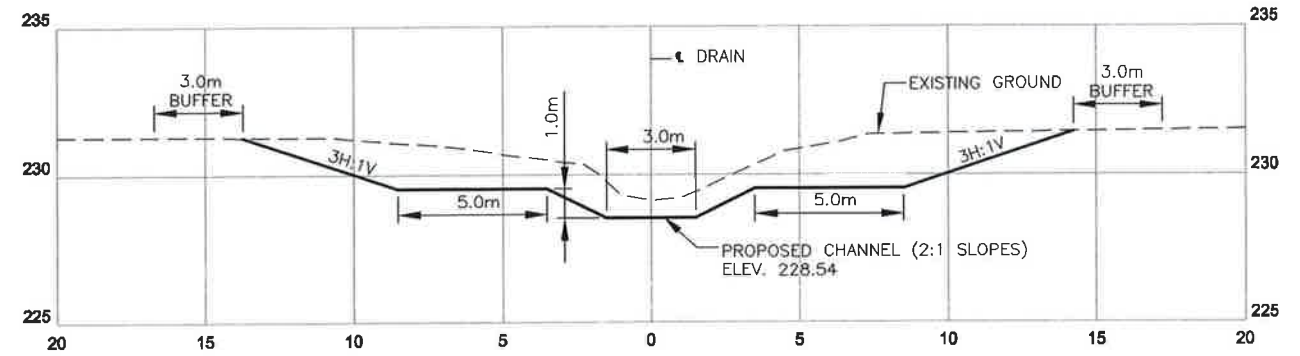
**SECTIONS 2-9**  
DRAWING SCALES BASED  
ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
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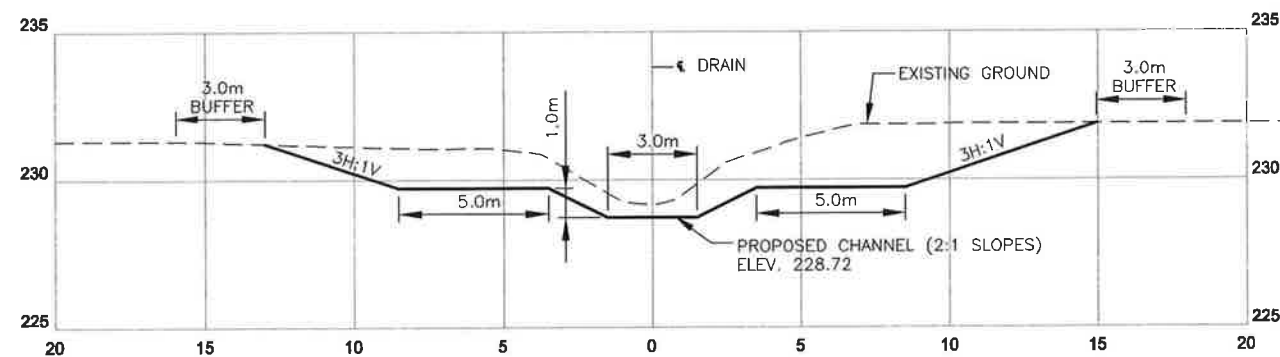
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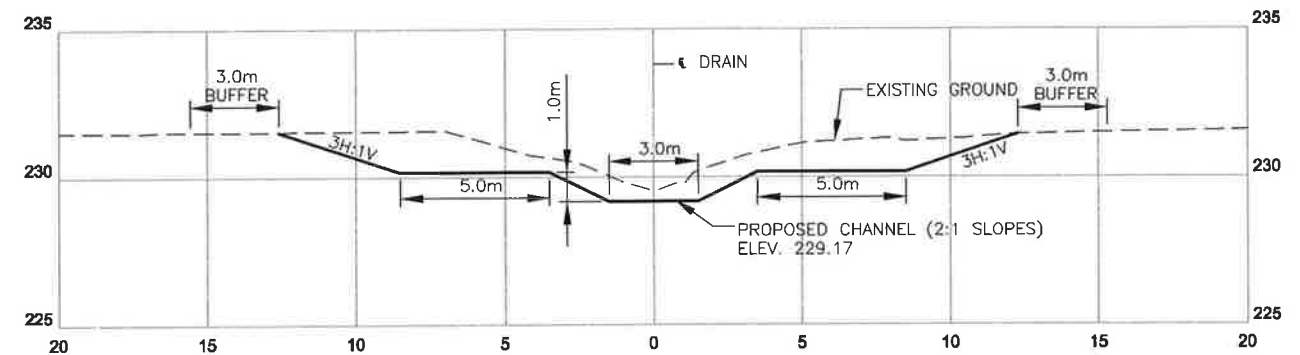
**STATION 7+400**



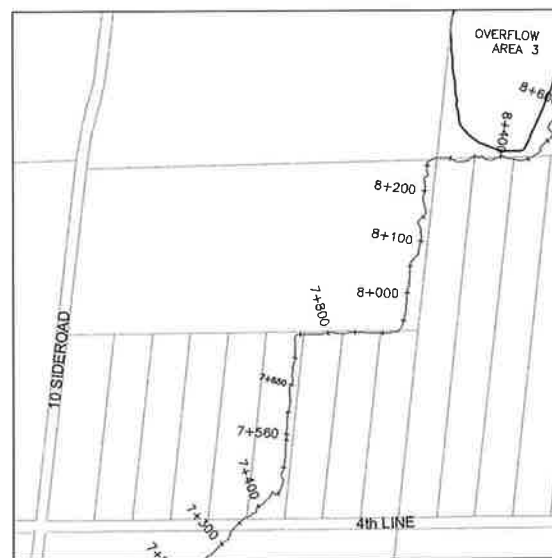
**STATION 7+560**



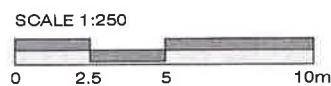
**STATION 7+650**



**STATION 7+800**



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM



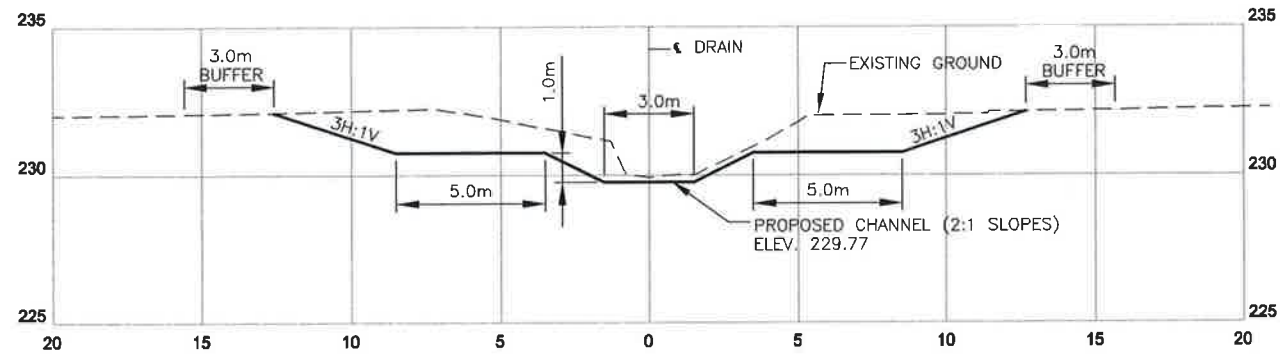
**DILLON CONSULTING**

**SECTIONS 2-10**

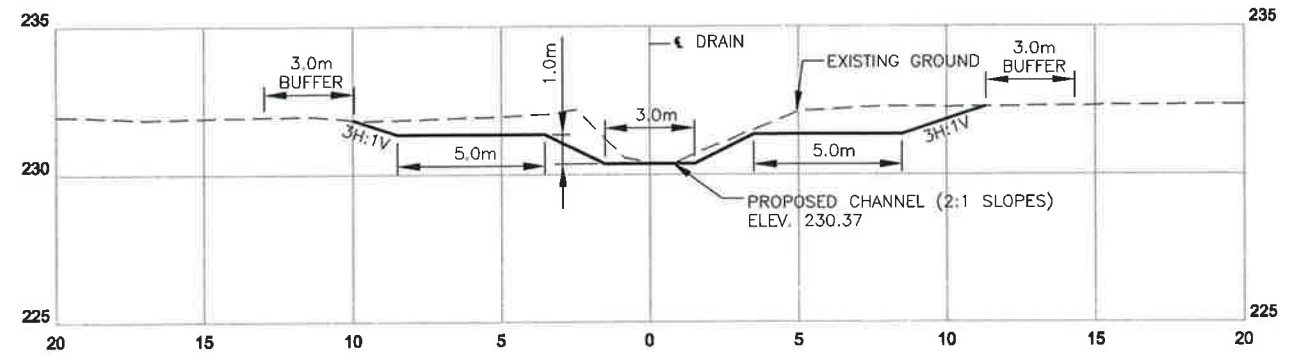
DRAWING SCALES BASED ON A 11"x17" SHEET

<b>SCHEDULE " G "</b>	
DRAINAGE REPORT FOR THE	
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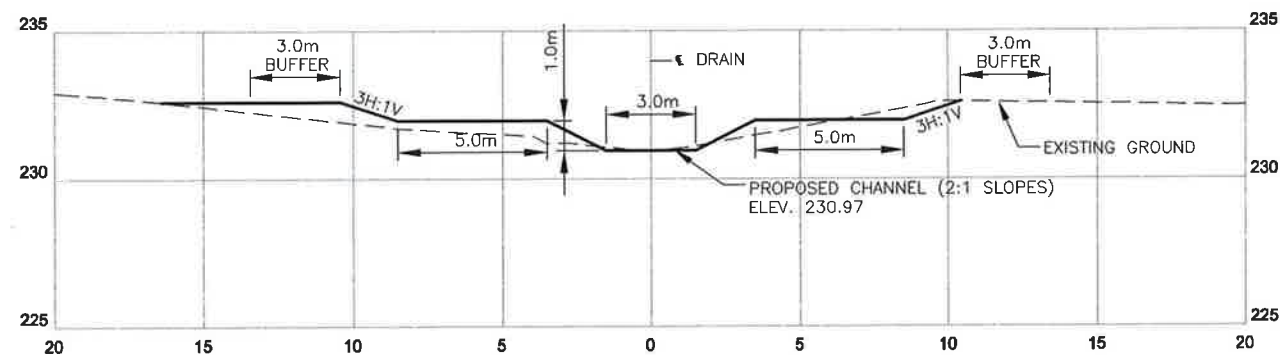


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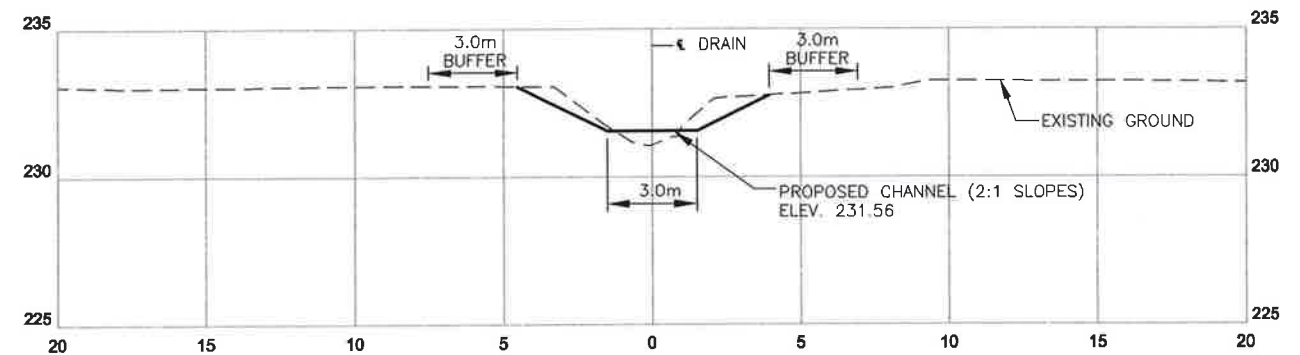
**STATION 8+200**

FUTURE MAINTENANCE ONLY



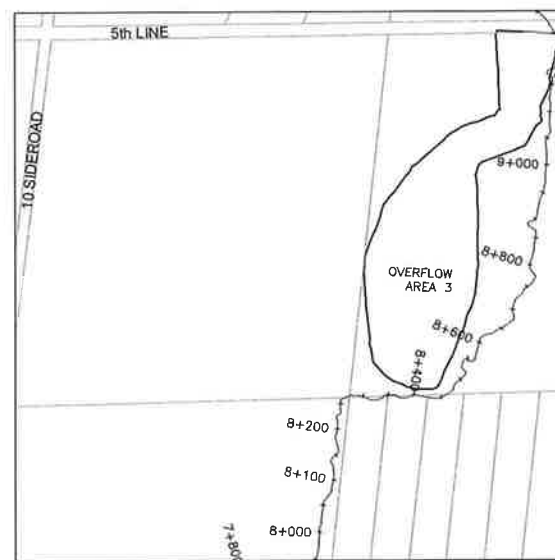
**STATION 8+400**

FUTURE MAINTENANCE ONLY

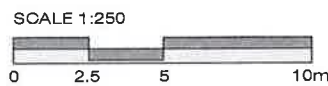


**STATION 8+600**

FUTURE MAINTENANCE ONLY



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM



**DILLON CONSULTING**

**SECTIONS 2-11**

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL

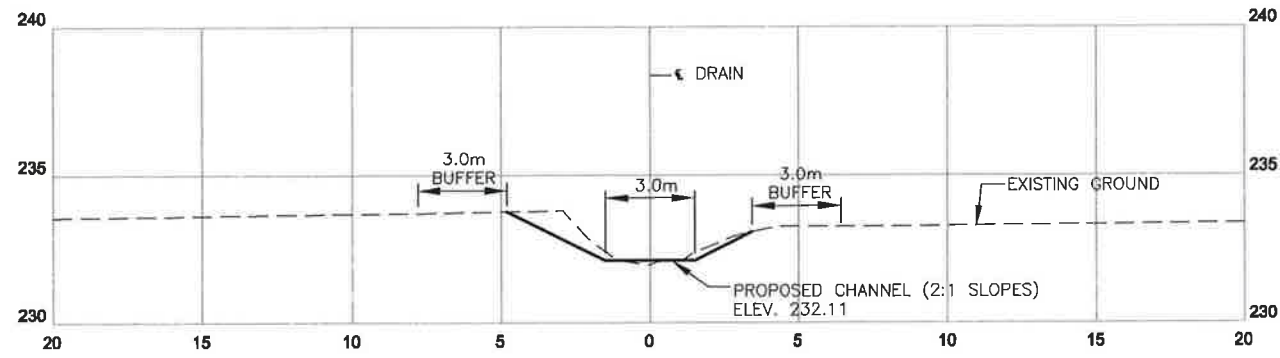
1 MARCH 2013

PROJECT No. 05-4787

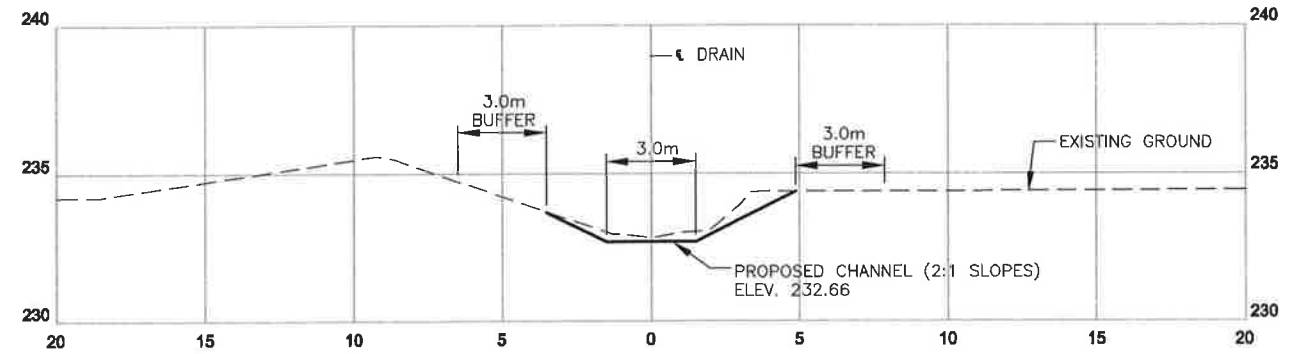
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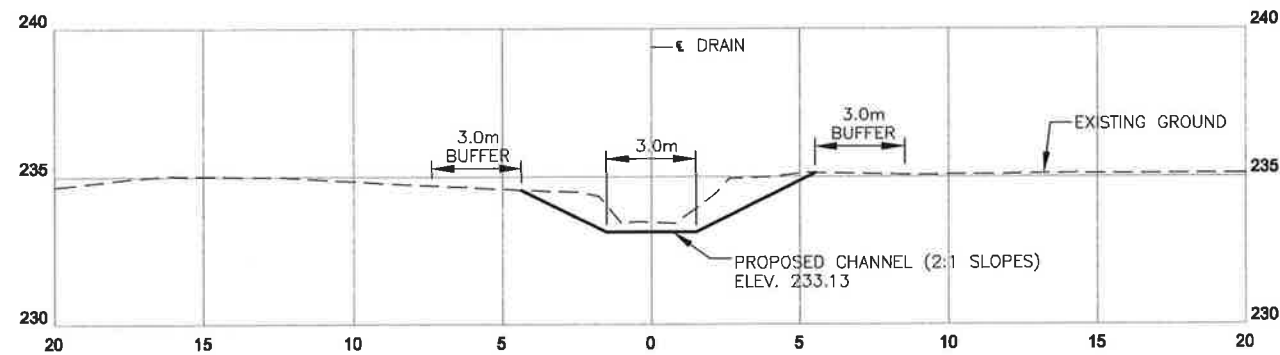
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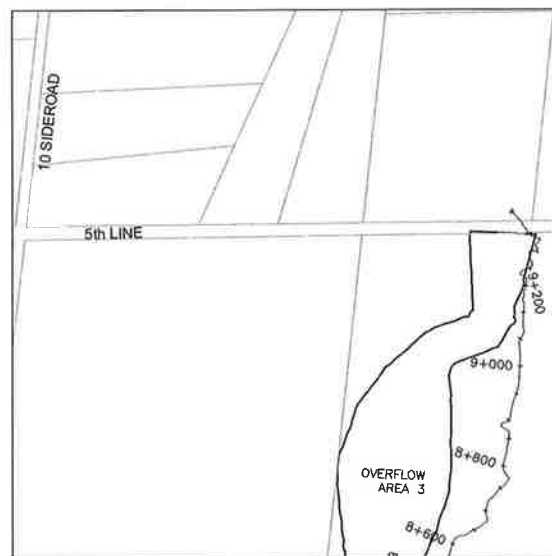
**STATION 8+800** FUTURE MAINTENANCE ONLY



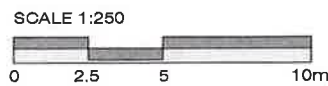
**STATION 9+000** FUTURE MAINTENANCE ONLY



**STATION 9+200** FUTURE MAINTENANCE ONLY



**KEY MAP**



NOTE: CROSS SECTIONS LOOKING UPSTREAM

SCHEDULE ' G '



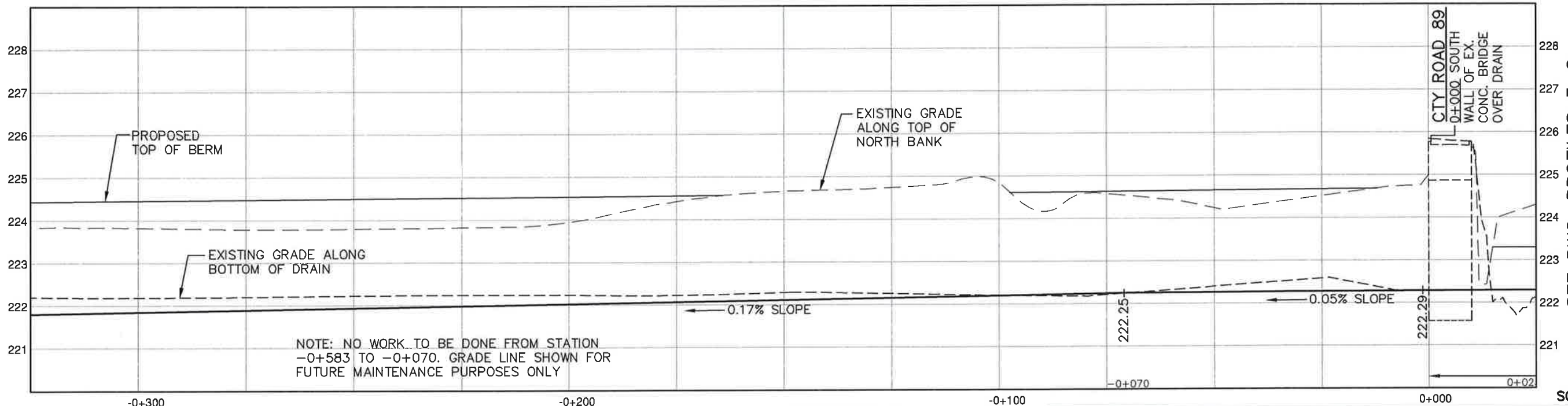
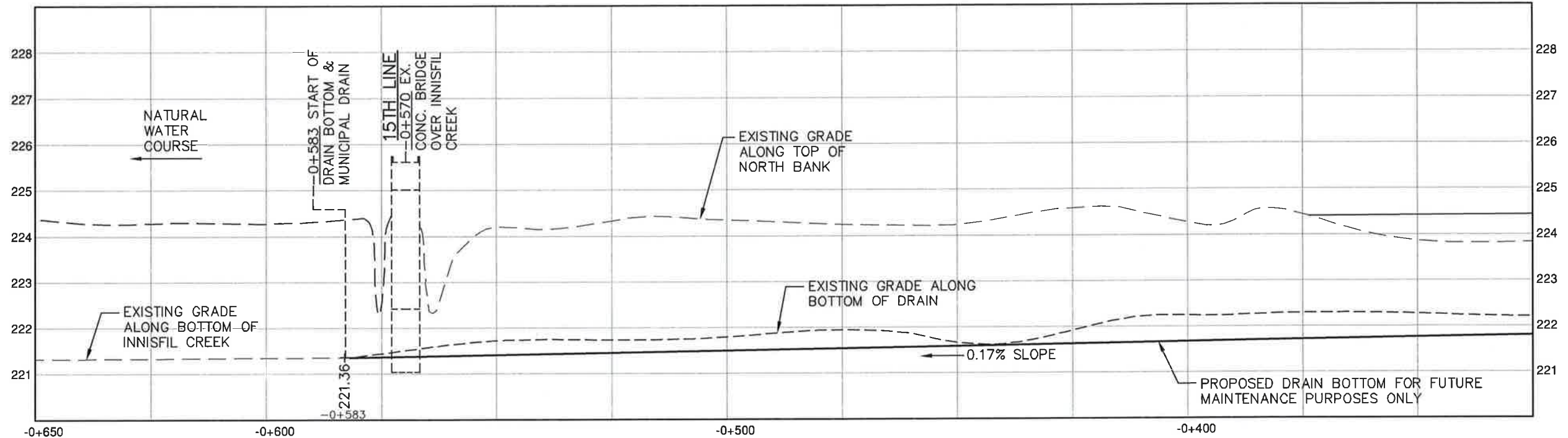
**DILLON CONSULTING**

**SECTIONS 2-12**

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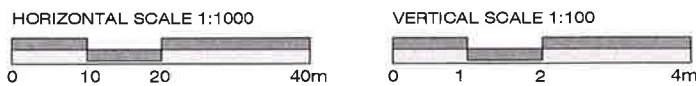
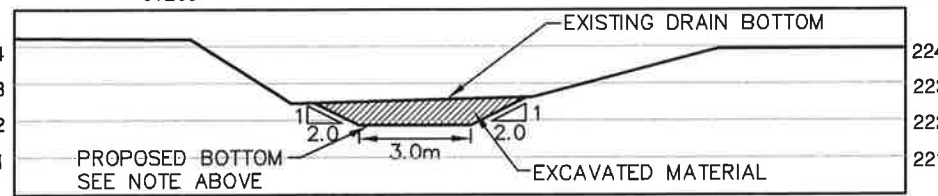
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PROFILE STA. -0+325 TO 0+000  
SCALE: HOR 1:1000 VER 1:100

SOUTH INNISFIL CREEK



**DILLON CONSULTING**

PROFILES 3-1  
-0+650 TO 0+000  
DRAWING SCALES BASED ON A 11"x17" SHEET

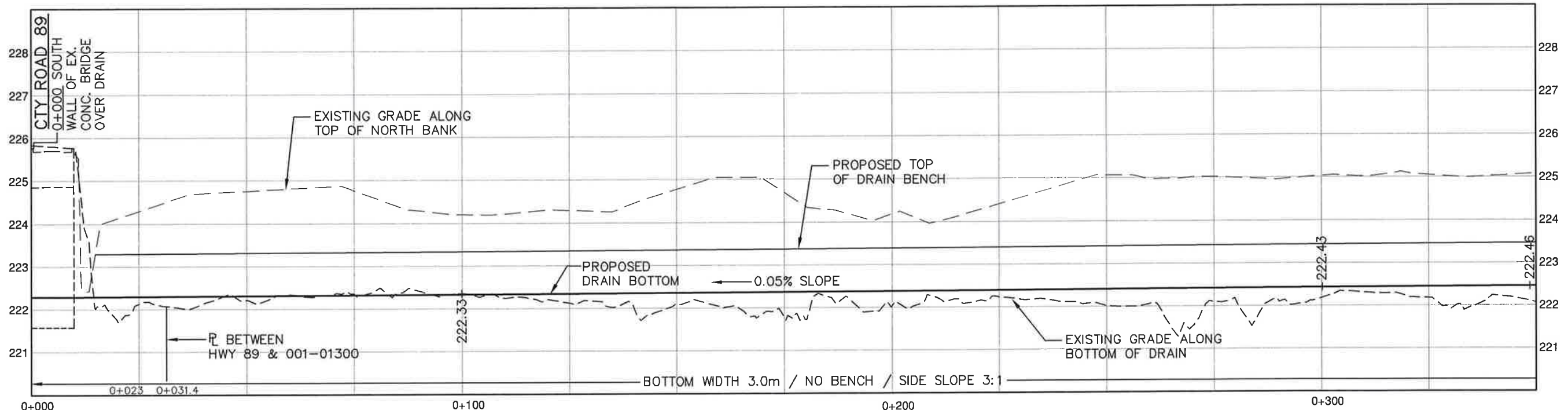
SCHEDULE " G "

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**  
TOWN OF INNISFIL

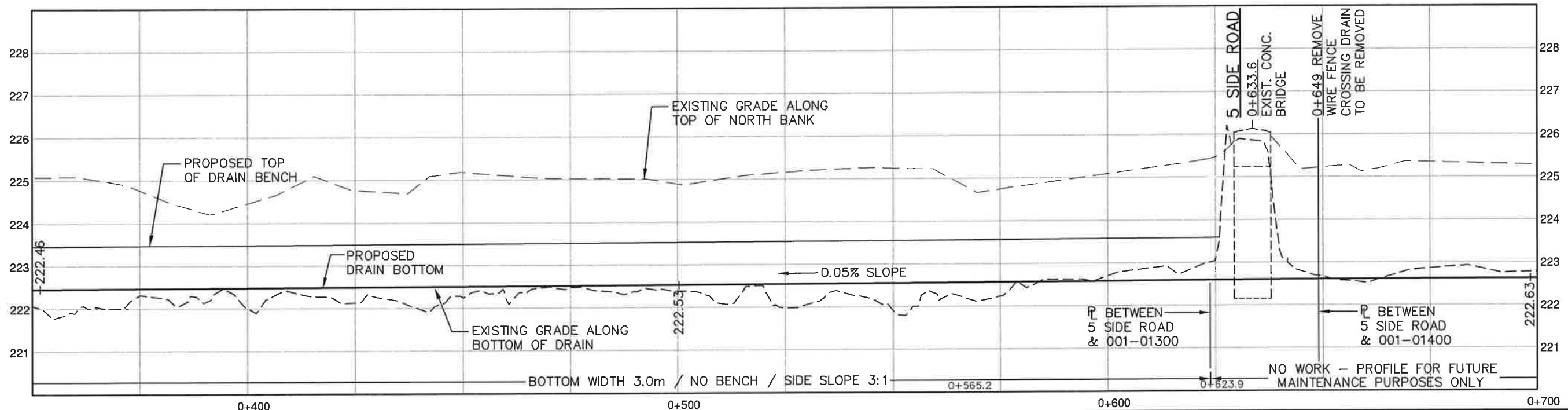
1 MARCH 2013  
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SEE DWG. PROFILES 3-2

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PROFILE STA. 0+000 TO 0+350  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 0+350 TO 0+700  
SCALE: HOR 1:1000 VER 1:100

SOUTH INNISFIL CREEK



SEE DWG. PROFILES 3-2



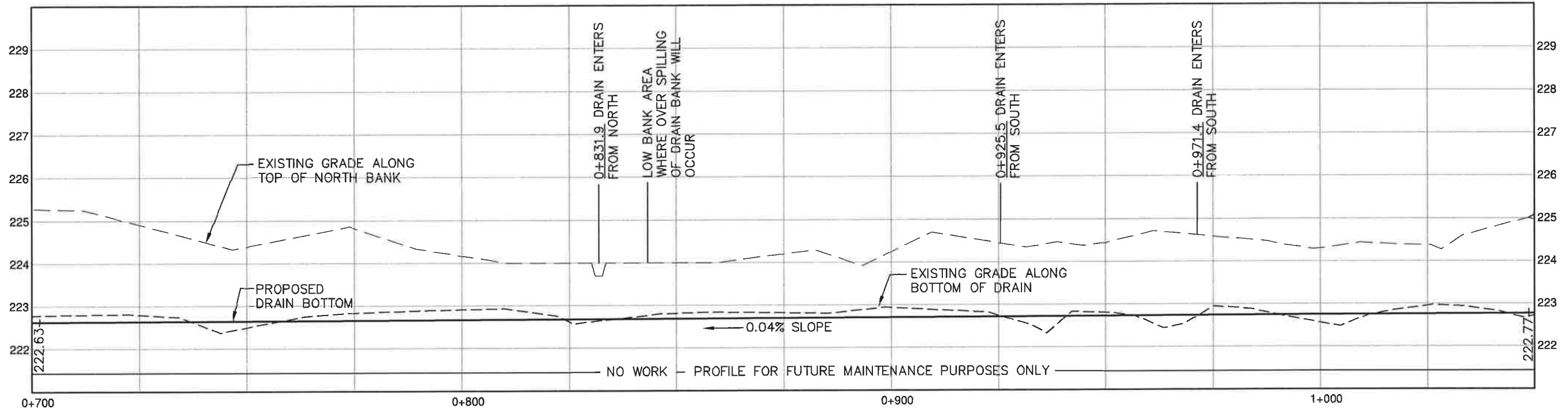
**DILLON CONSULTING**  
 PROFILES 3-2  
 0+000 TO 0+700  
 DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**  
 TOWN OF INNISFIL  
 1 MARCH 2013  
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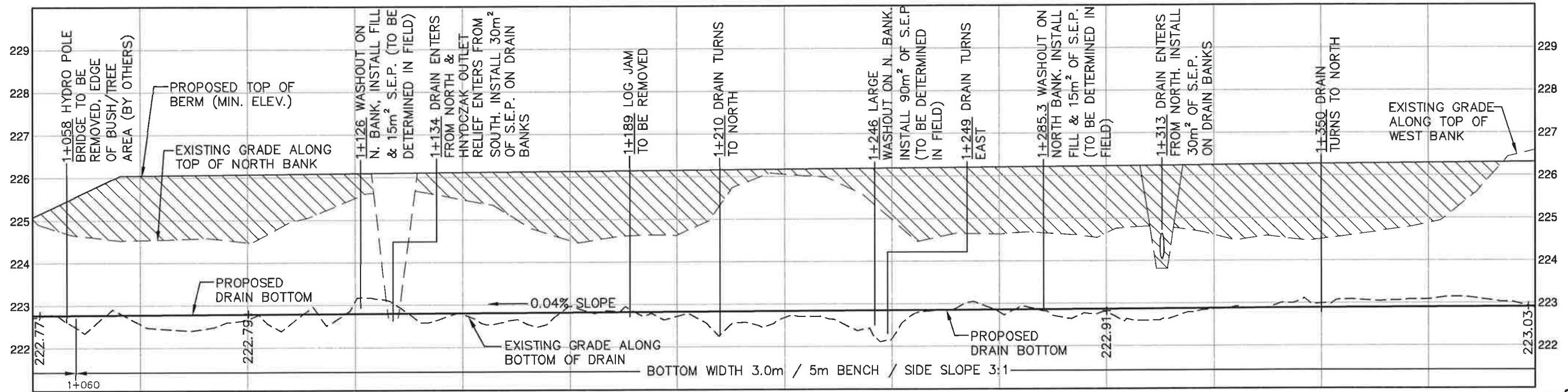
SCHEDULE "G"

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SEE DWG. PROFILES 3-1



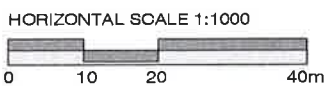
PROFILE STA. 0+700 TO 1+050  
SCALE: HOR 1:1000 VER 1:100



FILL AREAS

PROFILE STA. 1+050 TO 1+400  
SCALE: HOR 1:1000 VER 1:100

SOUTH INNISFIL CREEK



**DILLON CONSULTING**

PROFILES 3-3  
0+700 TO 1+400  
DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL

1 MARCH 2013

PROJECT No. 05-4787

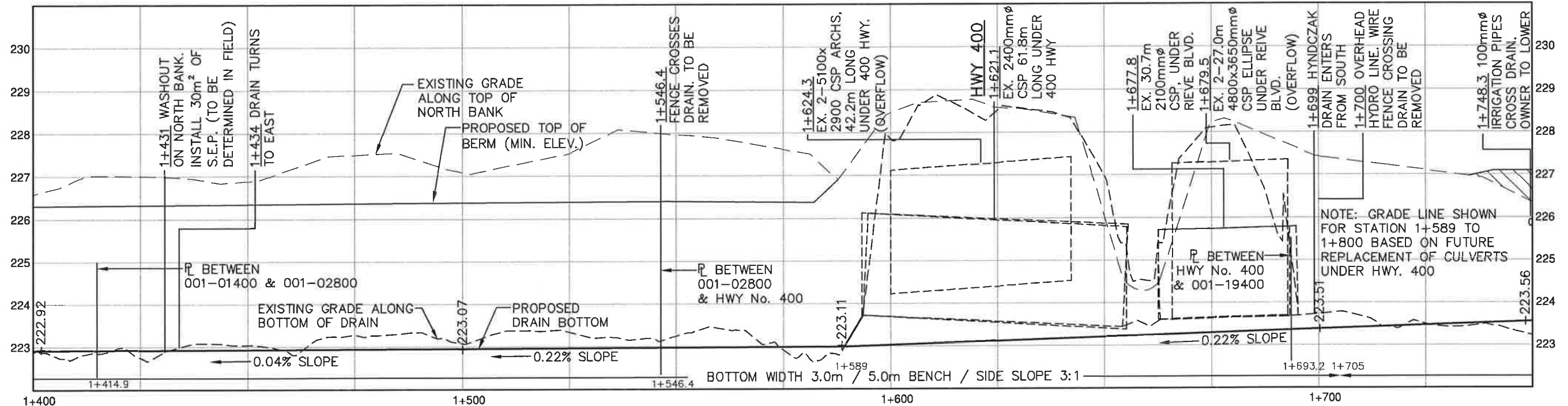
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SEE DWG. PROFILES 3-3

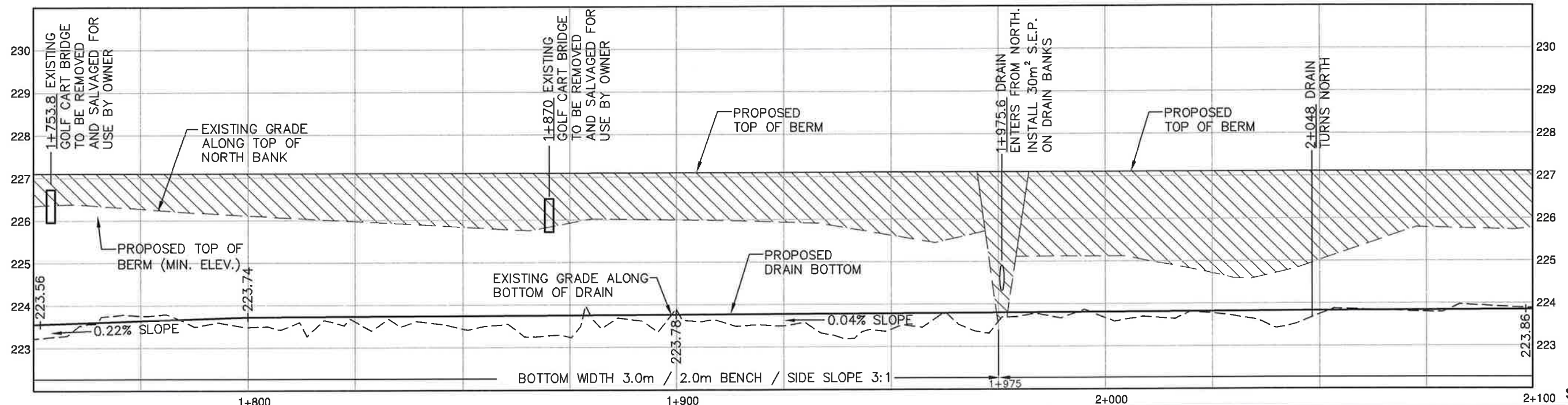
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SEE DWG. PROFILES 3-2



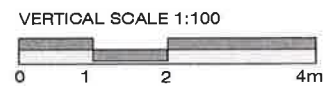
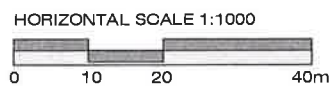
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SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 1+750 TO 2+100  
SCALE: HOR 1:1000 VER 1:100

FILL AREAS

### SOUTH INNISFIL CREEK



**DILLON CONSULTING**

PROFILES 3-4  
1+400 TO 2+100

DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE "G"

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL

1 MARCH 2013

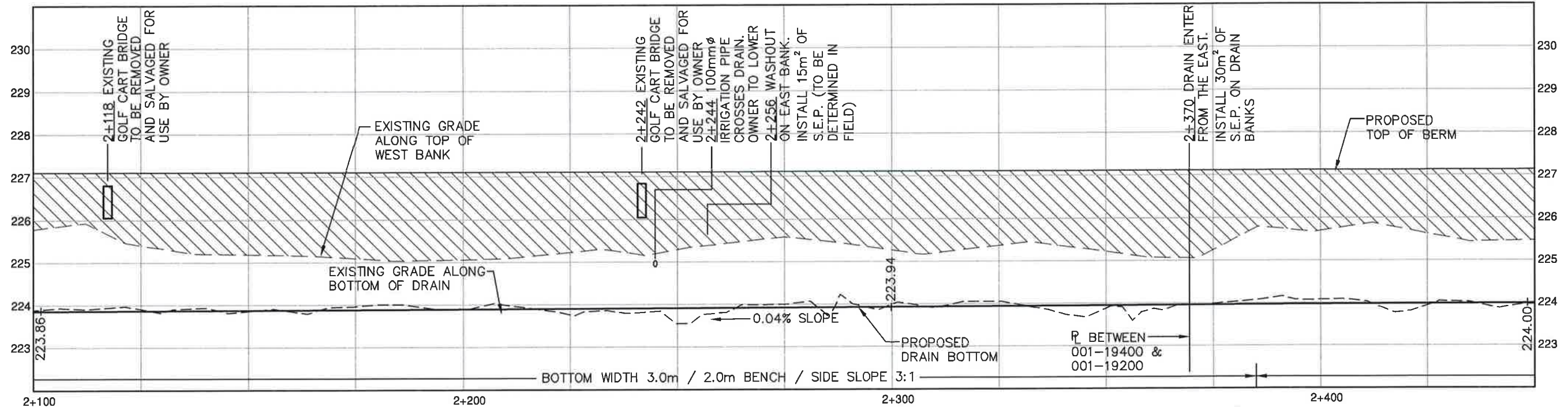
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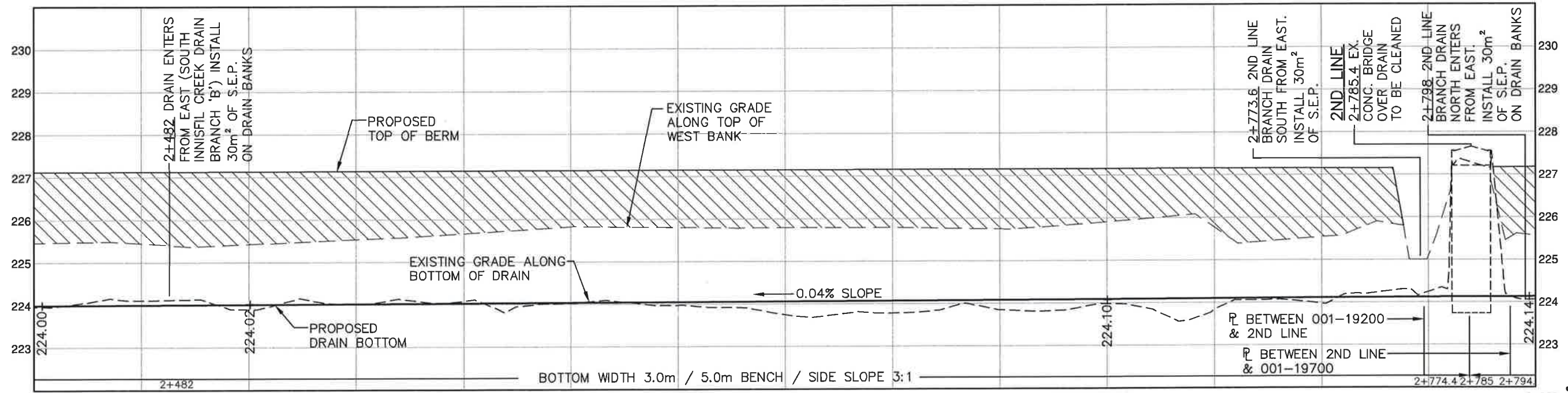
SEE DWG. PROFILES 3-4

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SEE DWG. PROFILES 3-3



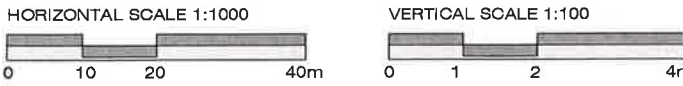
PROFILE STA. 2+100 TO 2+450  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 2+450 TO 2+800  
SCALE: HOR 1:1000 VER 1:100

FILL AREAS

SOUTH INNISFIL CREEK



**DILLON CONSULTING**  
PROFILES 3-5  
2+100 TO 2+800  
DRAWING SCALES BASED ON A 11"x17" SHEET

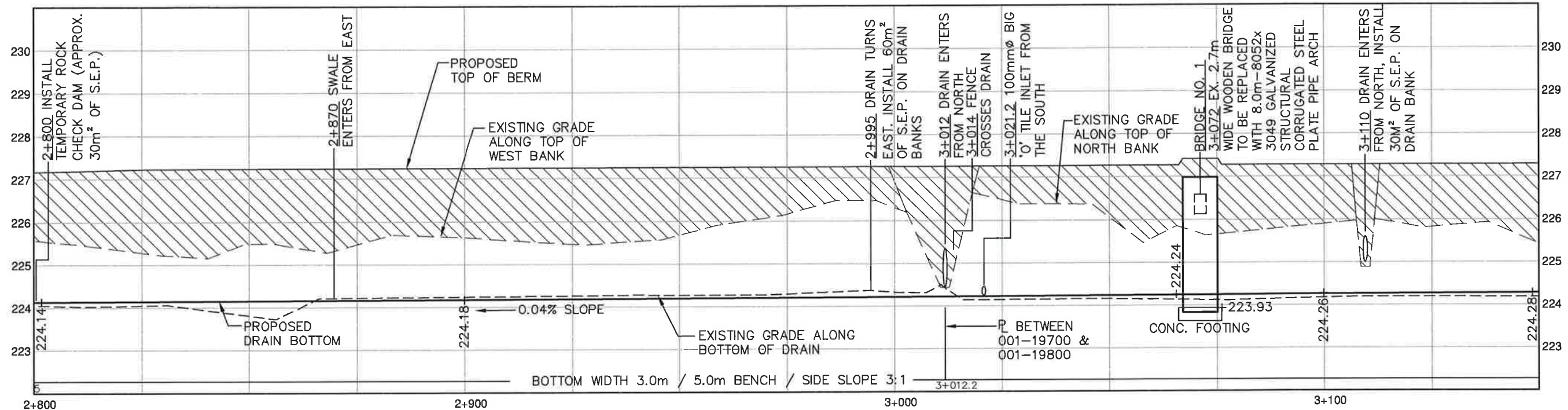
DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**  
TOWN OF INNISFIL  
1 MARCH 2013  
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SEE DWG. PROFILES 3-5

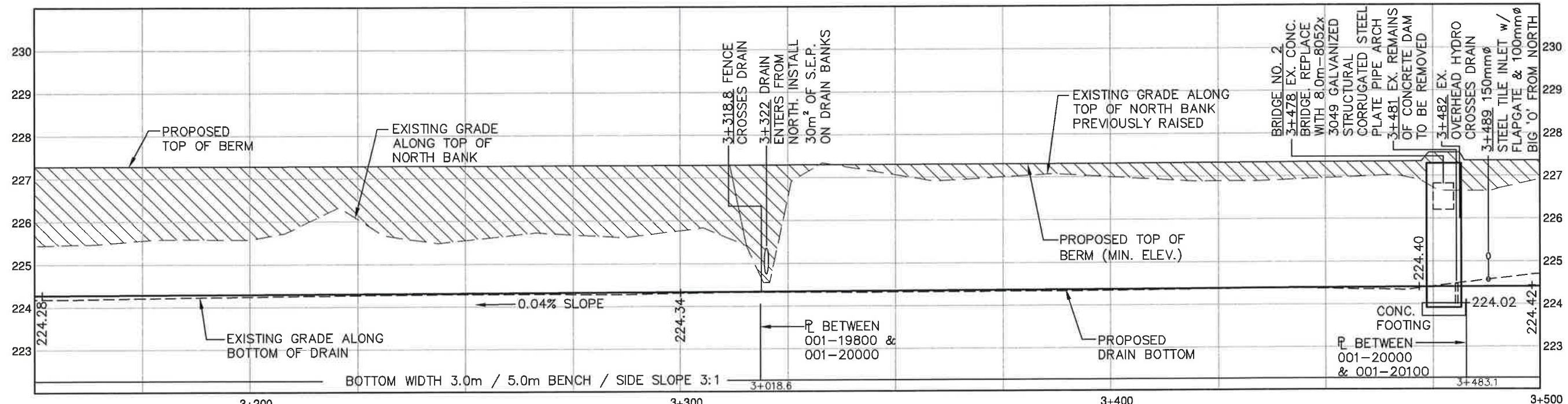
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SEE DWG. PROFILES 3-4



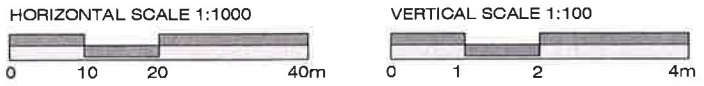
PROFILE STA. 2+800 TO 3+150  
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PROFILE STA. 3+150 TO 3+500  
SCALE: HOR 1:1000 VER 1:100

FILL AREAS

SOUTH INNISFIL CREEK



SEE DWG. PROFILES 3-6



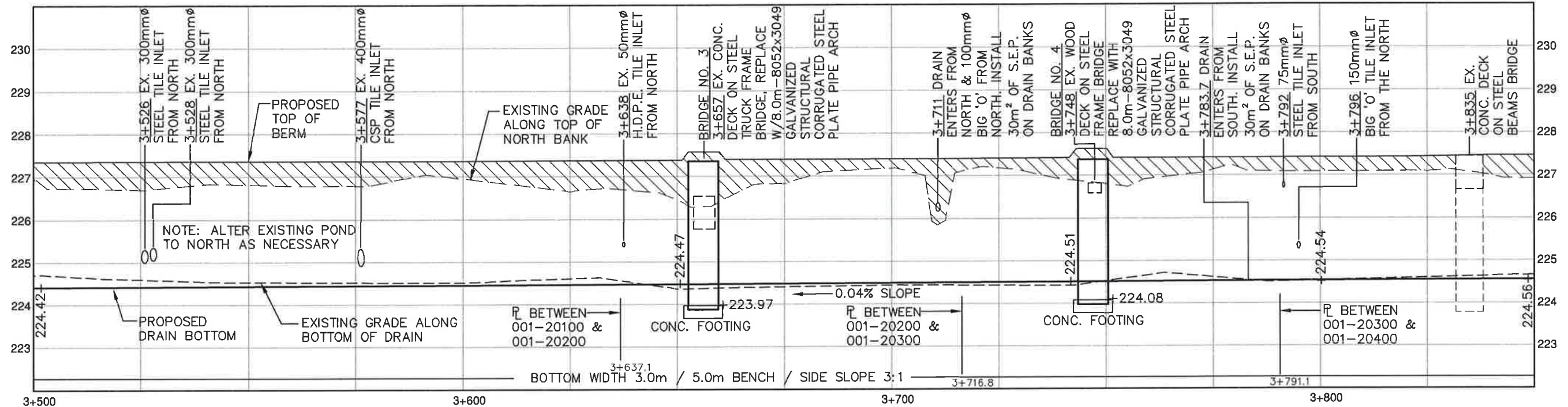
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**PROFILES 3-6**  
**2+800 TO 3+500**  
 DRAWING SCALES BASED ON A 11"x17" SHEET

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SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
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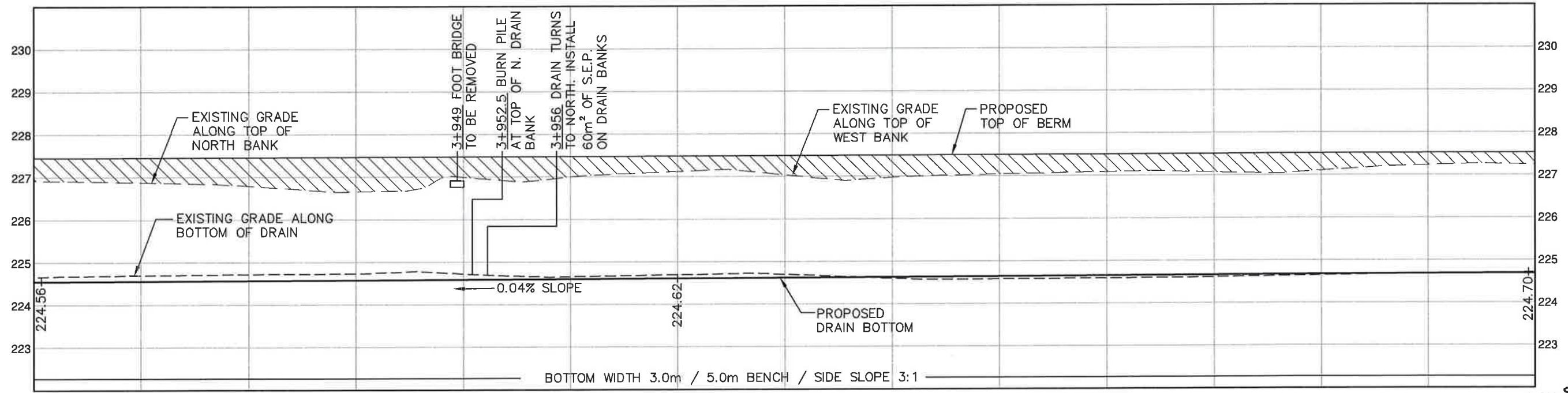
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SEE DWG. PROFILES 3-5



PROFILE STA. 3+500 TO 3+850  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 3+850 TO 4+200  
SCALE: HOR 1:1000 VER 1:100

FILL AREAS

SOUTH INNISFIL CREEK



SEE DWG. PROFILES 3-7

SCHEDULE "G"



**DILLON CONSULTING**  
**PROFILES 3-7**  
 3+500 TO 4+200  
 DRAWING SCALES BASED ON A 11"x17" SHEET

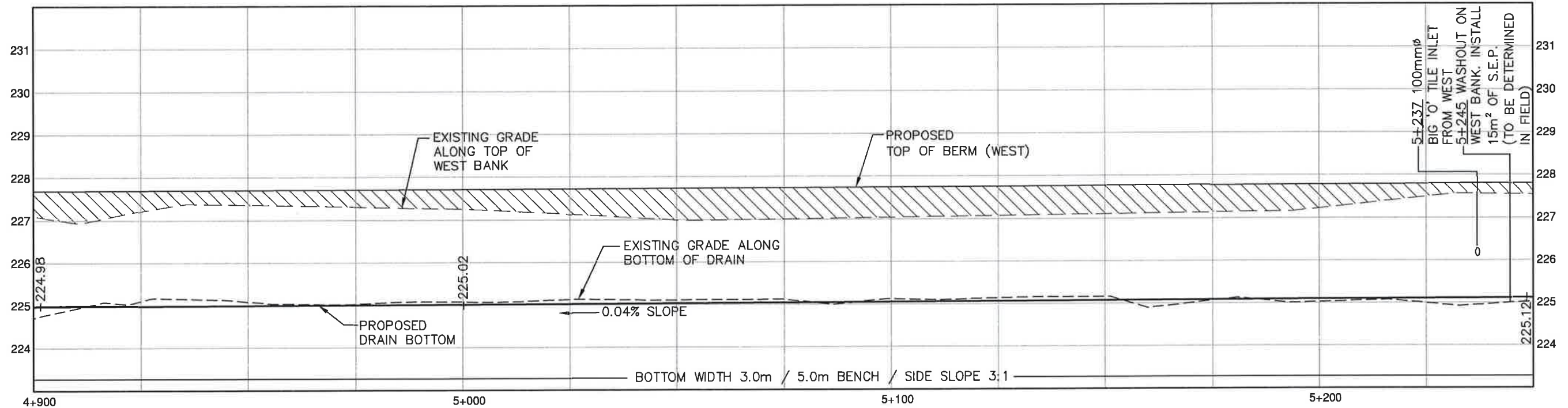
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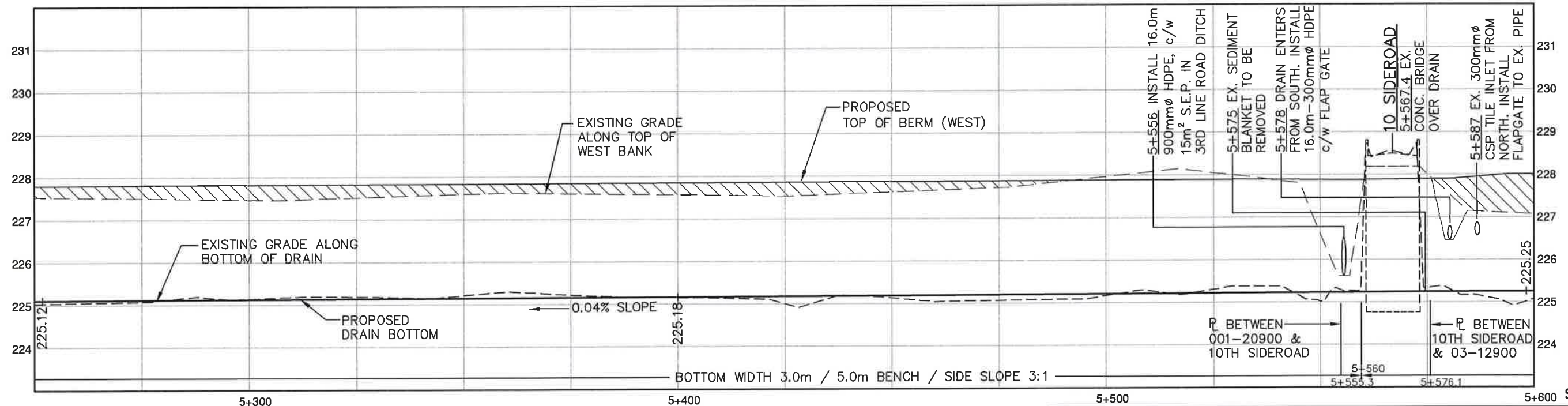


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SEE DWG. PROFILES 3-7



PROFILE STA. 4+900 TO 5+250  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 5+250 TO 5+600  
SCALE: HOR 1:1000 VER 1:100

SEE DWG. PROFILES 3-9

SCHEDULE "G"



FILL AREAS

### SOUTH INNISFIL CREEK



**DILLON CONSULTING**

PROFILES 3-9  
4+900 TO 5+600

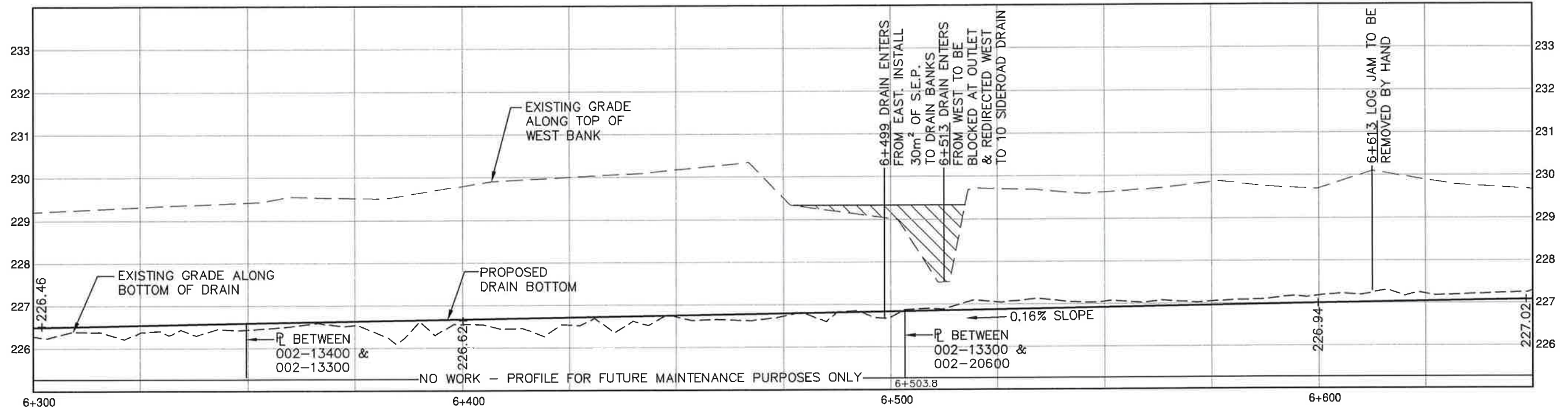
DRAWING SCALES BASED ON A 11"x17" SHEET

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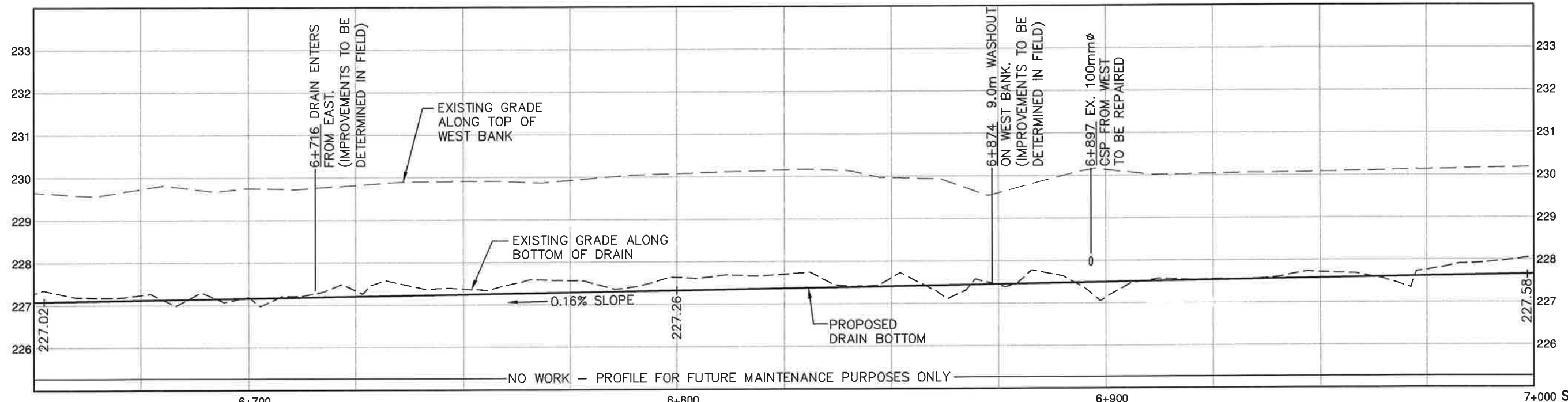


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SEE DWG. PROFILES 3-9



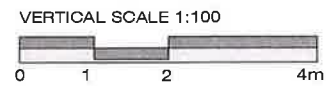
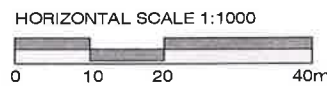
PROFILE STA. 6+300 TO 6+650  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 6+650 TO 7+000  
SCALE: HOR 1:1000 VER 1:100

FILL AREAS

### SOUTH INNISFIL CREEK



**DILLON CONSULTING**

PROFILES 3-11  
6+300 TO 7+000

DRAWING SCALES BASED ON A 11"x17" SHEET

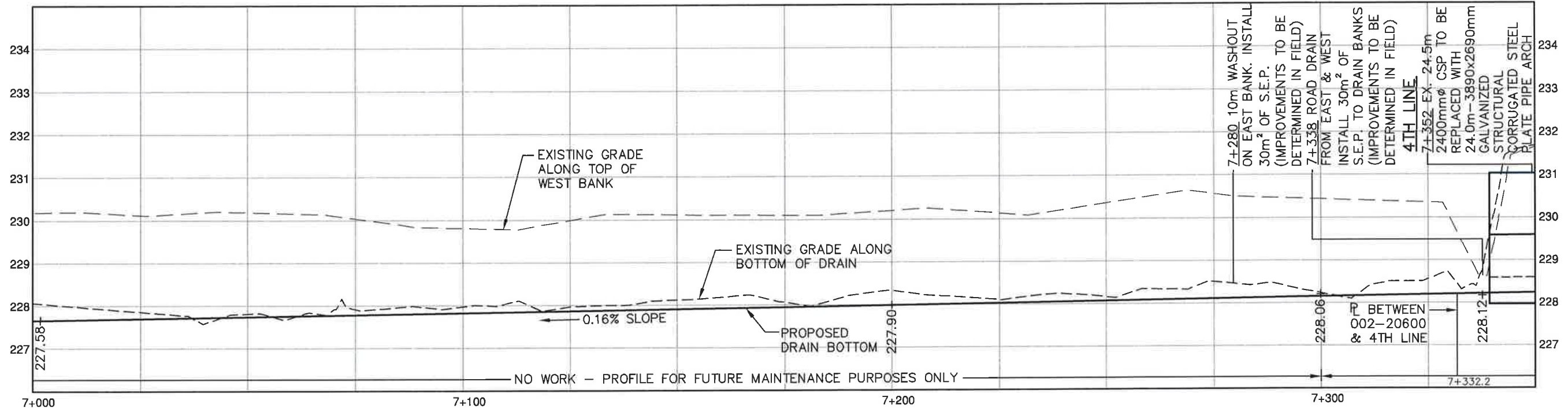
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SEE DWG. PROFILES 3-11

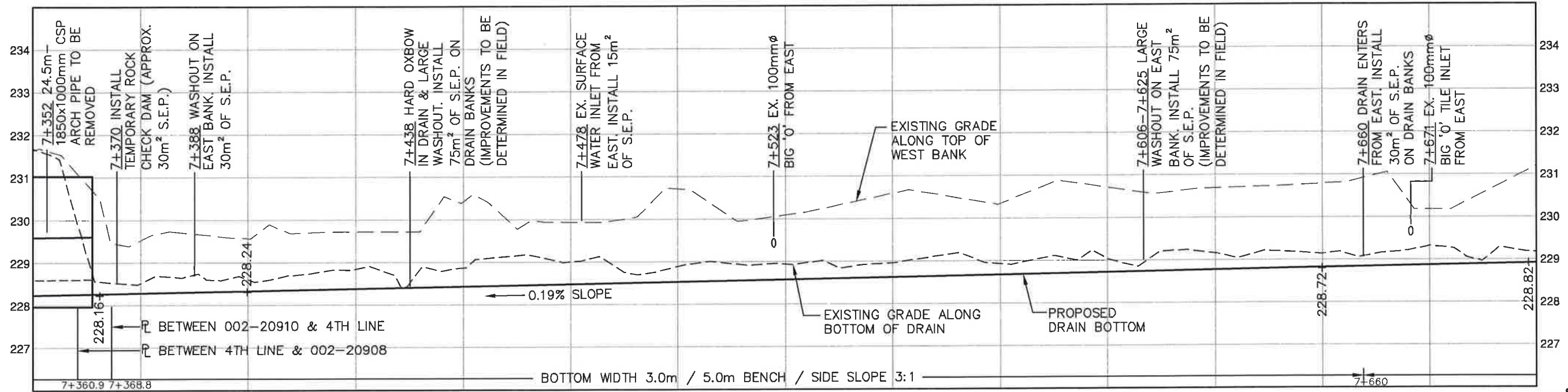
7+000 SCHEDULE "G"

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SEE DWG. PROFILES 3-10



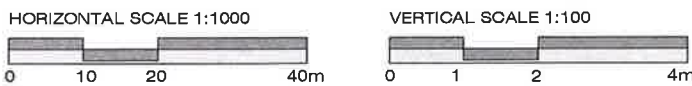
PROFILE STA. 7+000 TO 7+350  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 7+350 TO 7+700  
SCALE: HOR 1:1000 VER 1:100

SOUTH INNISFIL CREEK

SEE DWG. PROFILES 3-12



**DILLON CONSULTING**

PROFILES 3-12  
7+000 TO 7+700

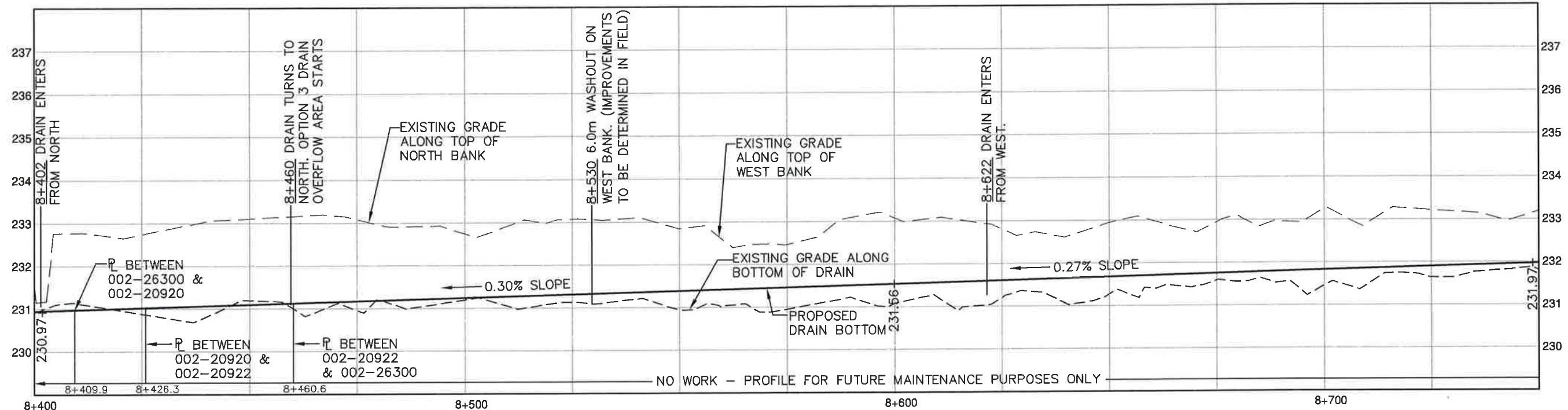
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DRAINAGE REPORT FOR THE	
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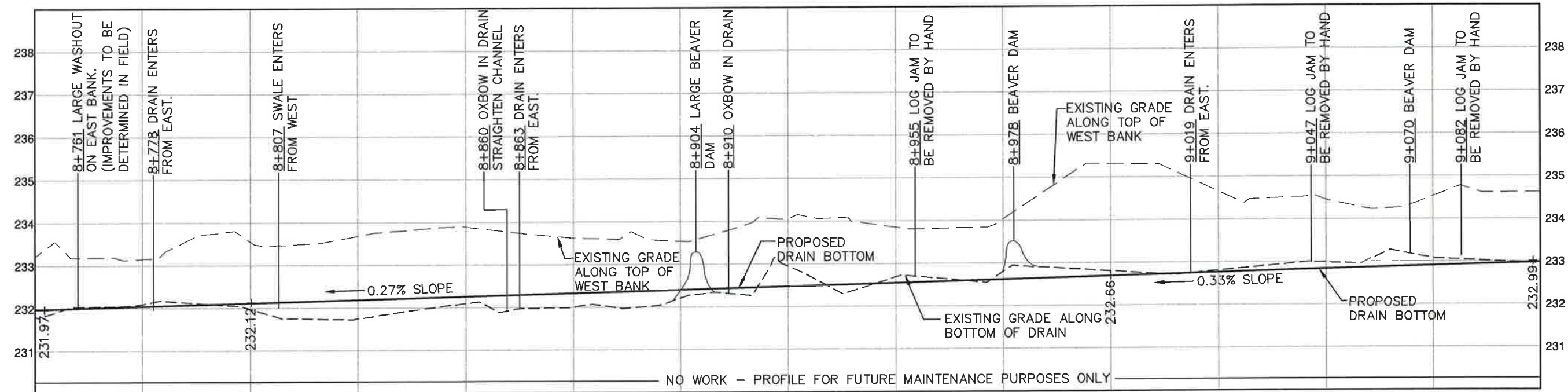


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SEE DWG. PROFILES 3-12

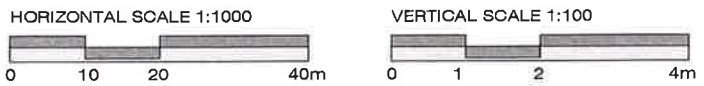


PROFILE STA. 8+400 TO 8+750  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 8+750 TO 9+100  
SCALE: HOR 1:1000 VER 1:100

SEE DWG. PROFILES 3-14



SOUTH INNISFIL CREEK



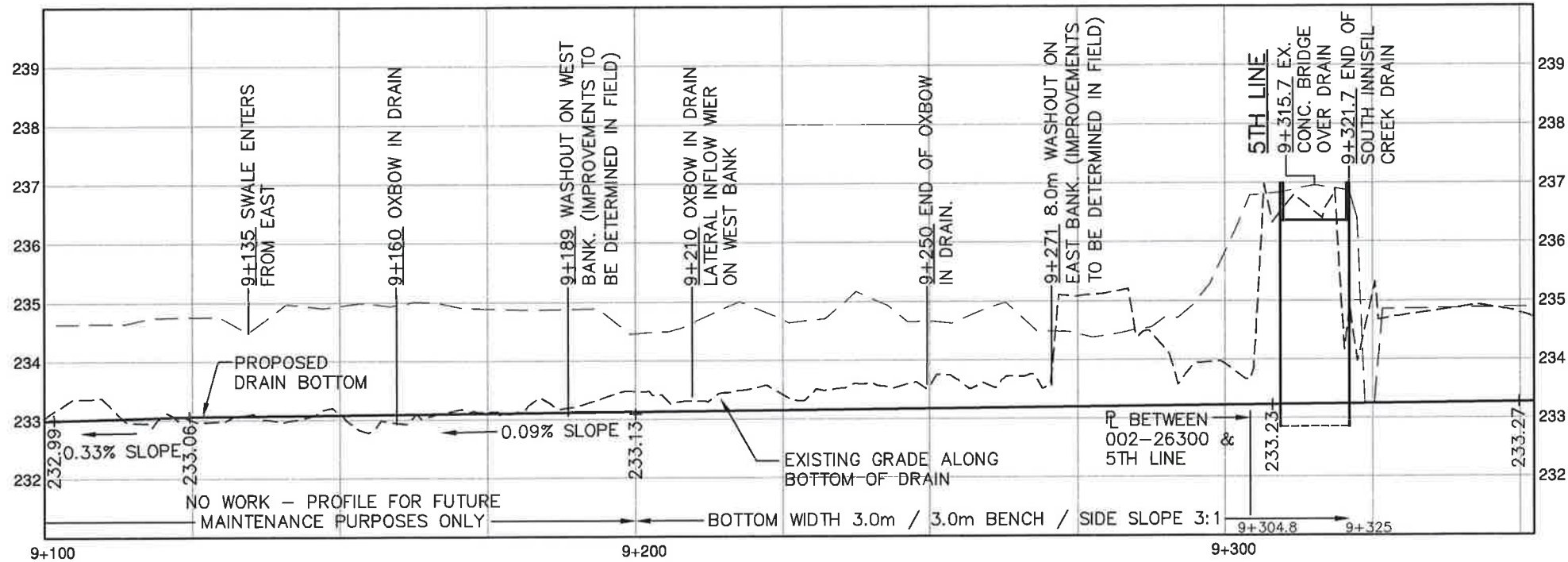
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PROFILES 3-14  
8+400 TO 9+100  
DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE  
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SCHEDULE "G"

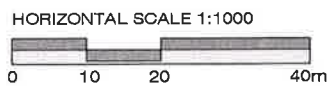
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SEE DWG. PROFILES 3-13



PROFILE STA. 9+100 TO 9+325  
SCALE: HOR 1:1000 VER 1:100

SOUTH INNISFIL CREEK



**DILLON**  
CONSULTING

PROFILES 3-15  
9+100 TO 9+325

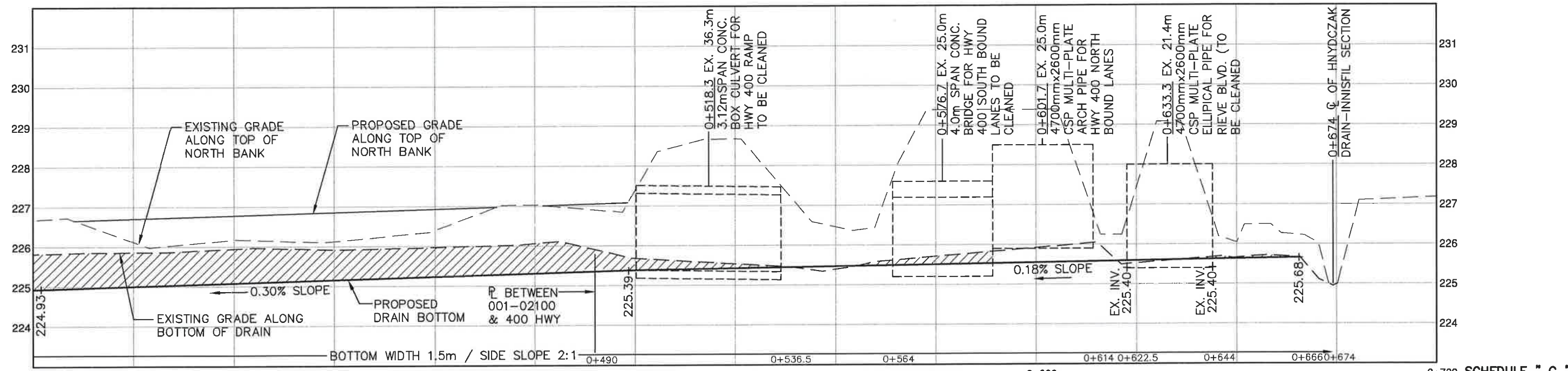
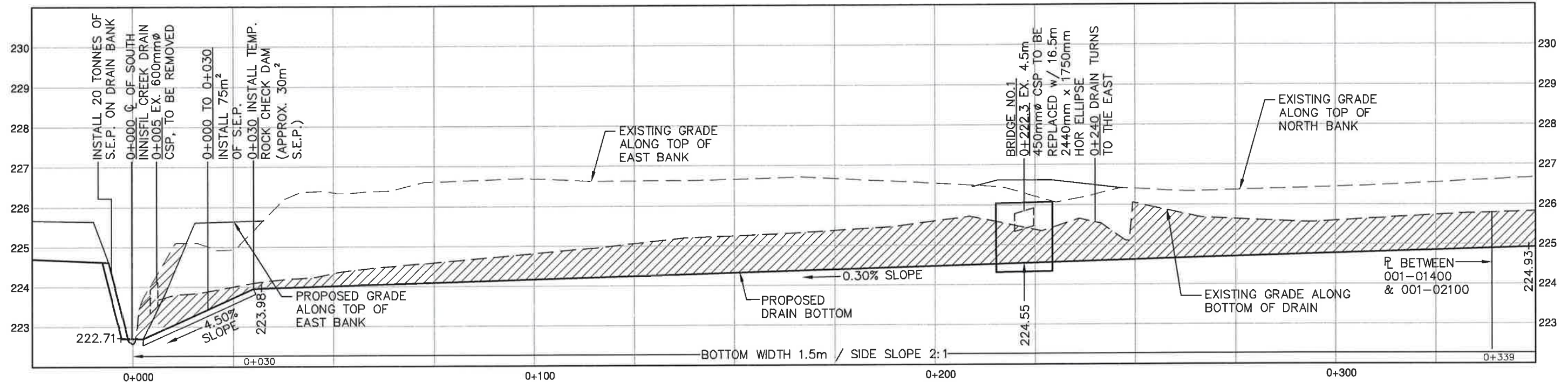
DRAWING SCALES BASED  
ON A 11"x17" SHEET

SCHEDULE " G "

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SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
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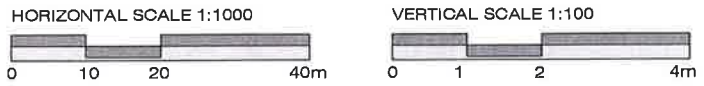
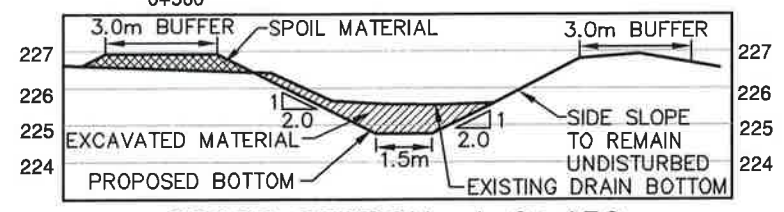


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CUT AREAS

HNYDCZAK OUTLET RELIEF DRAIN

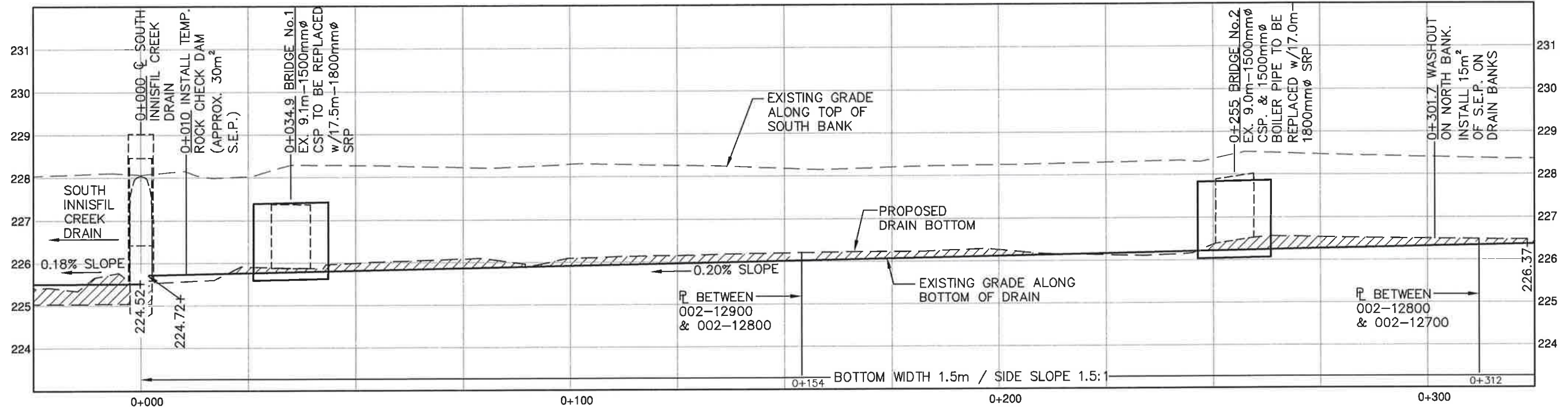


**DILLON CONSULTING**

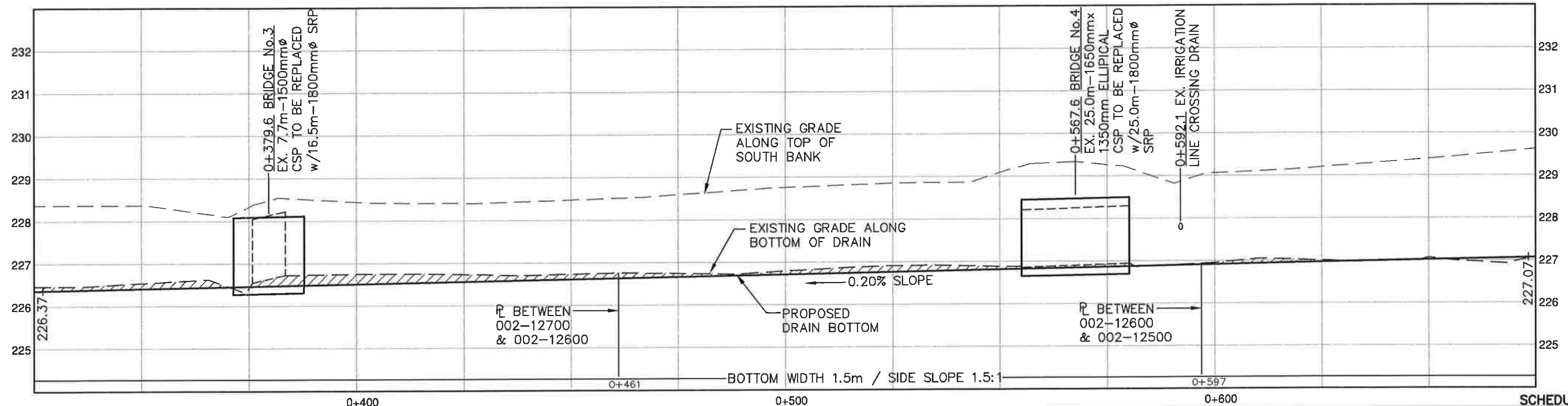
PROFILES 4-1  
 0+000 TO 0+700  
 DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE  
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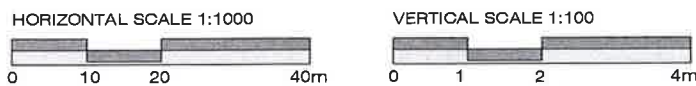
PROFILE STA. 0+000 TO 0+325  
 SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 0+325 TO 0+675  
 SCALE: HOR 1:1000 VER 1:100

CUT AREAS

3RD LINE BRANCH DRAIN



**DILLON CONSULTING**  
 PROFILES 5-1  
 0+000 TO 0+675  
 DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE "G"

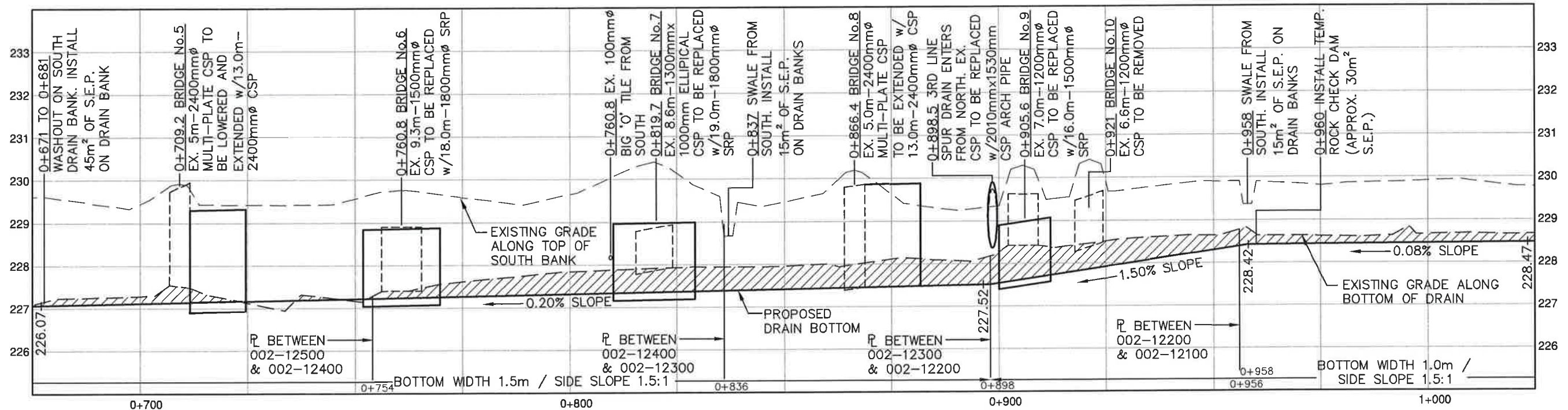
DRAINAGE REPORT FOR THE  
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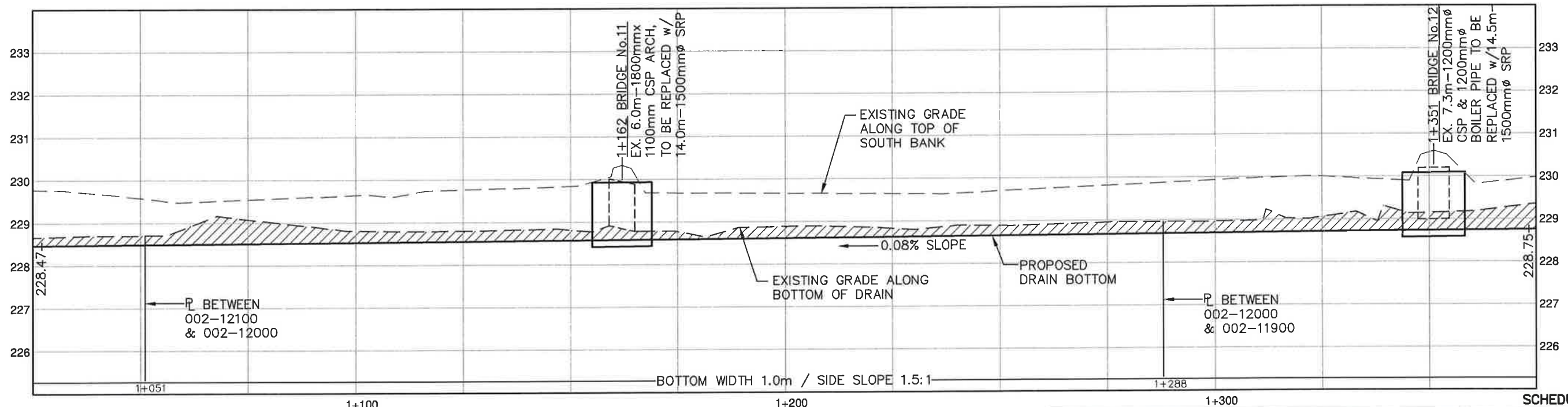
SEE DWG. PROFILES 5-2

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SEE DWG. PROFILES 5-1



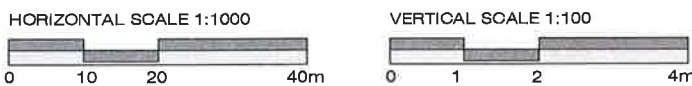
PROFILE STA. 0+675 TO 1+025  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 1+025 TO 1+375  
SCALE: HOR 1:1000 VER 1:100

CUT AREAS

3RD LINE BRANCH DRAIN



**DILLON CONSULTING**

PROFILES 5-2  
0+675 TO 1+375

DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE " G "

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL

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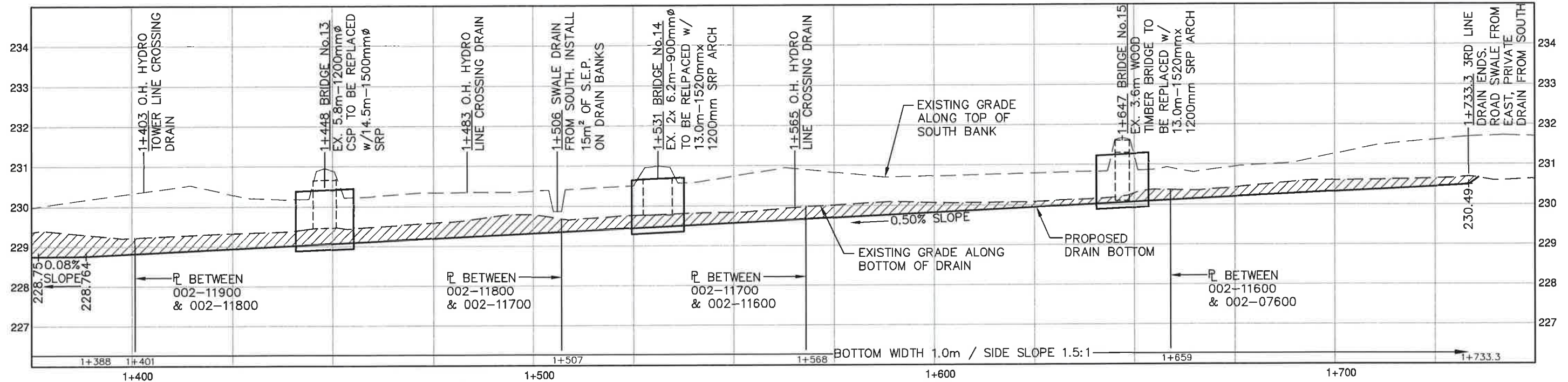
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SEE DWG. PROFILES 5-3

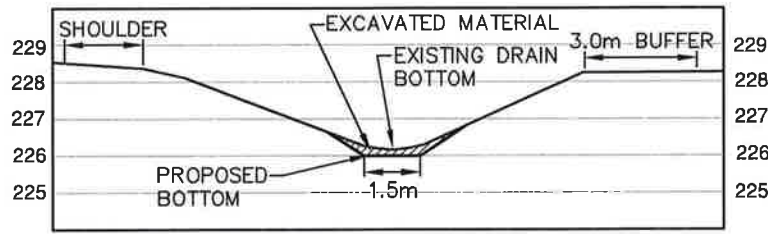
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SEE DWG. PROFILES 5-2

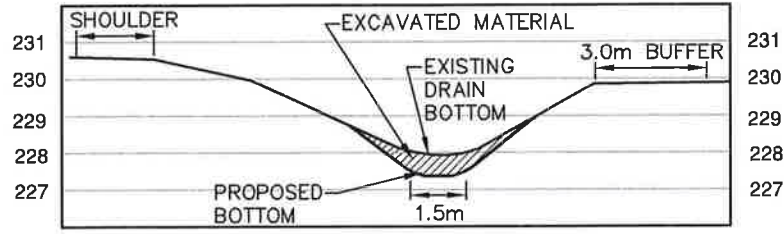


**PROFILE STA. 1+375 TO 1+750**  
SCALE: HOR 1:1000 VER 1:100

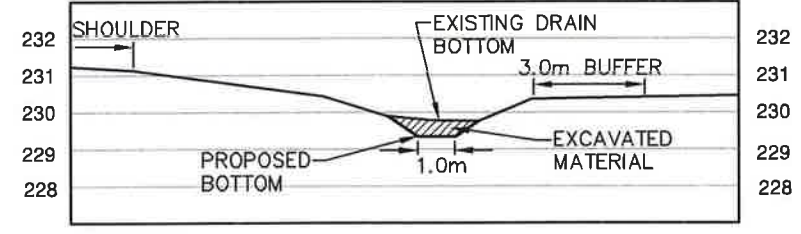
CUT AREAS



**CROSS SECTION BETWEEN 0+140**  
**LOOKING UPSTREAM**  
SCALE: 1:200



**CROSS SECTION BETWEEN 0+830**  
**LOOKING UPSTREAM**  
SCALE: 1:200



**CROSS SECTION BETWEEN 1+505**  
**LOOKING UPSTREAM**  
SCALE: 1:200

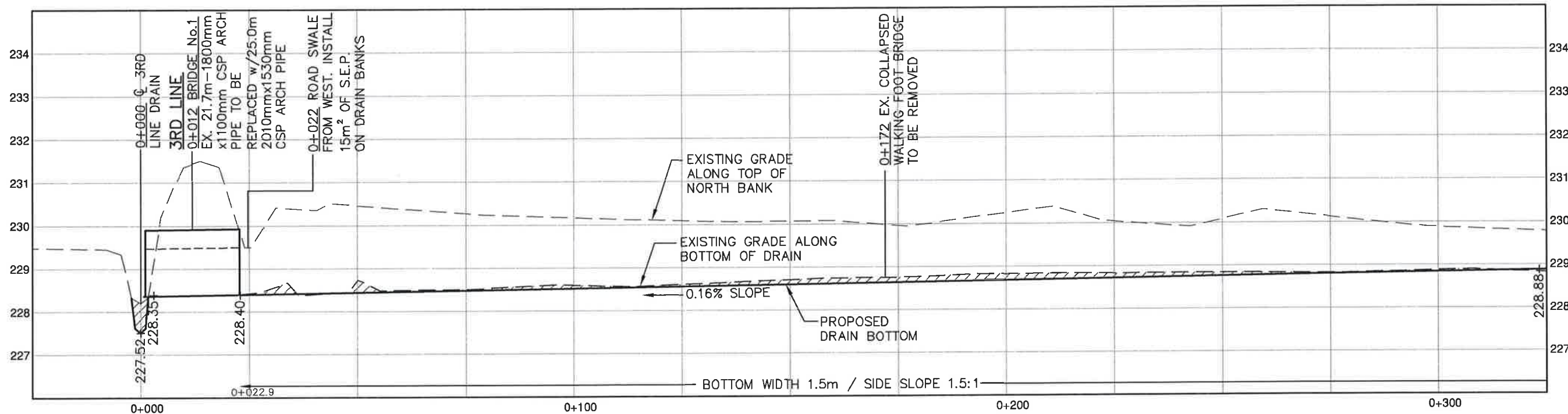


**3RD LINE BRANCH DRAIN**

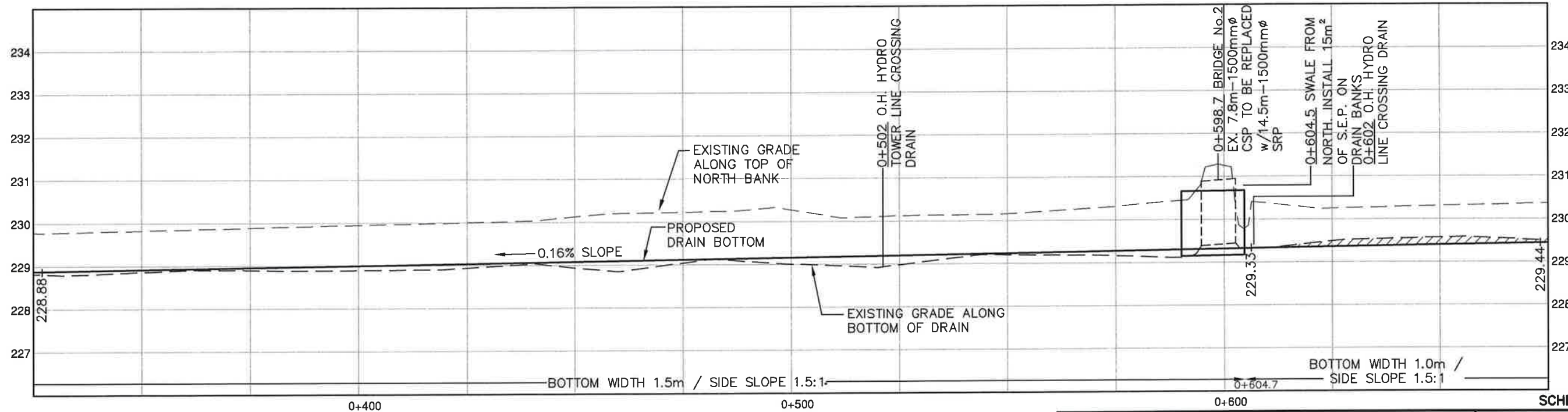


<b>SCHEDULE "G"</b>	
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**PROFILE STA. 0+000 TO 0+325**  
SCALE: HOR 1:1000 VER 1:100



**PROFILE STA. 0+325 TO 0+675**  
SCALE: HOR 1:1000 VER 1:100

SEE DWG. PROFILES 6-2



**3RD LINE SPUR DRAIN**



**DILLON CONSULTING**

**PROFILES 6-1**  
0+000 TO 0+675

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

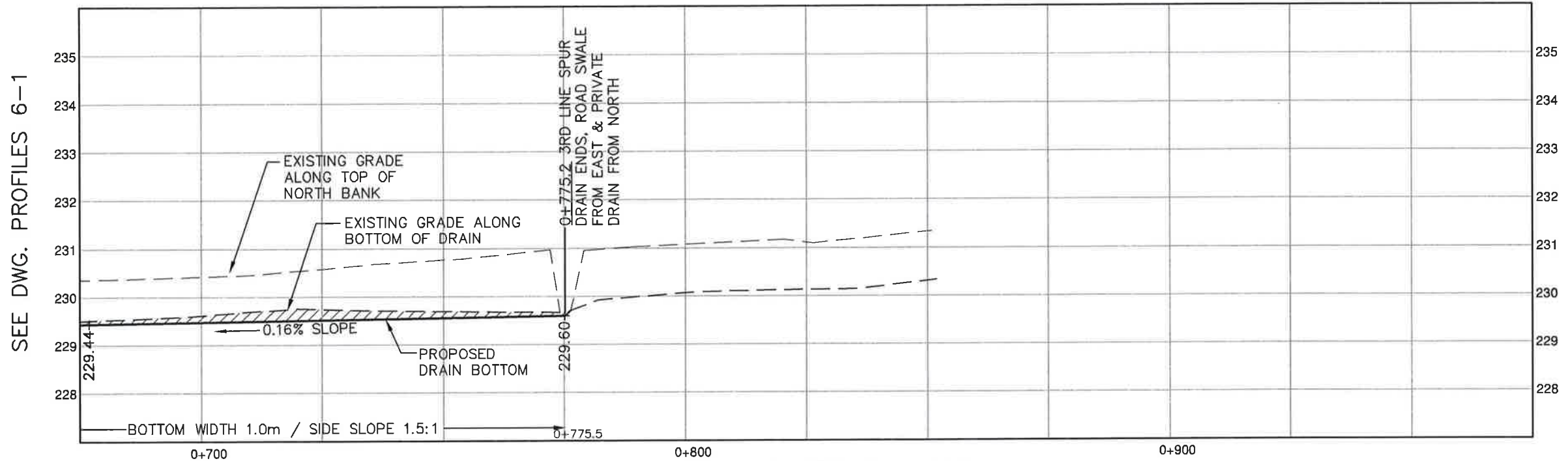
DRAINAGE REPORT FOR THE  
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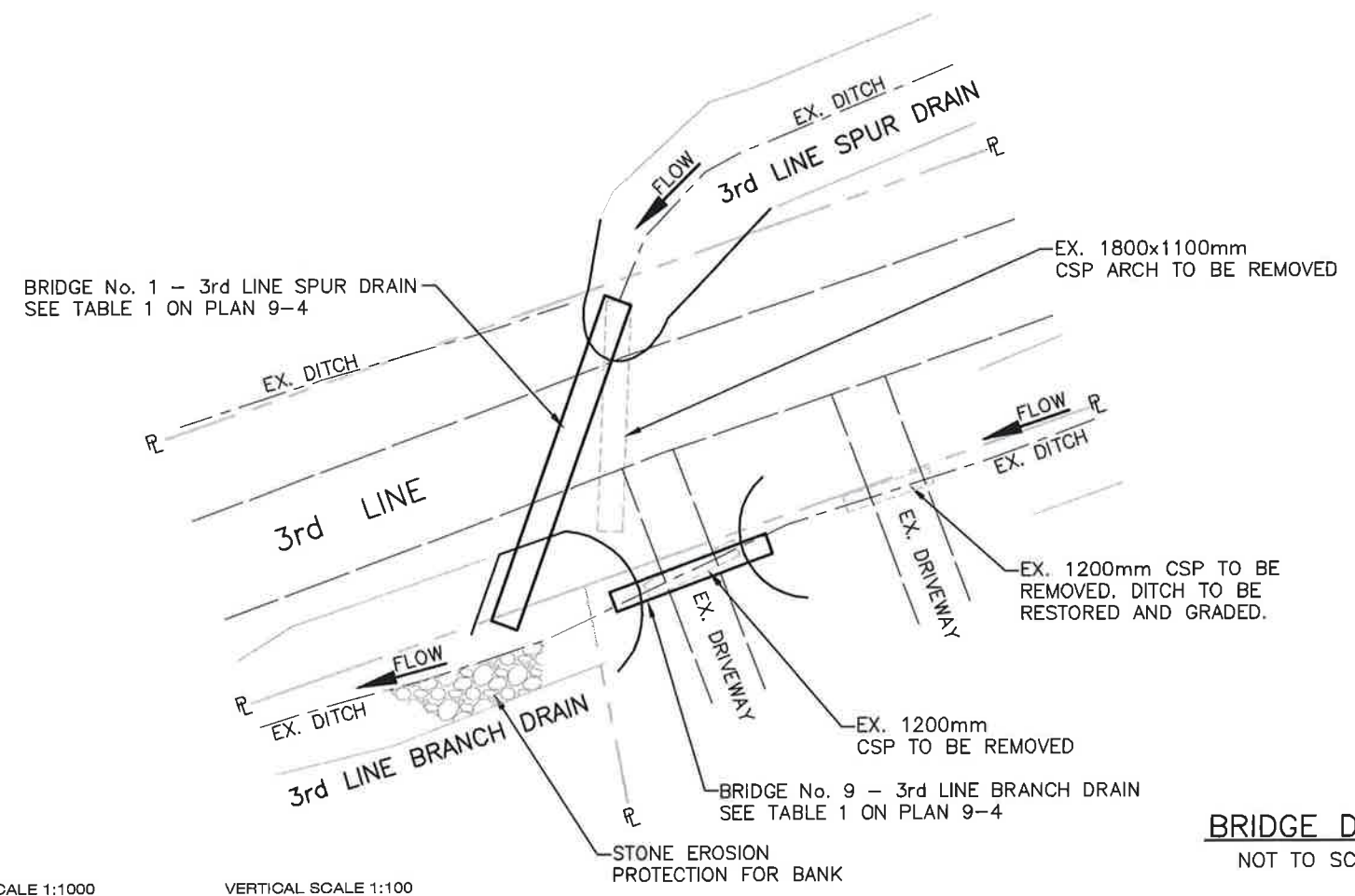
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PROFILE STA. 0+675 TO 0+800  
SCALE: HOR 1:1000 VER 1:100

3RD LINE SPUR DRAIN



BRIDGE DETAIL  
NOT TO SCALE



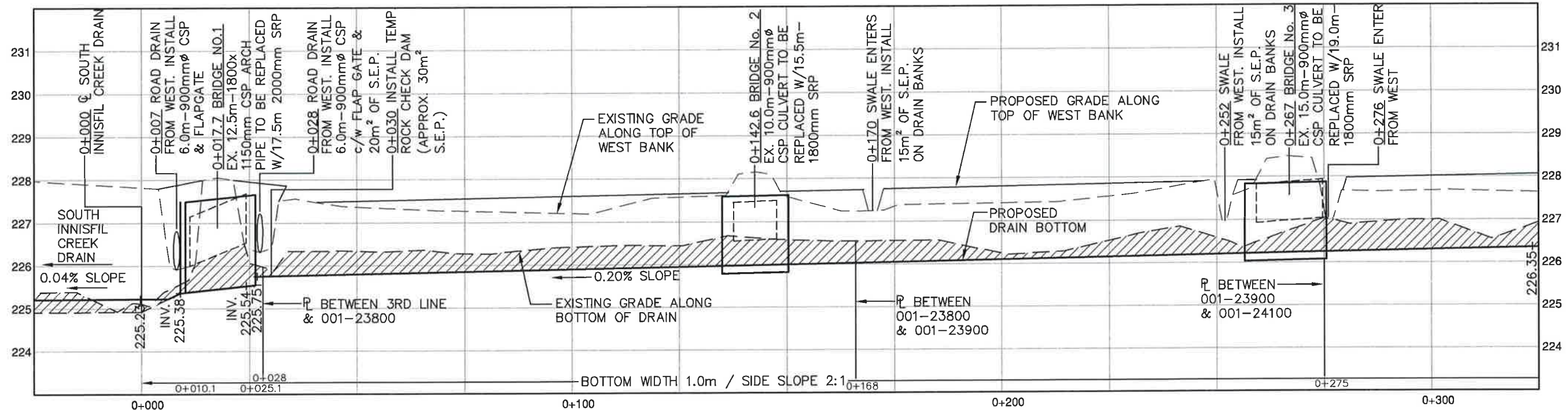
**DILLON CONSULTING**

PROFILES 6-2  
0+675 TO 0+800  
DRAWING SCALES BASED ON A 11"x17" SHEET

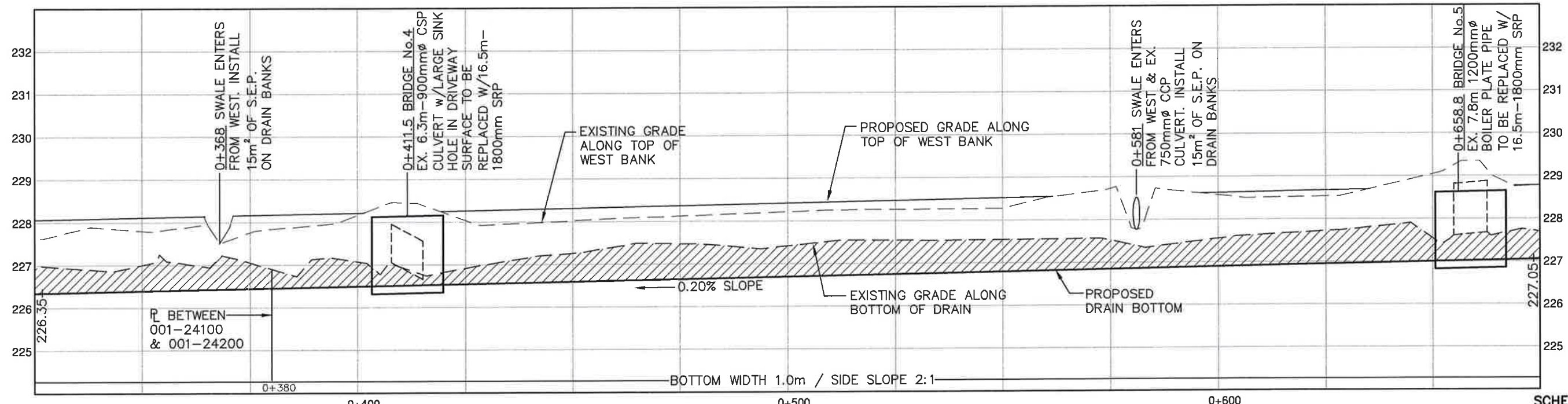
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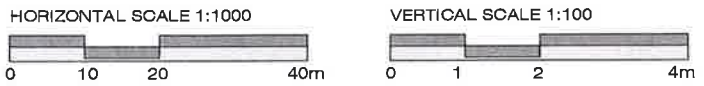
PROFILE STA. 0+000 TO 0+325  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 0+325 TO 0+675  
SCALE: HOR 1:1000 VER 1:100

CUT AREAS

10 SIDEROAD BRANCH DRAIN



**DILLON CONSULTING**  
PROFILES 7-1  
0+000 TO 0+675  
DRAWING SCALES BASED ON A 11"x17" SHEET

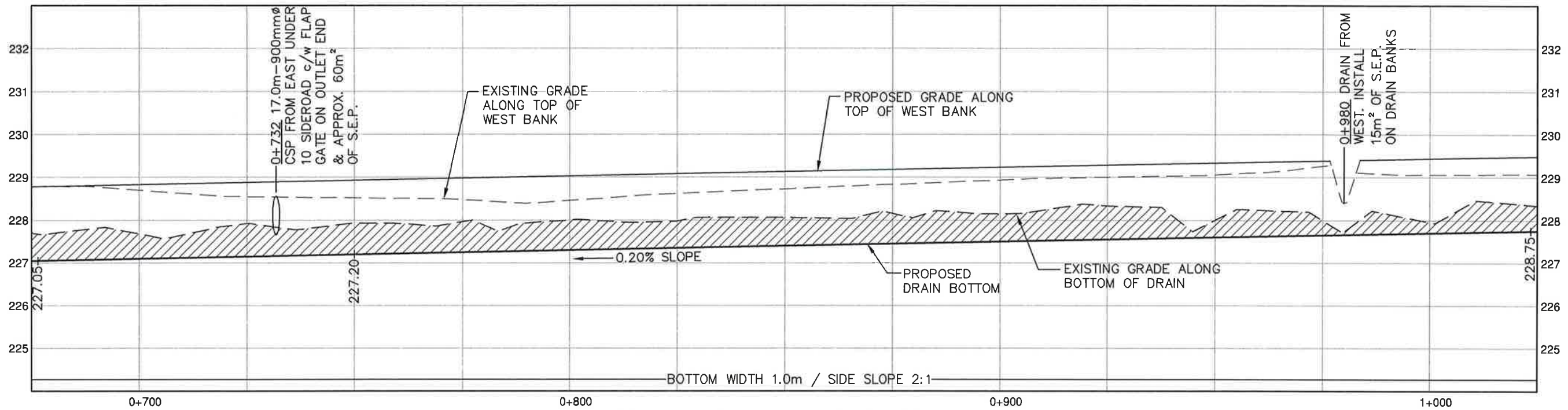
SCHEDULE " G "

DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
1 MARCH 2013	
PROJECT No. 05-4787	
Page 47 of 63	

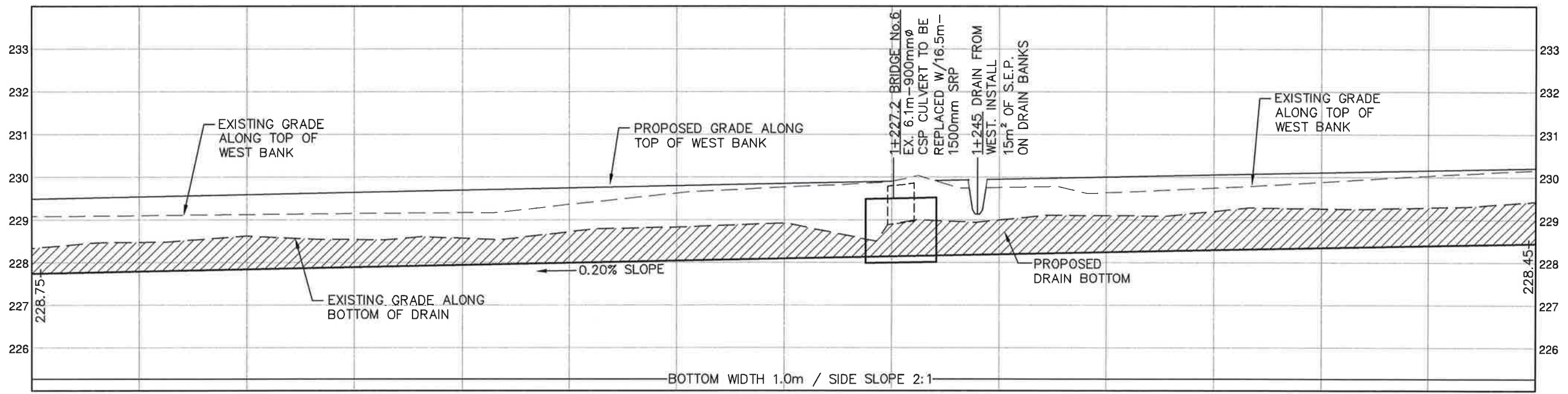
SEE DWG. PROFILES 7-2

Mar 06, 2013 - 2:06pm C:\Users\33wib\appdata\local\temp\AcPublish\_672\054787\_Profiles.dwg

SEE DWG. PROFILES 7-1

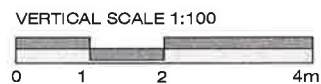
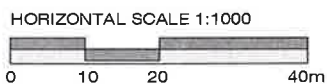


PROFILE STA. 0+675 TO 1+025  
SCALE: HOR 1:1000 VER 1:100



PROFILE STA. 1+025 TO 1+375  
SCALE: HOR 1:1000 VER 1:100

10 SIDEROAD BRANCH DRAIN



CUT AREAS



**DILLON CONSULTING**

PROFILES 7-2  
0+675 TO 1+375

DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE " G "

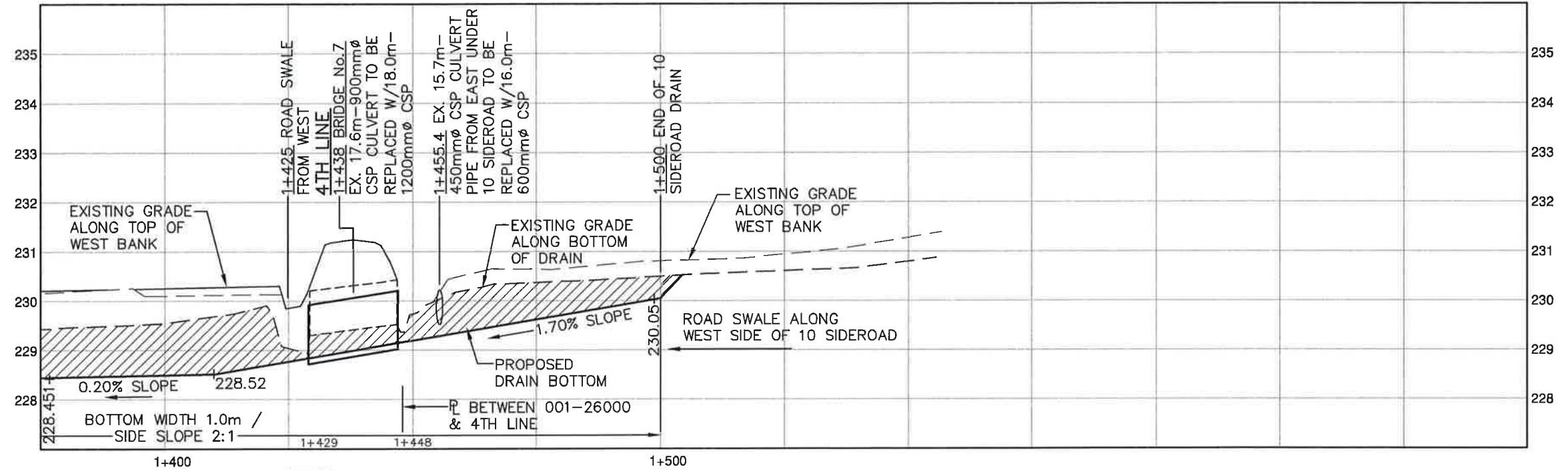
DRAINAGE REPORT FOR THE	
SOUTH INNISFIL CREEK DRAIN AND BRANCHES	
TOWN OF INNISFIL	
1 MARCH 2013	
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SEE DWG. PROFILES 7-3

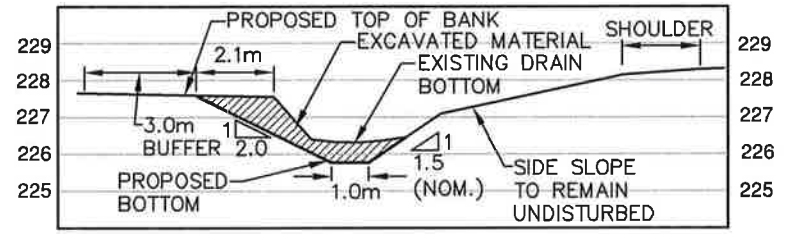


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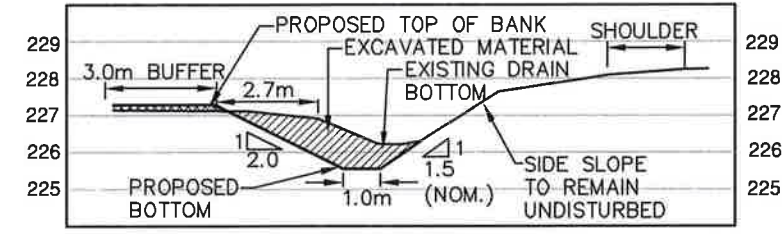
SEE DWG. PROFILES 7-2



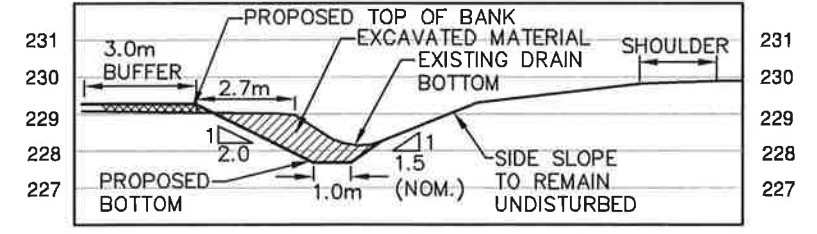
PROFILE STA. 1+375 TO 1+525  
SCALE: HOR 1:1000 VER 1:100



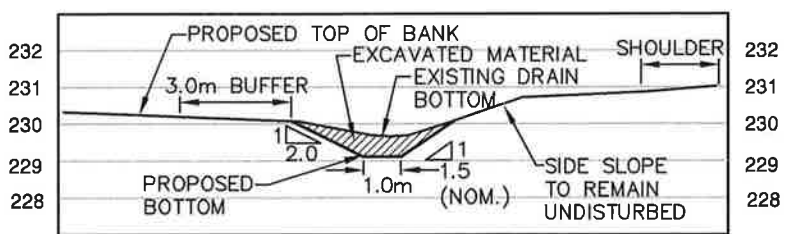
CROSS SECTION BETWEEN 0+040  
LOOKING UPSTREAM  
SCALE: 1:200



CROSS SECTION BETWEEN 0+430  
LOOKING UPSTREAM  
SCALE: 1:200

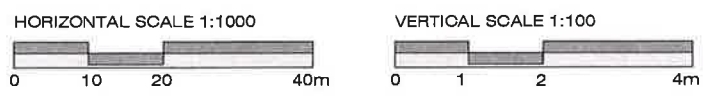


CROSS SECTION BETWEEN 0+910  
LOOKING UPSTREAM  
SCALE: 1:200



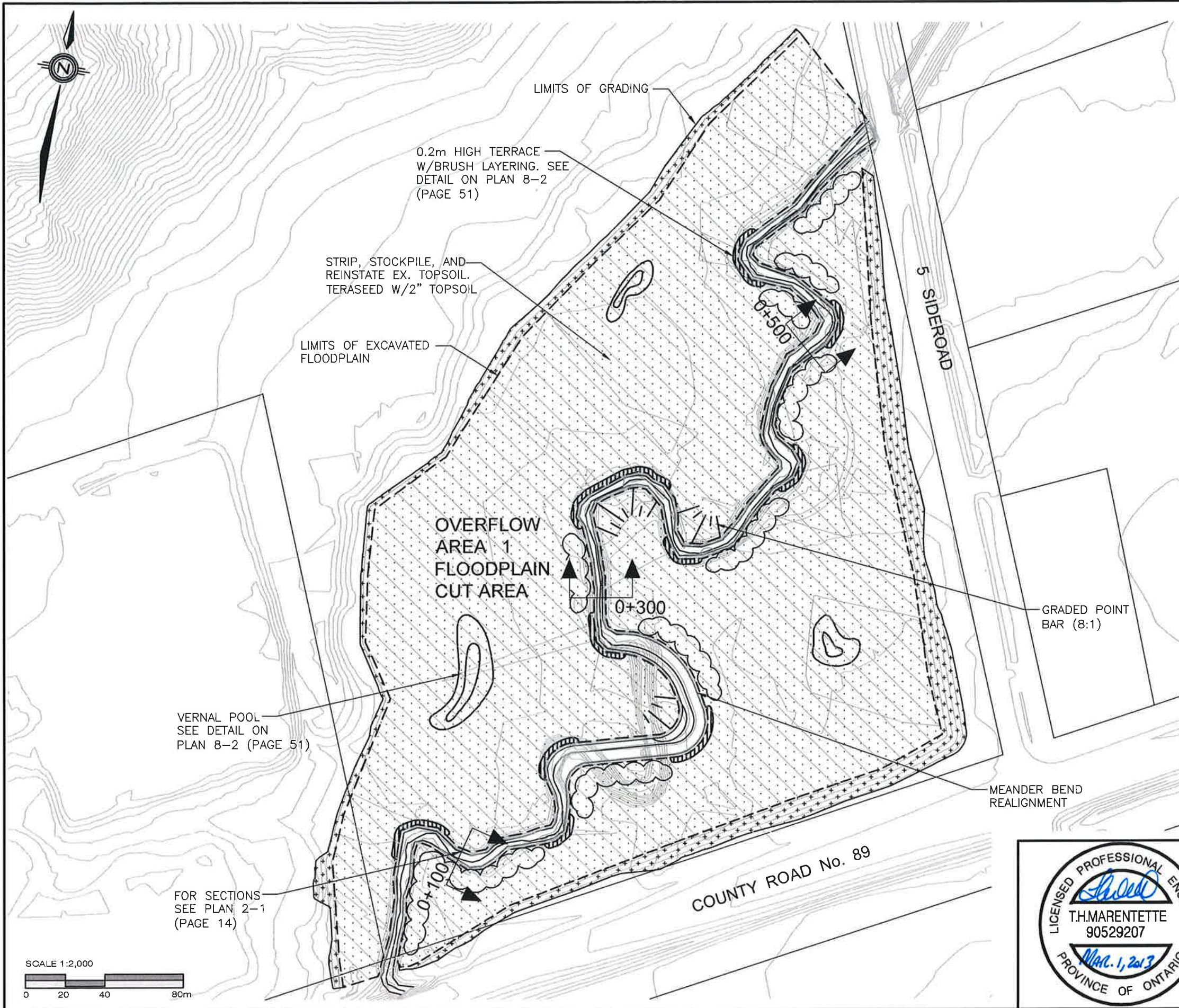
CROSS SECTION BETWEEN 1+140  
LOOKING UPSTREAM  
SCALE: 1:200

10 SIDEROAD BRANCH DRAIN



		<p><b>SCHEDULE " G "</b></p> <p>DRAINAGE REPORT FOR THE</p> <p><b>SOUTH INNISFIL CREEK DRAIN AND BRANCHES</b></p> <p>TOWN OF INNISFIL</p>
		<p>1 MARCH 2013</p> <p>PROJECT No. 05-4787</p> <p>Page 49 of 63</p>
<p><b>PROFILES 7-3</b> 1+375 TO 1+500</p> <p>DRAWING SCALES BASED ON A 11"x17" SHEET</p>		

Mar 06, 2013 - 2:49pm \\dillon.ca\DILLON\_DFS\Oakville\CAD\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Overflow 1.dwg



**LEGEND**

**REVEGETATION**

**FLOOD PLAIN:**  
REINSTATE STRIPPED AND STOCKPILED TOPSOIL. APPLY COVER CROP FOR EROSION CONTROL. ANNUAL OAT SEED APPLIED AT RATE OF 15kg/ha

**SIDE SLOPE:**  
REINSTATE STRIPPED TOPSOIL. APPLY ONTARIO SEED COMPANY SIDE SLOPE SEED MIX #8225

5% Autumn Bentgrass (*Agrostis perennans*)  
5% Black Eyed Susan (*Rudbeckia hirta*)  
30% Canada Wild Rye (*Elymus canadensis*)  
20% Little Bluestem (*Schizachyrium scoparium*)  
3% New England Aster (*Aster novae-angliae*)  
30% Oats (*Avena sativa*)  
2% Wild Bergamot (*Monarda fistulosa*)  
5% Tall Brome (*Bromus latigumis*)

**FLOODPLAIN CUT AREA**

**BRUSH LAYERING ZONE**

**PLANTING AREAS**

**REVEGETATION - SEEDLING TREE & SHRUB SPECIES:**

AREAS SHOWN ON THE PLAN TO BE PLANTED WITH AN EVEN MIX 20 GAL. POT AND WHIP SIZED SEEDLINGS

**SPECIES COMPOSITION:**

- WILLOW VARIETIES (PUSSY WILLOW, SANDBAR WILLOW AND BEAKED WILLOW ARE ACCEPTABLE)
- SILVER MAPLE
- TREMLING ASPEN
- WHITE BIRCH
- RED OSIER DOGWOOD
- BUTTONBUSH (IN LOW LYING AREAS)

**SPACING:**

- 5 M OFF-CENTRE, CLUSTER PLANTINGS

**MAIN DRAIN REVEGETATION:**

- APPLY REVEGETATION PLAN AS INDICATED ABOVE TO THE FOLLOWING STATION RANGES:

0+030 TO 0+620  
1+060 TO 1+560  
1+730 TO 5+740  
7+410 TO 8+400

**SCHEDULE " G "**

DRAINAGE REPORT FOR THE  
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL  
1 MARCH 2013

PROJECT No. 05-4787

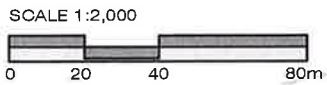
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**DILLON CONSULTING**

**PLAN 8-1**

DRAWING SCALES BASED ON A 11"x17" SHEET



FOR SECTIONS SEE PLAN 2-1 (PAGE 14)

VERNAL POOL SEE DETAIL ON PLAN 8-2 (PAGE 51)

OVERFLOW AREA 1 FLOODPLAIN CUT AREA

LIMITS OF EXCAVATED FLOODPLAIN

STRIP, STOCKPILE, AND REINSTATE EX. TOPSOIL. TERASEED W/2" TOPSOIL

0.2m HIGH TERRACE W/BRUSH LAYERING. SEE DETAIL ON PLAN 8-2 (PAGE 51)

LIMITS OF GRADING

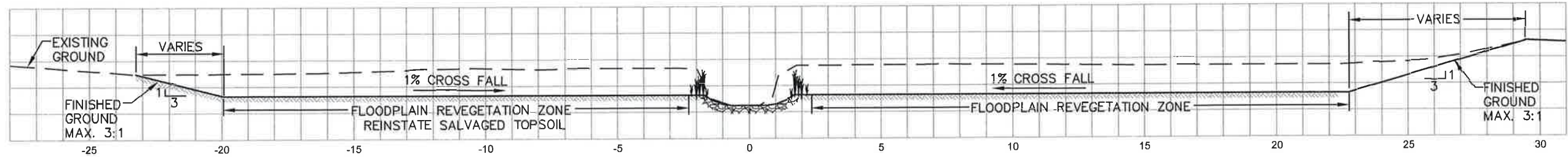
5 SIDEROAD

GRADED POINT BAR (8:1)

MEANDER BEND REALIGNMENT

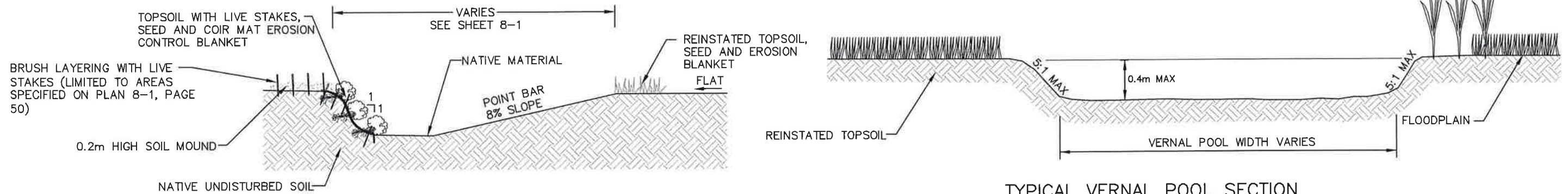
COUNTY ROAD No. 89

Mar 06, 2013 - 2: 49pm \\dillon.ca\dfs\Oakville\CAD\2005\05 4787 South Innisfil Creek Drain\02--Sheets\054787 Overflow 1.dwg



TYPICAL VALLEY CROSS SECTION

NOT TO SCALE

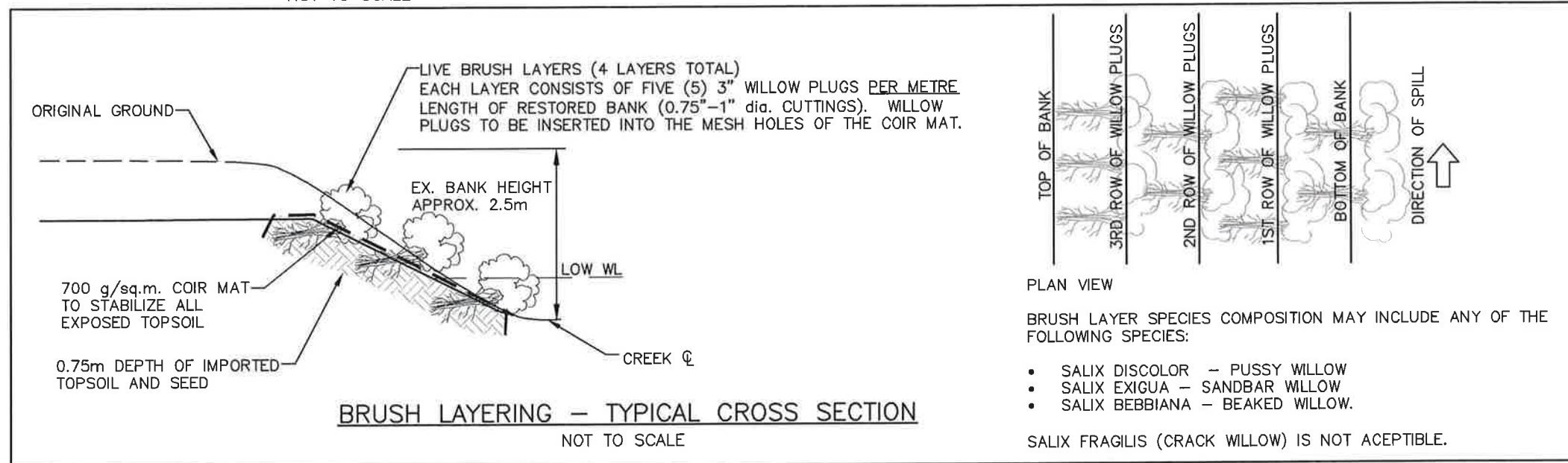


TYPICAL SECTION AT POOL

NOT TO SCALE

TYPICAL VERNAL POOL SECTION

NOT TO SCALE



BRUSH LAYERING - TYPICAL CROSS SECTION

NOT TO SCALE

SCHEDULE " G "



DETAILS 8-2

DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE  
SOUTH INNISFIL  
CREEK DRAIN  
AND BRANCHES

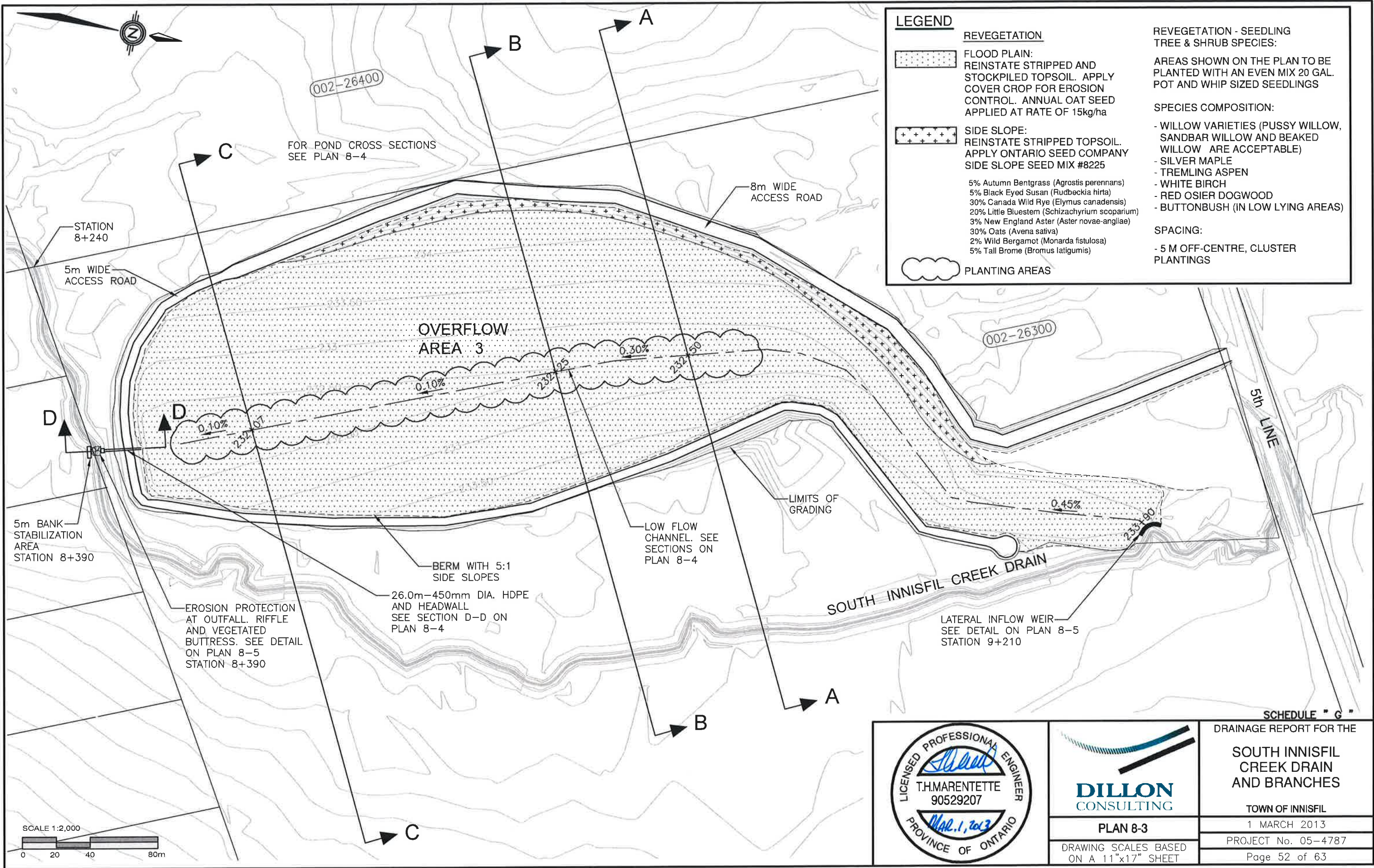
TOWN OF INNISFIL

1 MARCH 2013

PROJECT No. 05-4787

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Mar 06, 2013 - 2:52pm \\dillon.ca\Dillon\_DFS\Oakville\Oakville CAD\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Overflow 3.dwg



**LEGEND**

**REVEGETATION**

FLOOD PLAIN:  
REINSTATE STRIPPED AND STOCKPILED TOPSOIL. APPLY COVER CROP FOR EROSION CONTROL. ANNUAL OAT SEED APPLIED AT RATE OF 15kg/ha

SIDE SLOPE:  
REINSTATE STRIPPED TOPSOIL. APPLY ONTARIO SEED COMPANY SIDE SLOPE SEED MIX #8225

5% Autumn Bentgrass (*Agrostis perennans*)  
5% Black Eyed Susan (*Rudbeckia hirta*)  
30% Canada Wild Rye (*Elymus canadensis*)  
20% Little Bluestem (*Schizachyrium scoparium*)  
3% New England Aster (*Aster novae-angliae*)  
30% Oats (*Avena sativa*)  
2% Wild Bergamot (*Monarda fistulosa*)  
5% Tall Brome (*Bromus latigumis*)

PLANTING AREAS

REVEGETATION - SEEDLING TREE & SHRUB SPECIES:  
AREAS SHOWN ON THE PLAN TO BE PLANTED WITH AN EVEN MIX 20 GAL. POT AND WHIP SIZED SEEDLINGS

SPECIES COMPOSITION:  
- WILLOW VARIETIES (PUSSY WILLOW, SANDBAR WILLOW AND BEAKED WILLOW ARE ACCEPTABLE)  
- SILVER MAPLE  
- TREMLING ASPEN  
- WHITE BIRCH  
- RED OSIER DOGWOOD  
- BUTTONBUSH (IN LOW LYING AREAS)

SPACING:  
- 5 M OFF-CENTRE, CLUSTER PLANTINGS



**DILLON CONSULTING**

**PLAN 8-3**

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE " G "**

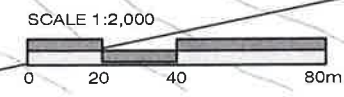
**DRAINAGE REPORT FOR THE SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL

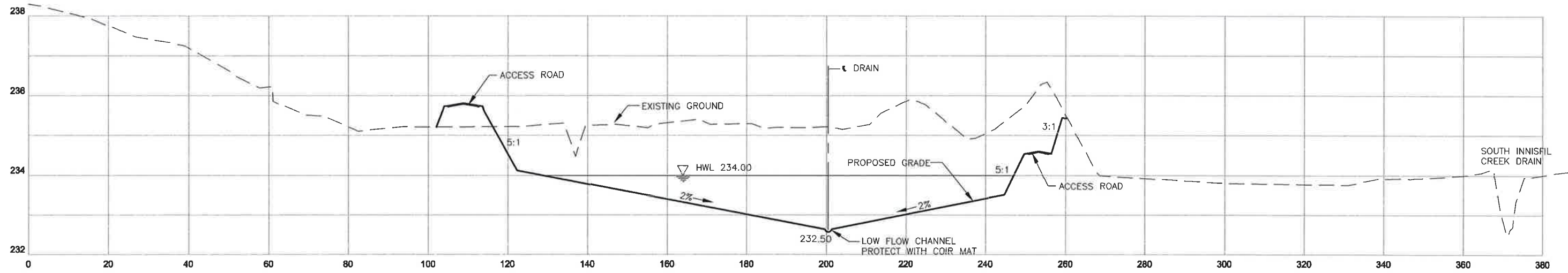
1 MARCH 2013

PROJECT No. 05-4787

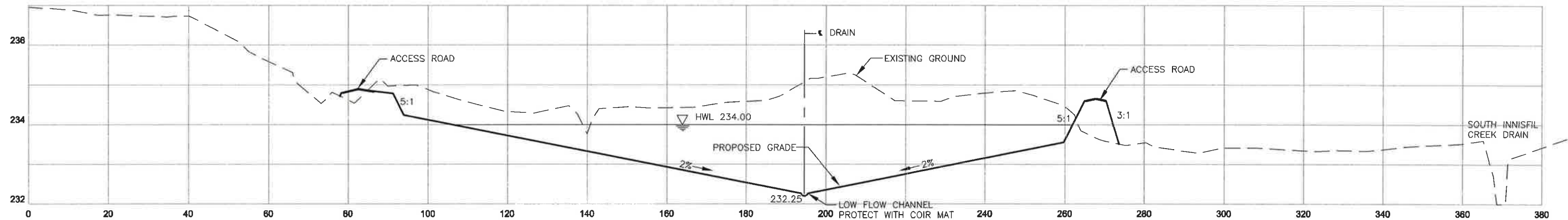
Page 52 of 63



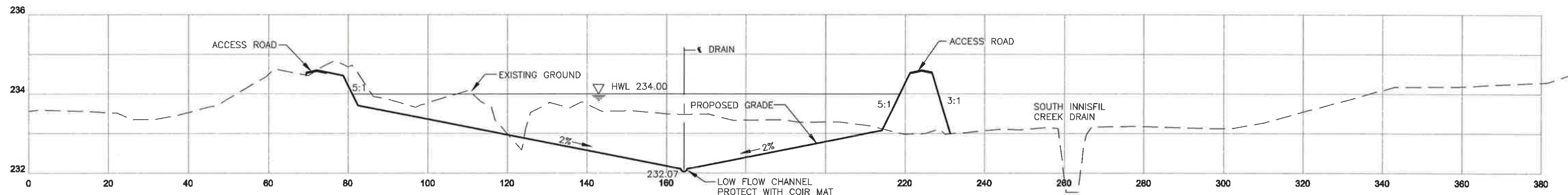
Mar 06, 2013 - 2:52pm \\dillon.ca\DFS\Oakville\Oakville CAD\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Overflow 3.dwg



**SECTION A-A**  
(APPROX. 330m U/S OF OUTLET)



**SECTION B-B**

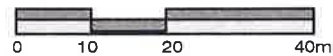


**SECTION C-C**  
FOR SECTION LOCATIONS  
SEE PLAN 8-3 (PAGE 52)

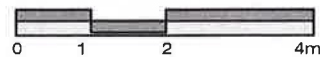
SCHEDULE " G "

NOTE: CROSS SECTIONS LOOKING UPSTREAM

HOR. SCALE 1:1000



VER. SCALE 1:100



**DILLON CONSULTING**

**SECTIONS 8-4**

DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

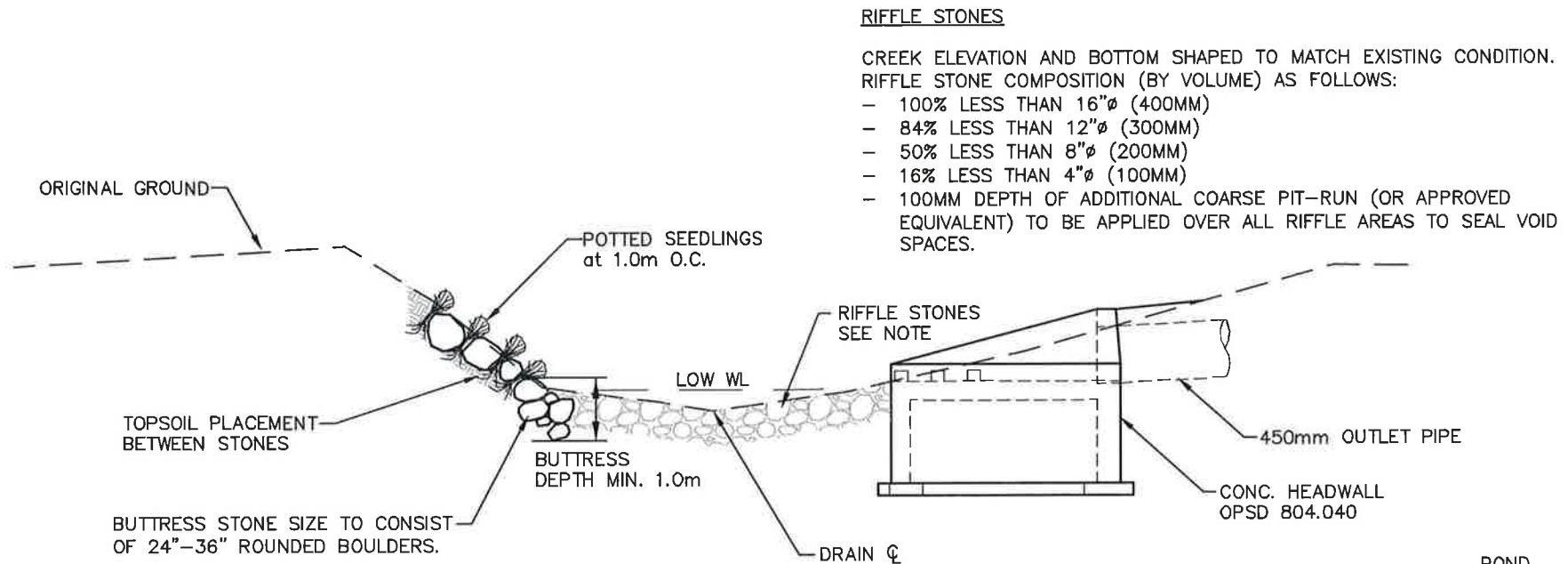
TOWN OF INNISFIL

1 MARCH 2013

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Mar 06, 2013 - 2:51pm \\dillon.ca\dillon\dfs\Oakville\CAD\cad\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Overflow 3.dwg



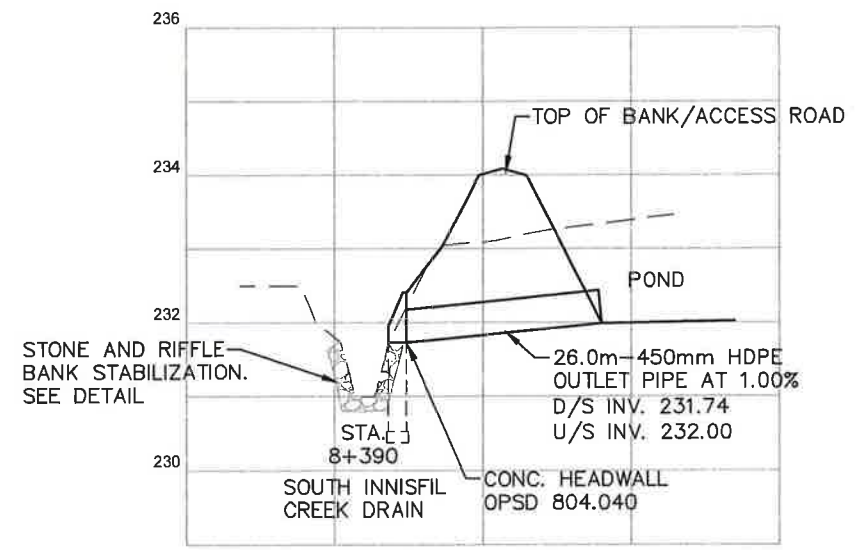
**RIFFLE STONES**  
 CREEK ELEVATION AND BOTTOM SHAPED TO MATCH EXISTING CONDITION.  
 RIFFLE STONE COMPOSITION (BY VOLUME) AS FOLLOWS:  
 - 100% LESS THAN 16"φ (400MM)  
 - 84% LESS THAN 12"φ (300MM)  
 - 50% LESS THAN 8"φ (200MM)  
 - 16% LESS THAN 4"φ (100MM)  
 - 100MM DEPTH OF ADDITIONAL COARSE PIT-RUN (OR APPROVED EQUIVALENT) TO BE APPLIED OVER ALL RIFFLE AREAS TO SEAL VOID SPACES.

**NOTE**  
 POTTED SEEDLINGS TO CONSIST OF EQUAL QUANTITIES OF EACH OF THE FOLLOWING SPECIES:

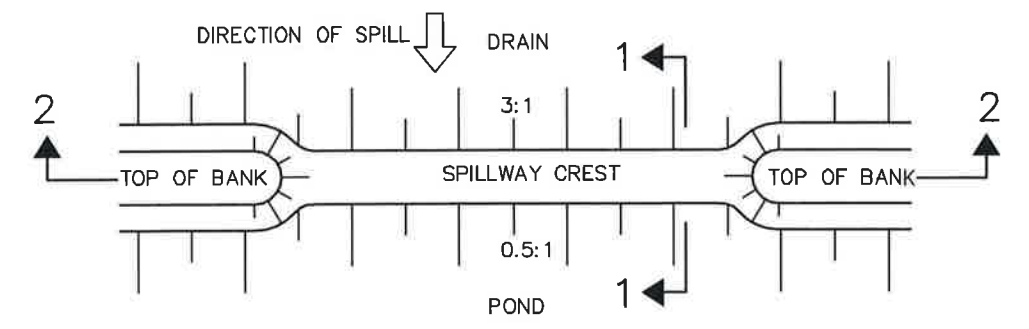
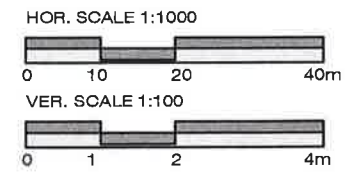
- SALIX NIGRA - BLACK WILLOW
- SALIX BEBBIANA - BEAKED WILLOW
- CORNUS SERICEA - RED OSIER DOGWOOD
- ALNUS RUGOSA - SPECKLED ALDER

- CONSTRUCTION**
1. EXCAVATE BELOW FINISHED GROUND PROFILE TO DEPTH OF 1.0M
  2. PLACE FIRST STONE
  3. FIX SEEDLING IN PLACE ADJACENT TO STONE
  4. PLACE TOPSOIL AND ADDITIONAL STONE, FILLING VOIDS WITH SMALLER STONES.
  5. ENSURE GOOD FIT OF ROCK/SOIL AROUND CROWN OF SEEDLING - HAND PLACEMENT MAY BE REQUIRED
  6. REPEAT

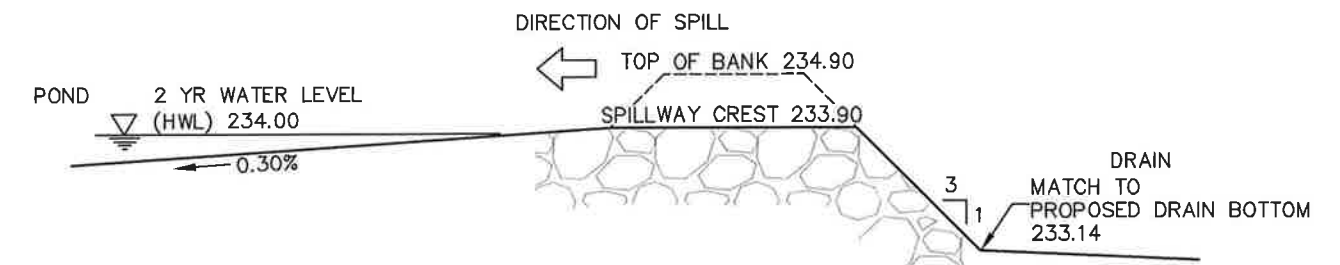
**EROSION PROTECTION AT OUTFALL - RIFFLE AND VEGETATED BUTTRESS**  
 NOT TO SCALE



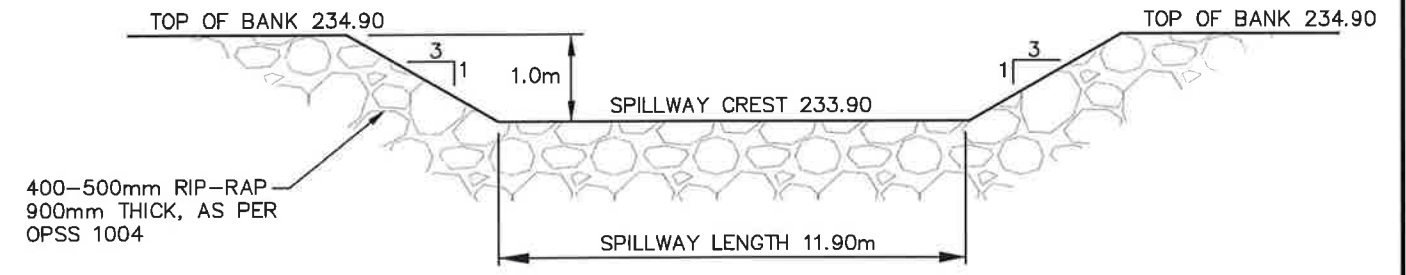
**SECTION D-D**  
 FOR SECTION LOCATION SEE PLAN 8-3 (PAGE 52)



**LATERAL INFLOW WEIR**  
 STA. 9+210 PLAN VIEW  
 NOT TO SCALE



**LATERAL INFLOW WEIR**  
 SECTION 1-1  
 NOT TO SCALE



**LATERAL INFLOW WEIR**  
 SECTION 2-2  
 NOT TO SCALE

SCHEDULE " G "



**DILLON CONSULTING**

**DETAILS 8-5**

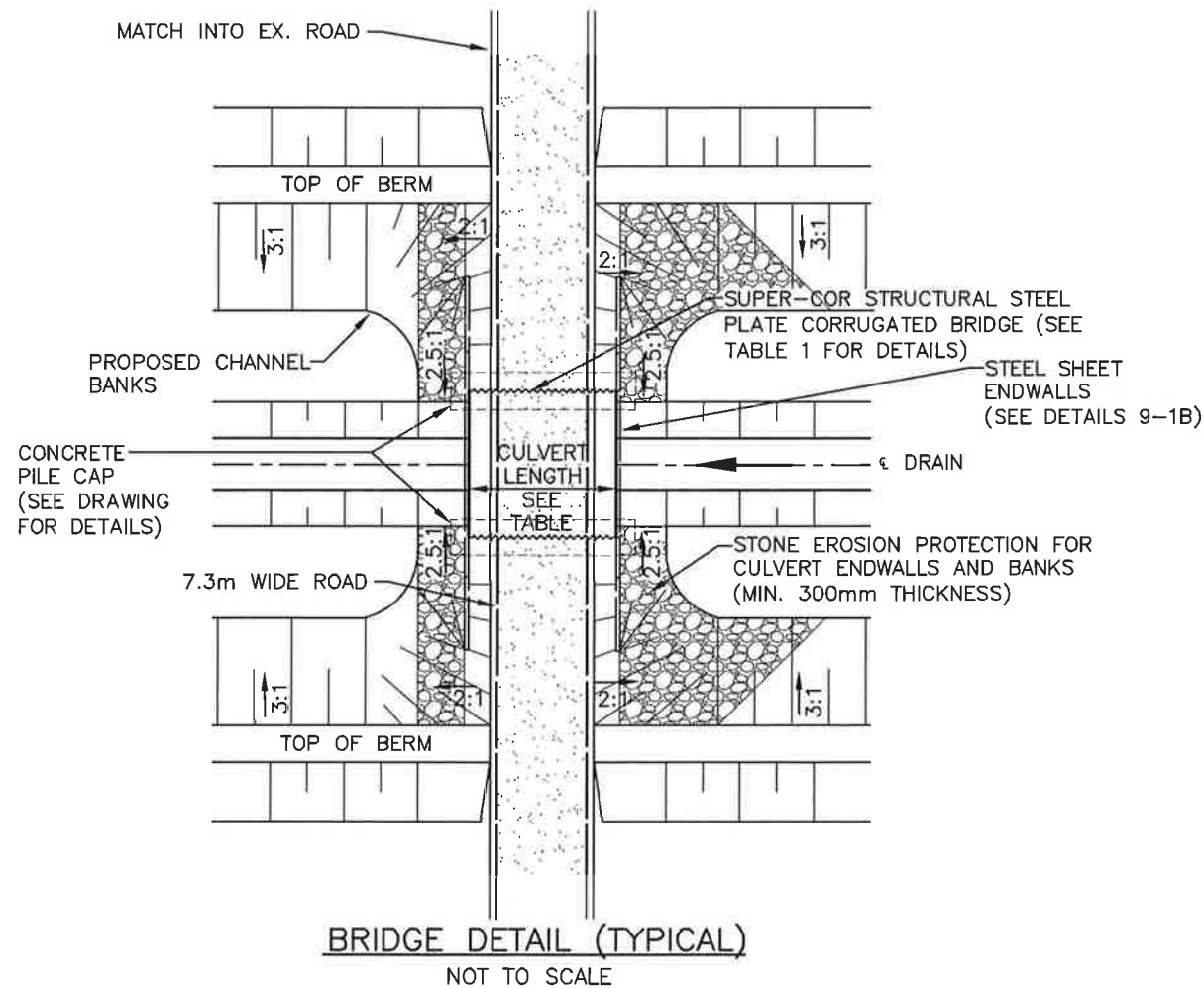
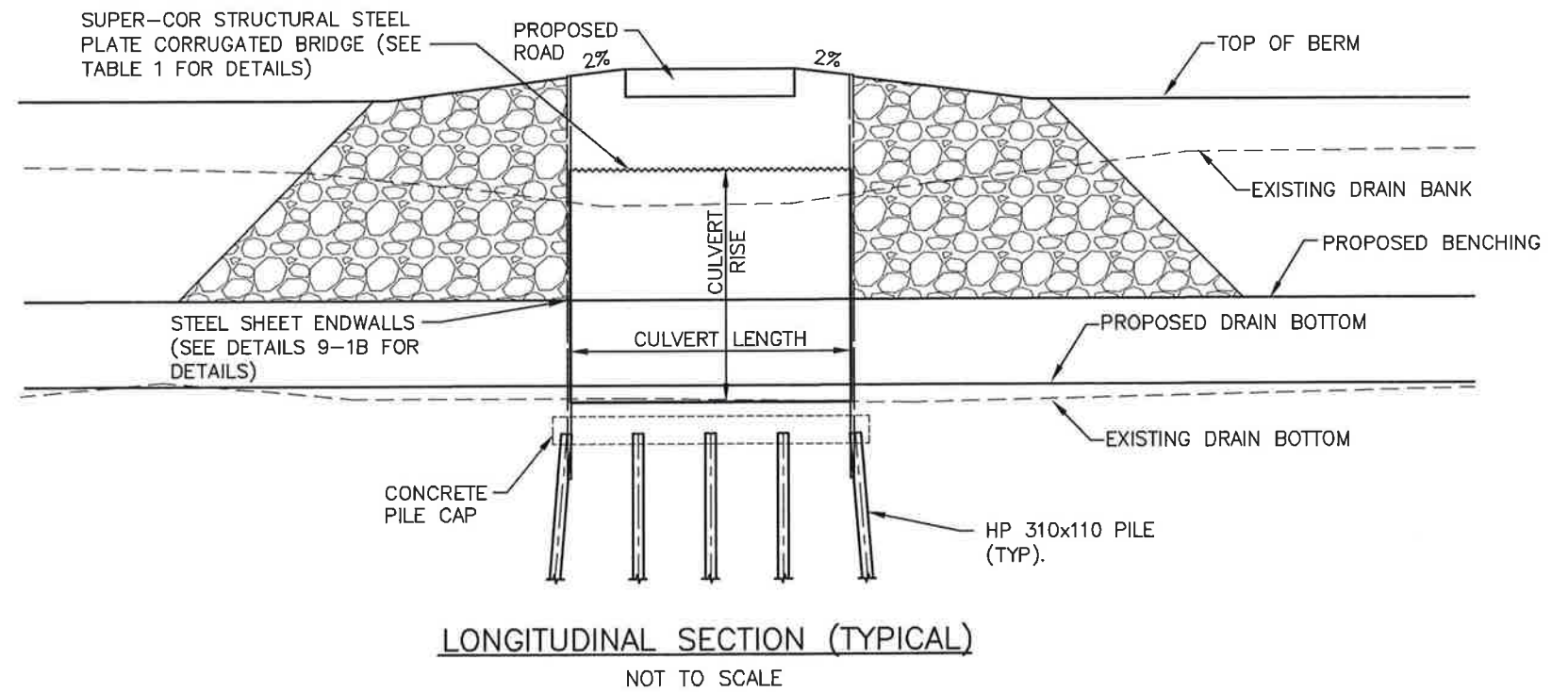
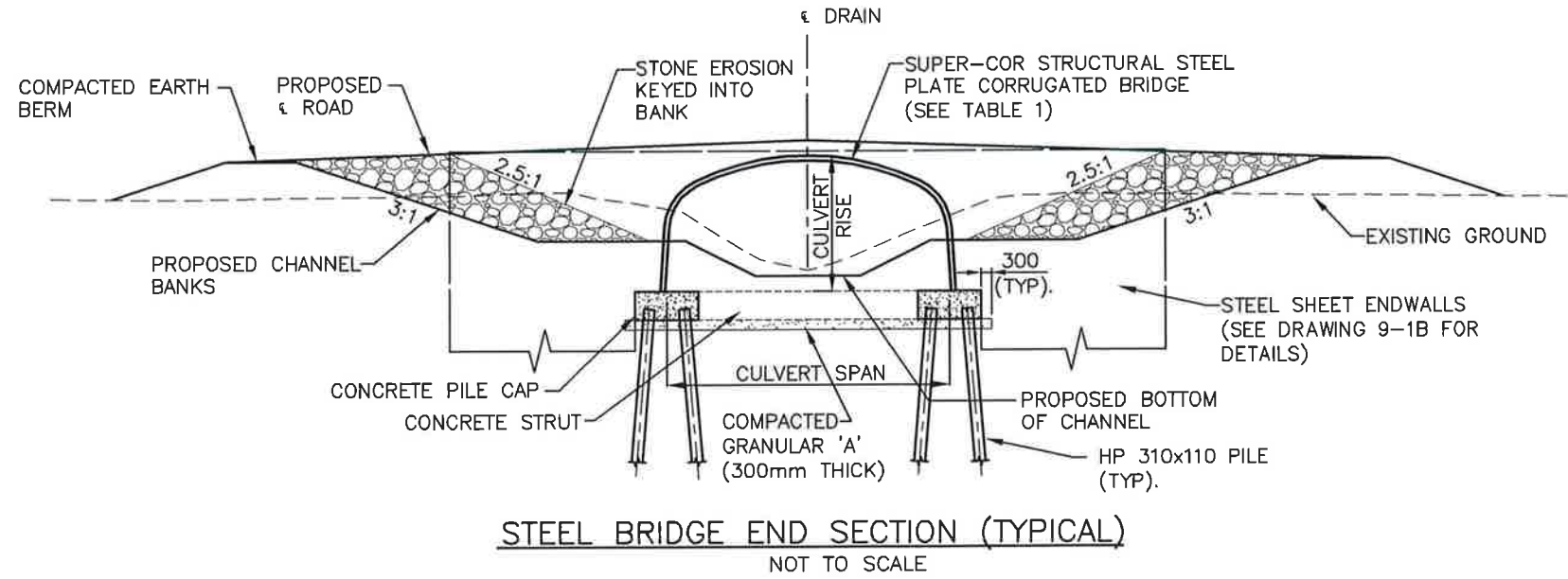
DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE	
<b>SOUTH INNISFIL CREEK DRAIN AND BRANCHES</b>	
TOWN OF INNISFIL	
1 MARCH 2013	
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Mar 06, 2013 - 3:31pm \\dillon.ca\dfs\Oakville\CAD\cad\2005\05 4787 South Innisfil Creek Drain\03-Drain\02-Sheets\054787 Culvert Details.dwg

**TABLE 1 - ACCESS CULVERT DESIGN INFORMATION**

DESCRIPTION	BRIDGE No.1	BRIDGE No.2	BRIDGE No.3	BRIDGE No.4	FUTURE REPLACEMENT
BRIDGE LOCATION (STA.)	3+072	3+478	3+657	3+748	3+835
INVERT ELEV. U/S SIDE(m)	224.25	224.41	224.48	224.52	224.56
INVERT ELEV. D/S SIDE(m)	224.24	224.40	224.47	224.51	224.55
TOP OF $\phi$ DRIVEWAY SURFACE ELEV. (m)	227.58	227.75	227.81	227.85	227.90
TOP OF CONCRETE PILE CAP ELEVATION	223.93	224.10	224.16	224.20	224.25
SOFFIT ELEVATION (m)	226.98	227.15	227.21	227.25	227.30
MIN. TOP WIDTH OF DRIVEWAY (m)	7.3	7.3	7.3	7.3	7.3
CULVERT SPAN (mm)	8052	8052	8052	8052	8052
CULVERT RISE (mm)	3049	3049	3049	3049	3049
CULVERT LENGTH (m)	8.0	8.0	8.0	8.0	8.0
CULVERT THICKNESS (mm)	8.0	8.0	8.0	8.0	8.0
CULVERT CORRUGATIONS (mm)	381x140	381x140	381x140	381x140	381x140
CULVERT TYPE	SUPER-COR STRUCTURAL STEEL PLATE CORRUGATED	SUPER-COR STRUCTURAL STEEL PLATE CORRUGATED	SUPER-COR STRUCTURAL STEEL PLATE CORRUGATED	SUPER-COR STRUCTURAL STEEL PLATE CORRUGATED	SUPER-COR STRUCTURAL STEEL PLATE CORRUGATED
CULVERT ENDWALL TYPE	STEEL/VERTICAL	STEEL/VERTICAL	STEEL/VERTICAL	STEEL/VERTICAL	STEEL/VERTICAL



SCHEDULE " G "

DRAINAGE REPORT FOR THE

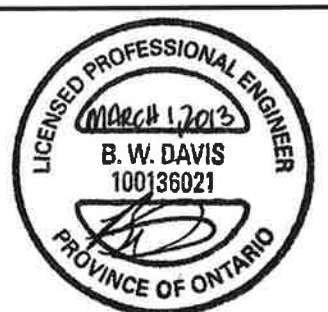
**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL

1 MARCH 2013

PROJECT No. 05-4787

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Mar 06, 2013 - 2:23pm \\dillon.ca\dfs\Oakville\CAD\cad\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Culvert Support.dwg

STEEL SHEET PILE ENDWALL  
TYPICAL BOTH ENDS (DESIGN,  
SUPPLY AND INSTALL BY OTHERS).

STRUCTURE & SYMMETRY

CORRUGATED STEEL BOX CULVERT,  
(DESIGN, SUPPLY AND INSTALL BY CONTRACTOR)

450 OPSS GRANULAR 'A' COMPACTED  
TO 100% STANDARD PROCTOR DRY  
DENSITY

PROPOSED CHANNEL BANKS

EXISTING GROUND

OPSS GRANULAR 'B' TYPE II  
BACKFILL TO CULVERT COMPACTED TO 100%  
STANDARD PROCTOR DRY DENSITY (TYP.)

CULVERT CONNECTION TO SLAB.  
DESIGN AND DETAILS BY SUPPLIER (TYP.)

8000  
(TYP.)  
CONCRETE  
PILE CAP

300  
(TYP.)

CONCRETE PILE CAP

CONCRETE STRUT

NATIVE UNDISTURBED  
SOIL (TYP.)

8052

300mm OPSS GRANULAR 'A' BASE  
COMPACTED TO 100% STANDARD  
PROCTOR DRY DENSITY

SHEAR CONNECTION OF SHEET PILE  
TO CONCRETE PILE CAP FOUNDATION  
(DESIGN BY CONTRACTOR).

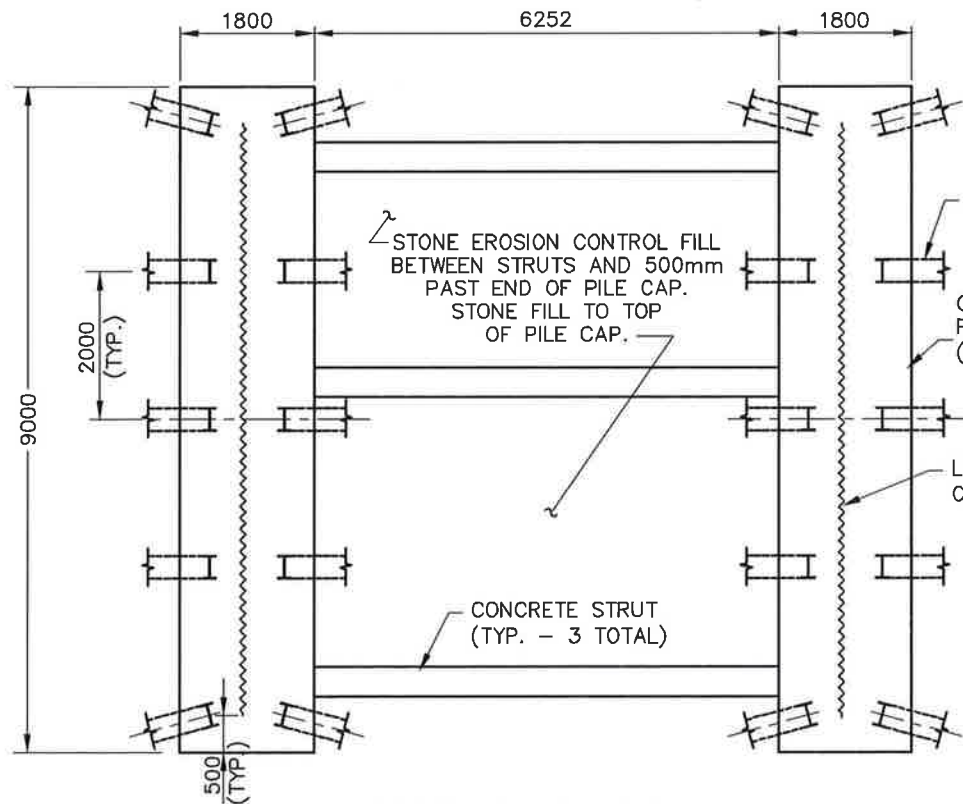
STEEL SHEET  
PILE DETAILS  
(SIM. OTHER SIDE)

EXCAVATION AND  
BACKFILL DETAILS  
(SIM. OTHER SIDE)

HP 310x110 PILE  
(TYP.)

**CULVERT SECTION**

SCALE 1:100



**FOUNDATION PLAN**

SCALE 1:100

FOR GENERAL AND CONSTRUCTION NOTES  
REFER TO DRAWING PAGE 58 OF 63



**DILLON CONSULTING**

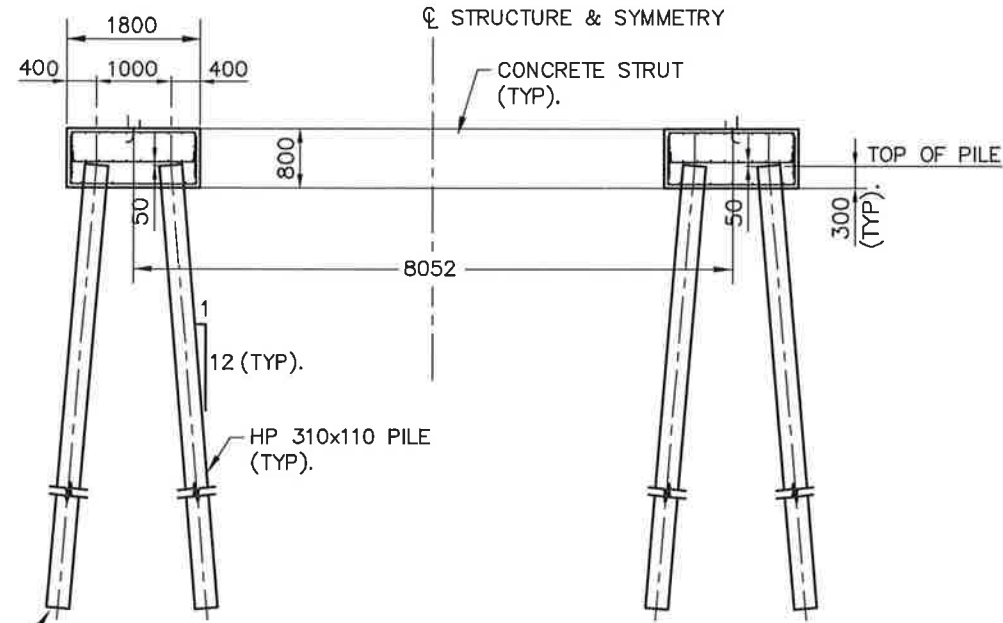
DETAILS 9-1B

DRAWING SCALES BASED  
ON A 11"x17" SHEET

<b>SCHEDULE " G "</b>	
DRAINAGE REPORT FOR THE	
<b>SOUTH INNISFIL CREEK DRAIN AND BRANCHES</b>	
TOWN OF INNISFIL	
1 MARCH 2013	
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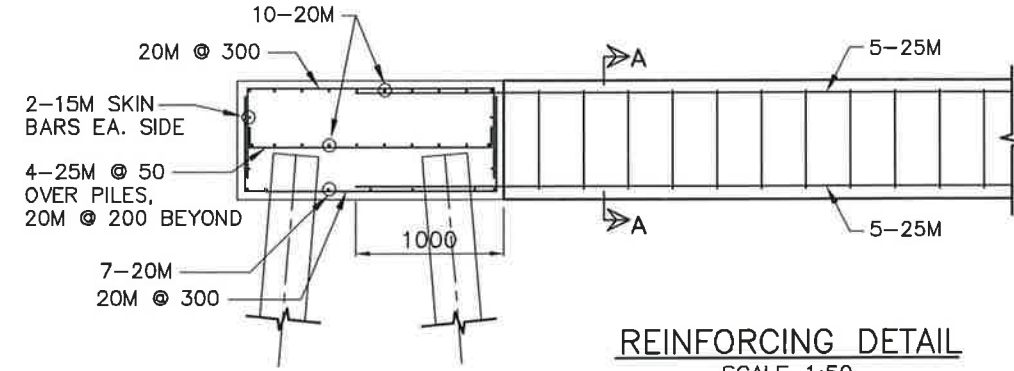
Mar 06, 2013 - 2:22pm \\dillon.ca\dfs\Oakville\CAD\cad\2005\05 4787 South Innisfil Creek Drain\03-Drain\02-Sheets\054787 Culvert Support.dwg



**FOUNDATION SECTION**

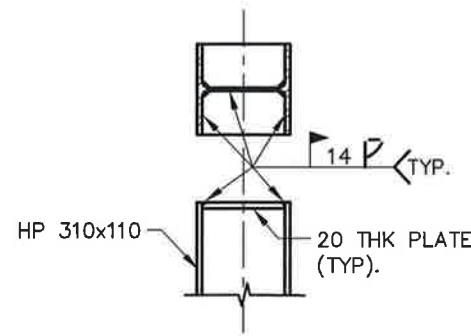
SCALE 1:100

DRIVING SHOES IN ACCORDANCE WITH OPSS 903 AND OPSD 3000.100 (TYP).



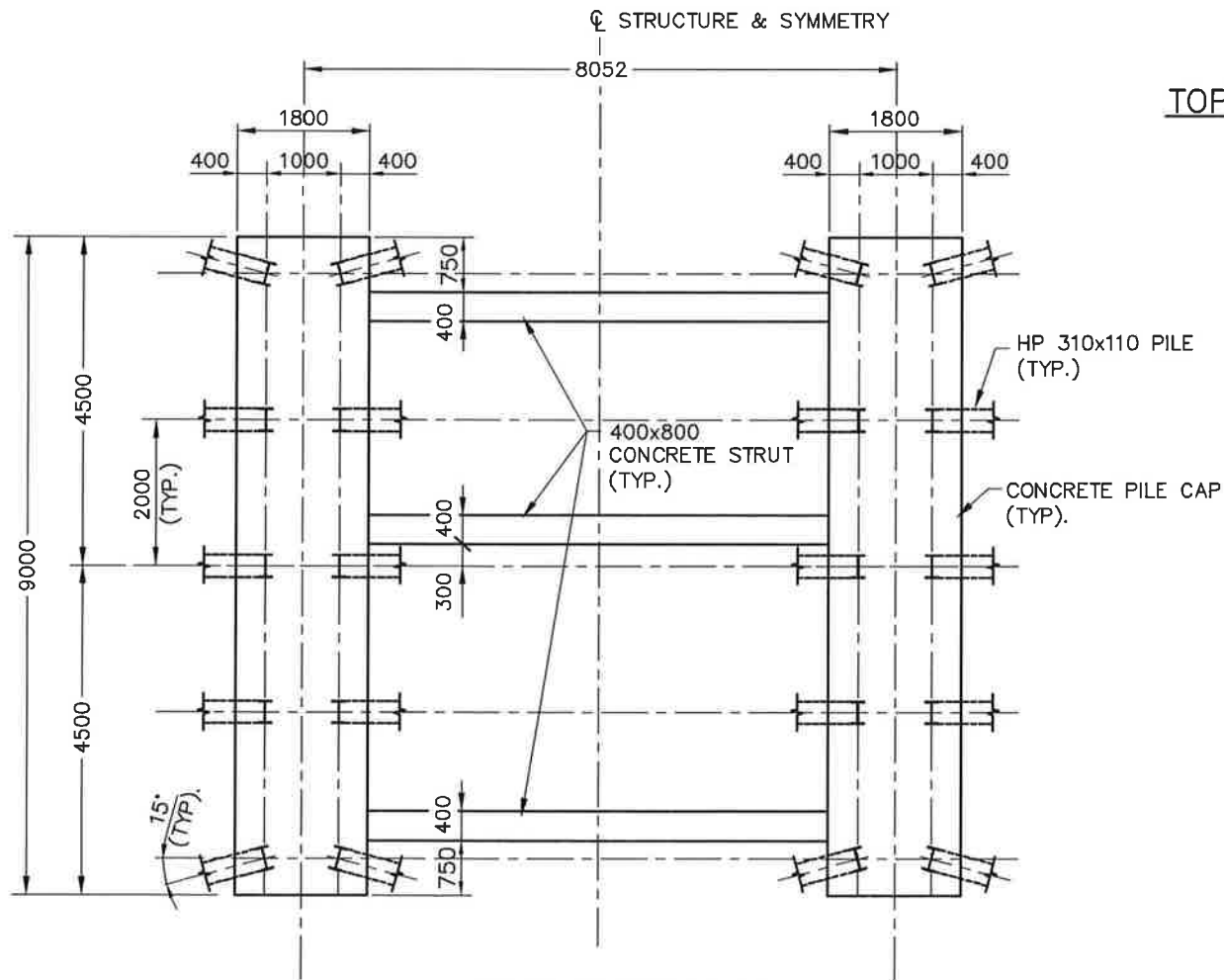
**REINFORCING DETAIL**

SCALE 1:50



**TOP OF PILE DETAIL**

SCALE 1:25



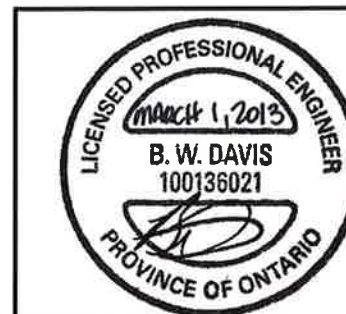
**FOUNDATION PLAN**

SCALE 1:100

ACCESS CULVERT SUPPORTING SYSTEM - PILE INFORMATION					
DESCRIPTION	BRIDGE No.1	BRIDGE No.2	BRIDGE No.3	BRIDGE No.4	FUTURE REPLACEMENT
BRIDGE LOCATION (STA.)	3+072	3+478	3+657	3+748	3+835
TOP OF PILE ELEVATION	223.43	223.60	223.66	223.70	223.75
NUMBER OF PILES	2 x 10	2 x 10	2 x 10	2 x 10	2 x 10
PILE SIZE	HP 310x110	HP 310x110	HP 310x110	HP 310x110	HP 310x110
APPROXIMATE PILE LENGTH *	22 m	21 m	21 m	21 m	21 m

\* APPROXIMATE PILE LENGTHS TAKE INTO ACCOUNT BATTER OF PILES. APPROXIMATE LENGTHS OF PILES ARE BASED ON THE GEOTECHNICAL INVESTIGATION AT EACH SITE. ACTUAL DRIVING LENGTHS WILL BE DETERMINED IN THE FIELD BASED ON FIELD TESTING. NO GEOTECHNICAL INFORMATION WAS AVAILABLE FOR BRIDGE #4, APPROXIMATE PILE LENGTH SHOWN IS AN ESTIMATE BASED ON GEOTECHNICAL INFORMATION FROM OTHER SITES.

FOR GENERAL AND CONSTRUCTION NOTES REFER TO DRAWING PAGE 58 OF 63.



SCHEDULE " G "	
DRAINAGE REPORT FOR THE	
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## NOTES

### GENERAL

1. ALL WORK SHALL CONFORM TO THE CANADIAN HIGHWAY BRIDGE DESIGN, CODE, 2006. USE CL625-ONTARIO TRUCK.
2. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH APPLICABLE LEGISLATION AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS.
3. THE CONTRACTOR SHALL AS PART OF HIS WORK CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS AND REPORT ANY DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH CONSTRUCTION.
4. SAFEGUARD AND PROTECT ALL EXISTING STRUCTURES, SERVICES AND UTILITIES WHICH MAY BE AFFECTED BY THE WORK OF THIS CONTRACT.
5. REFER TO GEOTECHNICAL INVESTIGATION REPORTS PREPARED BY GOLDER ASSOCIATES LTD. TITLED "GEOTECHNICAL INVESTIGATION. SOUTH INNISFIL CREEK DRAINAGE IMPROVEMENTS, TOWN OF INNISFIL, COUNTY OF SIMCOE, ONTARIO" REF. # 06-1189-519, DATED FEBRUARY 2007 AND "GEOTECHNICAL INVESTIGATION. SOUTH INNISFIL CREEK DRAINAGE IMPROVEMENTS, TOWN OF INNISFIL, ONTARIO", REF # 12-1170-0057 (1000), DATED FEBRUARY 2013.

### EXCAVATION AND BACKFILL

1. EXCAVATION AND BACKFILL FOR STRUCTURE SHALL BE IN ACCORDANCE WITH OPSS 902.
2. PLACE ALL CONCRETE IN THE DRY.
3. CONTINUOUSLY PROTECT THE BOTTOM OF THE EXCAVATION AND ALL FOUNDATIONS ON THE GROUND FROM DAMAGE DUE TO FROST AND GROUNDWATER PRESSURE.
4. ALL SUBGRADE TO BE INSPECTED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.
5. PLACING AND COMPACTION OF BACKFILL MATERIAL FOR CULVERT SHALL BE MONITORED AND TESTED FULL TIME BY GEOTECHNICAL ENGINEER.

### CONCRETE

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH OPSS. MUNI 904 A23.2-04.
2. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS TO BE 35 MPA, CLASS C-1.
3. CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:
  - STRENGTH 35 MPa (28 DAYS)
  - MAXIMUM W/C RATIO 0.40
  - MINIMUM CEMENT CONTENT: 370 kg/m<sup>3</sup>
  - MAXIMUM COARSE AGGREGATE: 20 mm
  - SLUMP: 60-90 mm
  - ENTRAINED AIR: 5-8 %
4. SUBMIT CONCRETE MIX DESIGN AND CYLINDER TEST RESULTS FOR REVIEW PRIOR TO PLACING ANY CONCRETE.
5. THE USE OF EARTH FORMS IS NOT PERMITTED.
6. DO NOT BACKFILL AGAINST STRUCTURES UNTIL CONCRETE HAS REACHED ITS 28 DAYS STRENGTH.

### REINFORCEMENT

1. ALL CONCRETE REINFORCING SHALL BE IN ACCORDANCE WITH OPSS 905.
2. REINFORCING STEEL GRADE 400R.
3. CLEAR COVER TO REINFORCING STEEL:
  - 100 WHEN CAST AGAINST EARTH AND AT TOP OF PILE CAP
  - 70 AT ALL OTHER LOCATIONS

### STRUCTURAL STEEL - PILES

1. ALL PILING WORK SHALL BE IN ACCORDANCE WITH OPSS 903 INCLUDING APPENDIX 'B'.
2. ALL PILES SHALL BE SUPPLIED AND INSTALLED WITH DRIVING SHOES IN ACCORDANCE WITH OPSS 903.
3. THE CONTRACTOR SHALL SUPPLY ALL EQUIPMENT NECESSARY TO INSTALL THE PILES AS SHOWN ON THE CONTRACT DRAWINGS.
4. THE CONTRACTOR SHALL USE TEMPLATES TO DRIVE THE PILES.
5. AFTER THE PILE DRIVING IS COMPLETE THE CONTRACTOR SHALL RE-TAP ALL PILES TO ENSURE RELAXATION HAS NOT REDUCED THE PILE CAPACITY. RE-TAPPING SHALL OCCUR NO SOONER THAN 24 HOURS AFTER THE PILE HAS BEEN INSTALLED. IF RE-TAPPING REVEALS THE PILE CAPACITY HAS BEEN REDUCED, THE PILE SHALL BE DRIVEN TO THE REQUIRED DEPTH TO ACHIEVE THE CAPACITY.
6. A GEOTECHNICAL ENGINEER SHALL BE ONSITE FULL TIME DURING THE PILE DRIVING OPERATION TO CONFIRM PILE CAPACITIES.
7. SPLICING OF STEEL PILES TO OPSD 3000.150.
8. PILE CONTROL TO MTO DRAWING SS103-11.

### STEEL SHEET END WALLS

1. ALL SHEET PILING WORK SHALL BE IN ACCORDANCE WITH OPSS 903.
2. THE CONTRACTOR SHALL DESIGN, SUPPLY AND INSTALL THE SHEET PILE WALLS.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE CONSULTANT FOR REVIEW AT MINIMUM 2 WEEKS PRIOR TO THE CONSTRUCTION OF THE SHEET PILE WALLS. THE SHOP DRAWINGS SHALL INDICATE THE ASSEMBLY PROCEDURES, BACKFILL PROCEDURES AND SPECIFICATIONS AS WELL AS CONNECTION DETAILS OF THE WALL TO THE PILE CAP AND BRIDGE.
4. THE SHOP DRAWINGS SHALL BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO WITH A MINIMUM OF 5 YEARS OF DESIGN EXPERIENCE FOR SHEET PILE WALL STRUCTURES.

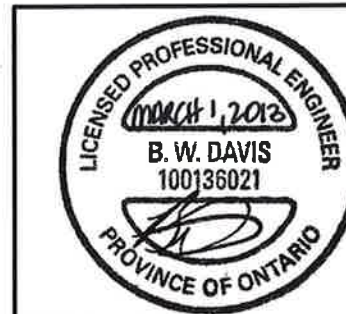
### CORRUGATED STEEL BOX CULVERT

1. THE CONTRACTOR SHALL DESIGN, SUPPLY AND INSTALL THE CORRUGATED STEEL BOX CULVERT.
2. THE APPROVED PRODUCTS FOR THE CORRUGATED STEEL BOX CULVERTS ARE SUPER-COR STRUCTURAL STEEL PLATE CORRUGATED BRIDGE BY AIL OR CONSULTANT APPROVED EQUAL.
3. THE CORRUGATED STEEL BOX CULVERTS SHALL BE DESIGNED IN ACCORDANCE WITH CSA S6-06.
4. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE CONSULTANT FOR REVIEW AT MINIMUM 2 WEEKS PRIOR TO THE CONSTRUCTION OF THE CORRUGATED STEEL BOX CULVERT.
5. THE SHOP DRAWINGS SHALL BE STAMPED AND SIGNED BY TWO PROFESSIONAL ENGINEERS LICENSED IN THE PROVINCE OF ONTARIO WITH A MINIMUM OF 5 YEARS OF DESIGN EXPERIENCE FOR SIMILAR STRUCTURES.
6. TORQUE ON ALL BOLTS SHALL BE TESTED PRIOR TO BACKFILLING BY GEOTECHNICAL ENGINEER.
7. MANUFACTURER'S REPRESENTATIVE SHALL VISIT EACH CULVERT SITE AT THE START OF ERECTION OF THE CULVERT AND AT THE END OF BACKFILLING TO CONFIRM THE CULVERT HAS BEEN ASSEMBLED IN ACCORDANCE WITH THE REVIEWED AND APPROVED SHOP DRAWINGS.

### CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF THE PROPOSED WORK AND ALL DETAILS ON SITE AND REPORT ANY DISCREPANCIES TO THE CONTRACT ADMINISTRATOR BEFORE PROCEEDING WITH THE REPAIR WORK.
2. BACKFILL SHALL BE PLACED SIMULTANEOUSLY BEHIND BOTH SIDES OF STRUCTURE KEEPING THE HEIGHT OF THE BACKFILL APPROXIMATELY THE SAME. AT NO TIME SHALL THE DIFFERENCE IN ELEVATION OF BACKFILL ON BOTH SIDES BE GREATER THAN 300 mm.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CREEK FLOW THROUGH THE WORK AREA.
4. CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY NEW CONSTRUCTION TO THEIR ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR AND IN ACCORDANCE WITH OPSS 507.
5. CONTRACTOR SHALL CONFIRM BENCH MARK ELEVATIONS AND ALIGNMENT OF NEW STRUCTURE PRIOR TO CONSTRUCTION, AND SHALL REPORT ANY DISCREPANCIES TO THE CONTRACT ADMINISTRATOR. ALL REMOVED MATERIALS TO BE DISPOSED OF OFF SITE IN ACCORDANCE WITH MUNICIPAL AND PROVINCIAL GUIDELINES.

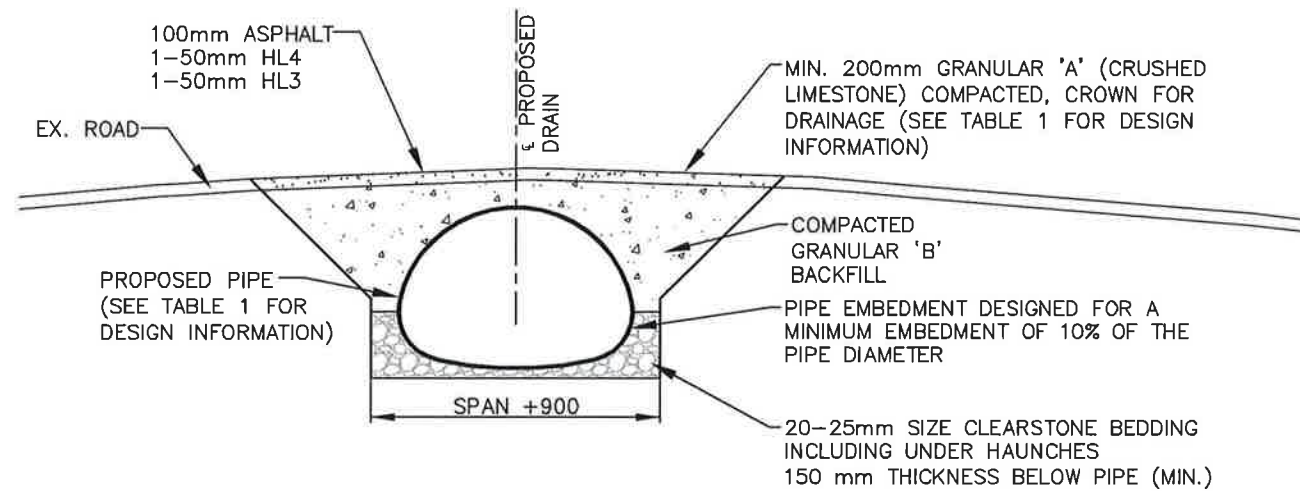
#### SCHEDULE " G "



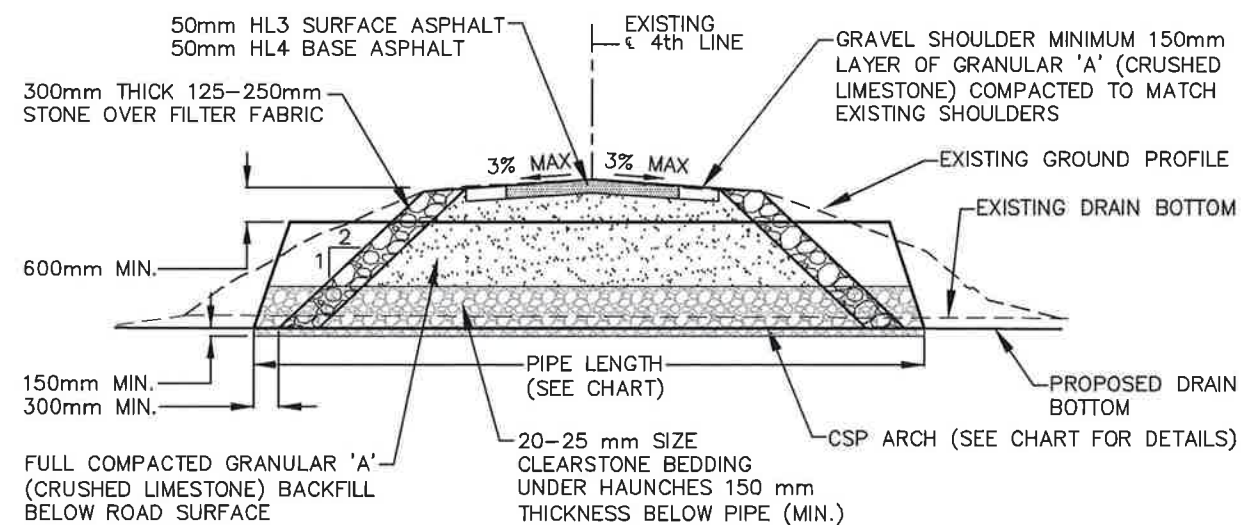
DRAINAGE REPORT FOR THE
<b>SOUTH INNISFIL CREEK DRAIN AND BRANCHES</b>
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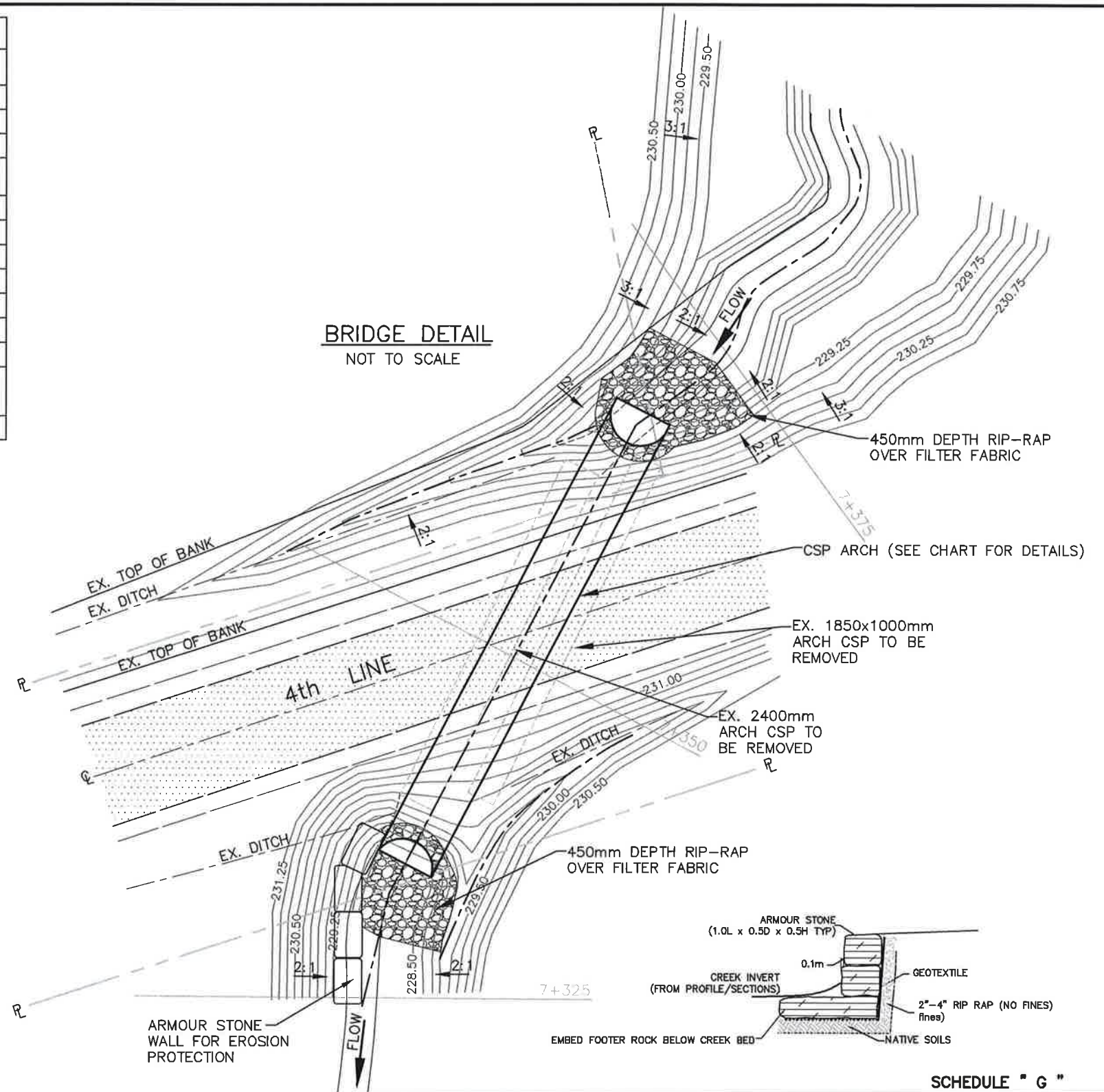
TABLE 1 - CULVERT DESIGN INFORMATION				
DESCRIPTION	4th LINE BRIDGE	2nd LINE BRIDGE (FUTURE REPLACE)	3rd LINE BRIDGE (FUTURE REPLACE)	10 SIDEROAD (FUTURE REPLACE)
BRIDGE LOCATION (STA.)	7+350	2+798	5+760	5+567
PIPE INVERT ELEV. U/S SIDE(m)	227.81	224.15	225.52	225.24
PIPE INVERT ELEV. D/S SIDE(m)	227.87	224.14	225.49	225.23
TOP OF $\phi$ ROAD SURFACE ELEV. (m)	231.69	227.65	228.95	228.70
MIN. TOP WIDTH OF ROAD (m)	MATCH EXISTING	MATCH EXISTING	MATCH EXISTING	MATCH EXISTING
MIN. CULVERT GRADE (%)	0.10	0.10	0.10	0.10
CULVERT SPAN (mm)	3890	8052	8052	8052
CULVERT RISE (mm)	2690	3049	3049	3049
CULVERT LENGTH (m)	33.5	20.0	22.0	20.0
CULVERT THICKNESS (mm)	4.2	8.0	8.0	8.0
CULVERT CORRUGATIONS (mm)	125x25	381X140	381X140	381X140
CULVERT TYPE	CSP ARCH	SUPER-COR STRUCTURAL STEEL PLATE CORRUGATED	SUPER-COR STRUCTURAL STEEL PLATE CORRUGATED	SUPER-COR STRUCTURAL STEEL PLATE CORRUGATED
CULVERT ENDWALL TYPE	STEEL/SLOPING	STEEL/SLOPING	STEEL/SLOPING	STEEL/SLOPING



**BRIDGE CROSS SECTION**  
NOT TO SCALE



**LONGITUDINAL SECTION**  
NOT TO SCALE



**BRIDGE DETAIL**  
NOT TO SCALE



**DILLON CONSULTING**

**DETAILS 9-2**

DRAWING SCALES BASED ON A 11"x17" SHEET

**SCHEDULE "G"**

**DRAINAGE REPORT FOR THE SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

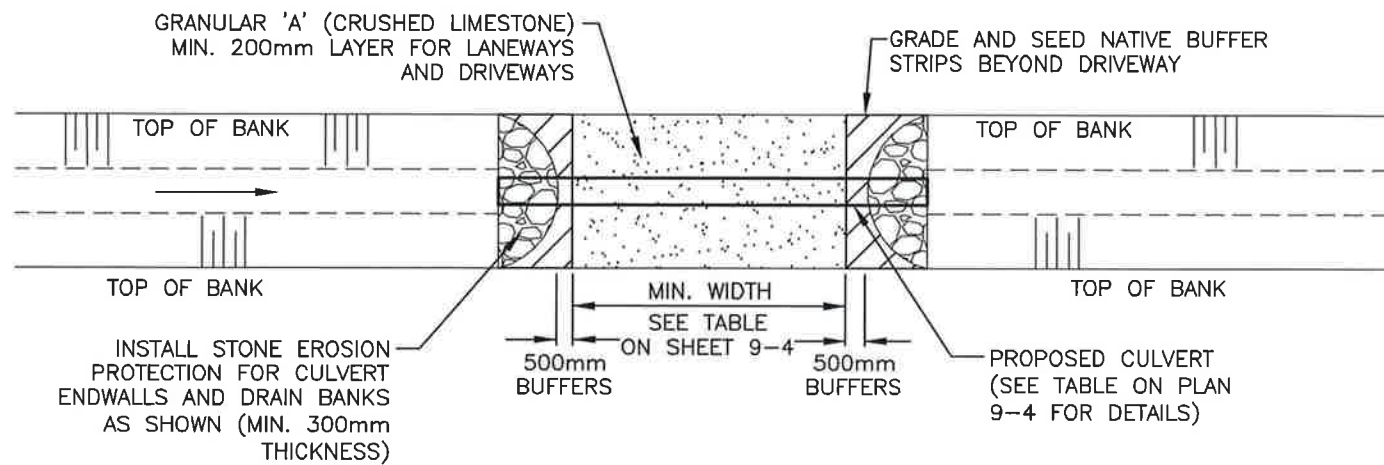
TOWN OF INNISFIL

1 MARCH 2013

PROJECT No. 05-4787

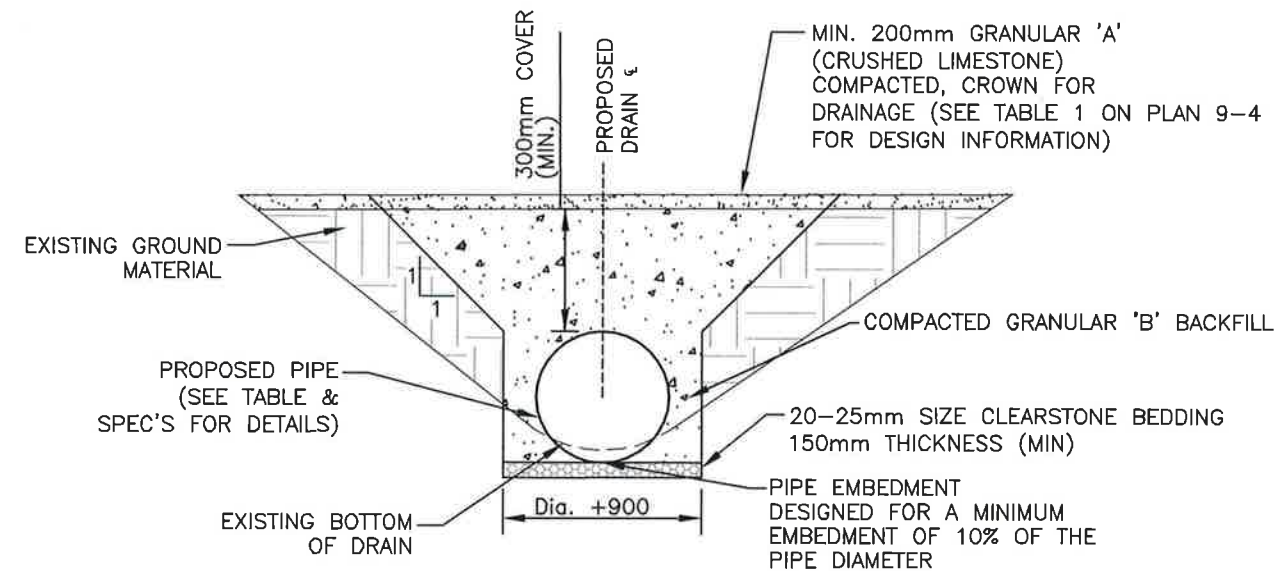
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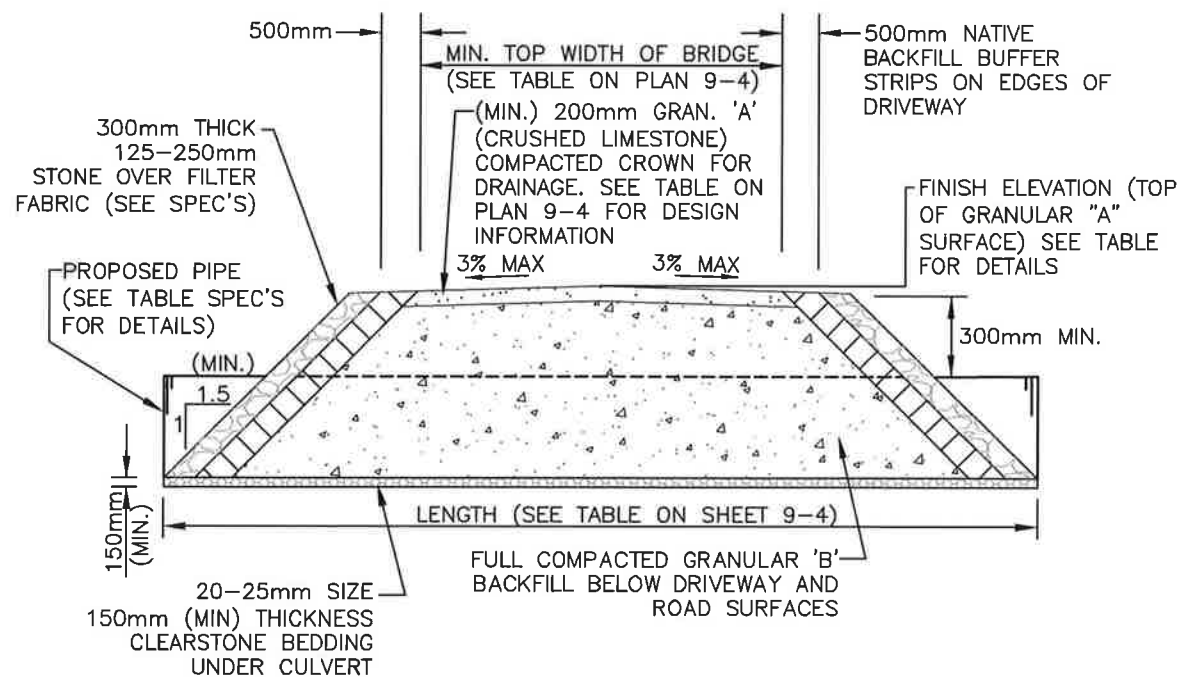
**BRIDGE DETAIL (TYPICAL)**

SCALE: 1:100



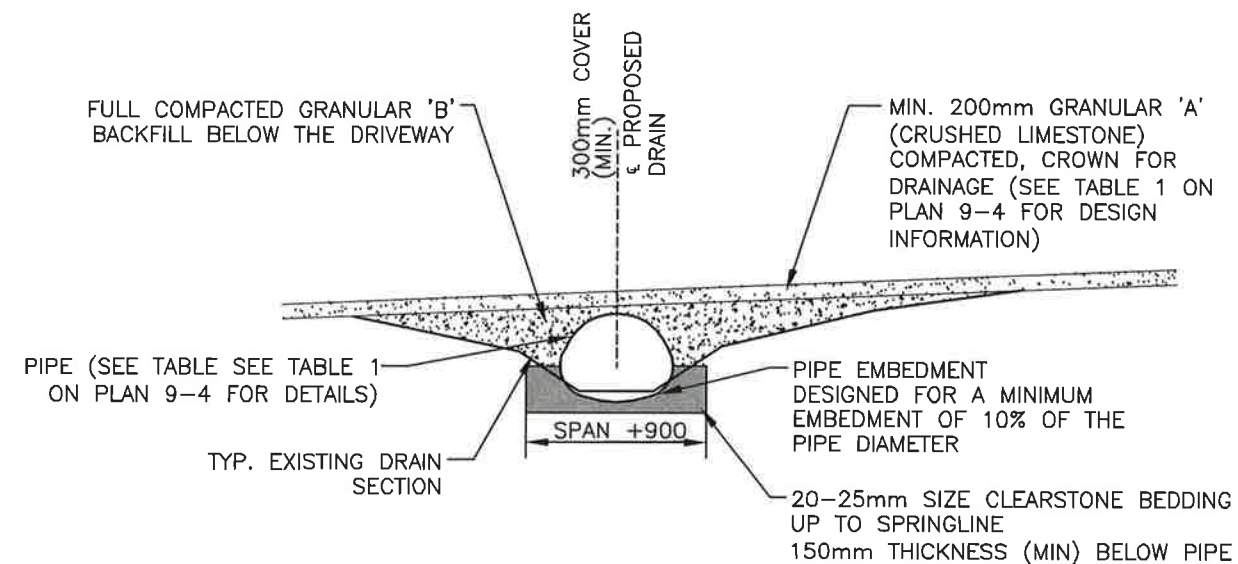
**BRIDGE CROSS SECTION FOR ROUND PIPE (TYPICAL)**

SCALE: 1:100



**LONGITUDINAL SECTION (TYPICAL)**

SCALE: 1:100



**BRIDGE CROSS SECTION FOR ARCH PIPE (TYPICAL)**

SCALE: 1:100



SCHEDULE "G"	
DRAINAGE REPORT FOR THE	
<b>SOUTH INNISFIL CREEK DRAIN AND BRANCHES</b>	
TOWN OF INNISFIL	
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**DETAILS 9-3**  
 DRAWING SCALES BASED ON A 11"x17" SHEET

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### 3RD LINE BRANCH DRAIN

TABLE 1 - ACCESS CULVERT DESIGN INFORMATION

DESCRIPTION	BRIDGE No.1	BRIDGE No.2	BRIDGE No.3	BRIDGE No.4	BRIDGE No.5	BRIDGE No.6	BRIDGE No.7	BRIDGE No.8	BRIDGE No.9	BRIDGE No.10	BRIDGE No.11	BRIDGE No.12	BRIDGE No.13	BRIDGE No.14	BRIDGE No.15
BRIDGE LOCATION (STA.)	0+034.9	0+255	0+379.6	0+567.6	0+709.2	0+760.8	0+819.7	0+866.4	0+905.6	0+921	1+162	1+351	1+448	1+531	1+647
PIPE INVERT ELEV. U/S SIDE(m)	225.62	226.06	226.31	226.70	226.92	227.08	227.20	227.48	227.58	N/A	228.44	228.59	228.94	229.36	229.94
PIPE INVERT ELEV. D/S SIDE(m)	225.60	226.04	226.29	226.65	226.90	227.05	227.16	227.46	227.39	N/A	228.43	228.58	228.88	229.30	229.88
TOP OF $\phi$ DRIVEWAY SURFACE ELEV. (m)	228.33	228.49	228.55	229.34	229.90	229.77	230.41	230.20	230.20	N/A	230.31	230.59	230.95	231.00	231.45
DRAIN BOTTOM (m) (DESIGN) (AT CENTRELINE OF CULVERT)	225.79	226.23	226.48	226.86	227.15	227.24	227.36	227.47	227.64	N/A	228.58	228.73	229.06	229.48	230.06
MIN. TOP WIDTH OF DRIVEWAY (m)	7.3	7.3	7.3	15.0	7.3	7.3	7.3	7.3	6.1	N/A	6.1	6.1	6.1	6.1	6.1
MIN. CULVERT GRADE (%)	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	1.50	N/A	0.10	0.10	0.50	0.50	0.10
CULVERT TYPE	S.R.P.	S.R.P.	S.R.P.	S.R.P.	C.S.P.	S.R.P.	S.R.P.	C.S.P.	S.R.P.	N/A	S.R.P.	S.R.P.	S.R.P.	S.R.P.A.	S.R.P.A.
PIPE SIZE (mm)	1800	1800	1800	1800	2400	1800	1800	2400	1500	N/A	1500	1500	1500	1520x1200	1520x1200
CULVERT LENGTH (m)	17.5	17.0	16.5	25.0	13.0	18.0	19.0	13.0	16.0	N/A	14.0	14.5	14.5	13.0	13.0
CULVERT THICKNESS (mm)	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	N/A	2.8	2.8	2.8	2.8	2.8
CULVERT CORRUGATIONS (mm)	-	-	-	-	125x25	-	-	125x25	-	N/A	-	-	-	-	-
CULVERT TYPE	GALV.	GALV.	GALV.	GALV.	GALV.	GALV.	GALV.	GALV.	GALV.	N/A	GALV.	GALV.	GALV.	GALV.	GALV.
CULVERT ENDWALL TYPE	SLOPING	SLOPING	SLOPING	SLOPING	SLOPING	SLOPING	SLOPING	SLOPING	SLOPING	N/A	SLOPING	SLOPING	SLOPING	SLOPING	SLOPING

### 3RD LINE SPUR DRAIN

TABLE 1 - ACCESS CULVERT DESIGN INFORMATION

DESCRIPTION	BRIDGE No.1	BRIDGE No.2
BRIDGE LOCATION (STA.)	0+012	0+598.7
PIPE INVERT ELEV. U/S SIDE(m)	228.40	229.18
PIPE INVERT ELEV. D/S SIDE(m)	228.35	229.16
TOP OF $\phi$ DRIVEWAY SURFACE ELEV. (m)	231.47	231.29
DRAIN BOTTOM (m) (DESIGN) (AT CENTRELINE OF CULVERT)	228.38	229.32
MIN. TOP WIDTH OF DRIVEWAY (m)	7.3	6.1
MIN. CULVERT GRADE (%)	0.10	0.16
CULVERT TYPE	C.S.P.A.	S.R.P.
PIPE SIZE (mm)	2010x1530	1500
CULVERT LENGTH (m)	25.0	14.5
CULVERT THICKNESS (mm)	3.5	2.8
CULVERT CORRUGATIONS (mm)	125x25	-
CULVERT TYPE	ALUM.	GALV.
CULVERT ENDWALL TYPE	SLOPING	SLOPING

### 10TH SIDEROAD BRANCH DRAIN

TABLE 1 - ACCESS CULVERT DESIGN INFORMATION

DESCRIPTION	BRIDGE No.1	BRIDGE No.2	BRIDGE No.3	BRIDGE No.4	BRIDGE No.5	BRIDGE No.6	BRIDGE No.7
BRIDGE LOCATION (STA.)	0+017.7	0+142.6	0+267	0+411.5	0+658.8	1+227.2	1+438
PIPE INVERT ELEV. U/S SIDE(m)	225.54	225.82	226.07	226.36	226.85	228.02	229.03
PIPE INVERT ELEV. D/S SIDE(m)	225.38	225.79	226.04	226.33	226.82	227.99	228.72
TOP OF $\phi$ DRIVEWAY SURFACE ELEV. (m)	228.06	228.16	228.44	228.64	229.15	230.31	231.25
DRAIN BOTTOM (m) (DESIGN) (AT CENTRELINE OF CULVERT)	225.67	225.99	226.24	226.52	227.02	228.16	229.00
MIN. TOP WIDTH OF DRIVEWAY (m)	7.3	6.1	10.0	7.3	7.3	7.3	8.8
MIN. CULVERT GRADE (%)	1.00	0.20	0.20	0.20	0.20	0.20	1.70
CULVERT TYPE	S.R.P.	S.R.P.	S.R.P.	S.R.P.	S.R.P.	S.R.P.	C.S.P.
PIPE SIZE (mm)	2000	1800	1800	1800	1800	1500	1200
CULVERT LENGTH (m)	17.5	15.5	19.0	16.5	16.5	16.5	18.0
CULVERT THICKNESS (mm)	2.8	2.8	2.8	2.8	2.8	2.8	2.8
CULVERT CORRUGATIONS (mm)	-	-	-	-	-	-	125x25
CULVERT TYPE	GALV.	GALV.	GALV.	GALV.	GALV.	GALV.	GALV.
CULVERT ENDWALL TYPE	SLOPING	SLOPING	SLOPING	SLOPING	SLOPING	SLOPING	SLOPING

### HNYDCZAK OUTLET RELIEF DRAIN

TABLE 1 - ACCESS CULVERT DESIGN INFORMATION

DESCRIPTION	BRIDGE No.1
BRIDGE LOCATION (STA.)	0+222.3
PIPE INVERT ELEV. U/S SIDE(m)	224.34
PIPE INVERT ELEV. D/S SIDE(m)	224.31
TOP OF $\phi$ DRIVEWAY SURFACE ELEV. (m)	226.62
DRAIN BOTTOM (m) (DESIGN) (AT CENTRELINE OF CULVERT)	224.55
MIN. TOP WIDTH OF DRIVEWAY (m)	7.3
MIN. CULVERT GRADE (%)	0.30
CULVERT TYPE	HORIZONTAL ELLIPSE
PIPE SIZE (mm)	2470x1750
CULVERT LENGTH (m)	16.5
CULVERT THICKNESS (mm)	3.0
CULVERT CORRUGATIONS (mm)	-
CULVERT TYPE	GALV.
CULVERT ENDWALL TYPE	SLOPING

**NOTE:**

- S.E.P. = STONE EROSION PROTECTION
- CSP = CORRUGATED STEEL PIPE
- H.D.P.E. = HIGH DENSITY POLYETHYLENE PIPE
- SRP = SPIRAL RIBBED PIPE (ULTRAFLO)
- CCP = CIRCULAR CONCRETE PIPE
- STL = STEEL PIPE
- BIG 'O' = PLASTIC DRAINAGE TUBING

**SCHEDULE " G "**



**DILLON CONSULTING**

**CULVERT TABLES 9-4**

DRAWING SCALES BASED ON A 11"x17" SHEET

DRAINAGE REPORT FOR THE

**SOUTH INNISFILL CREEK DRAIN AND BRANCHES**

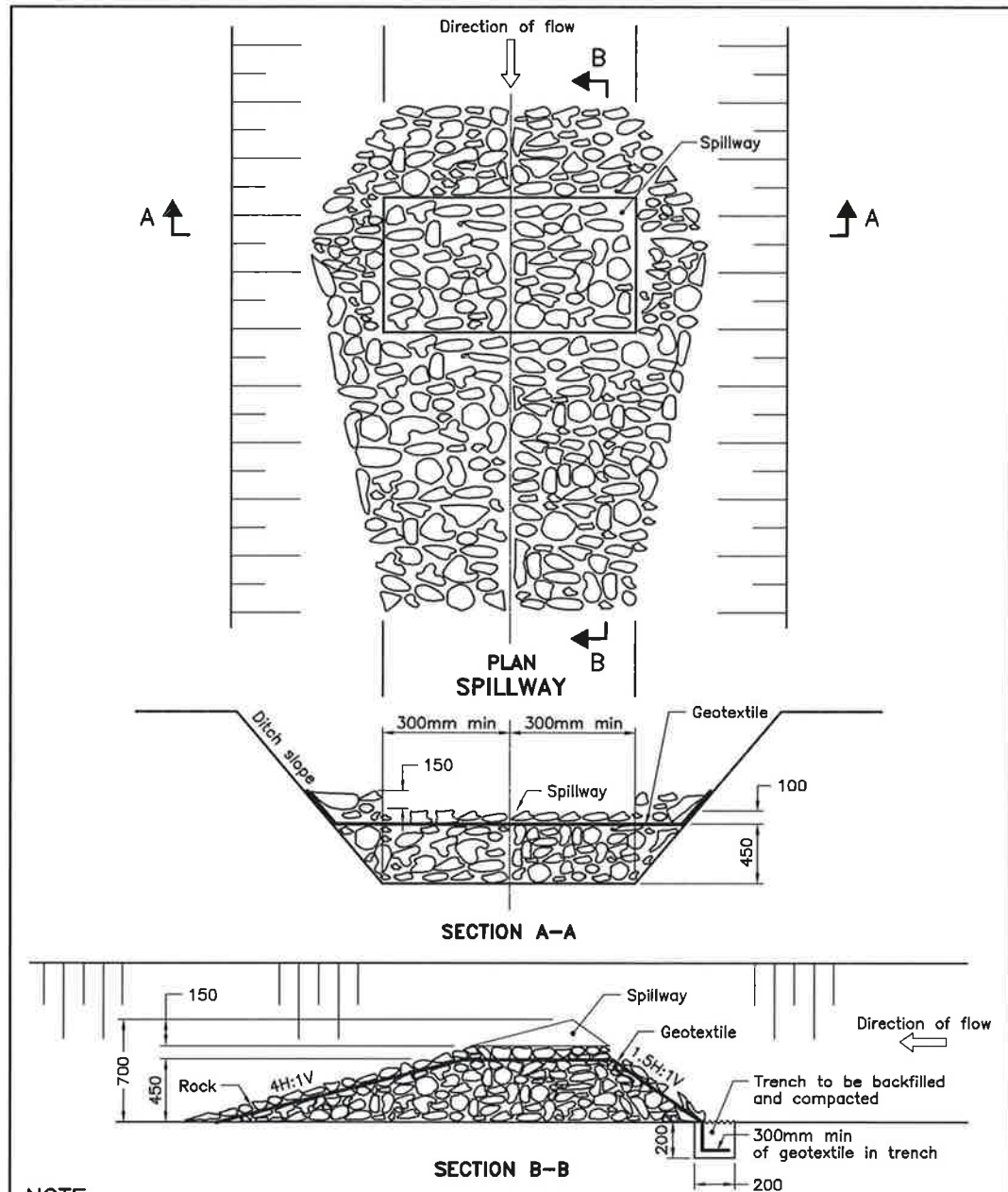
TOWN OF INNISFILL

1 MARCH 2013

PROJECT No. 05-4787

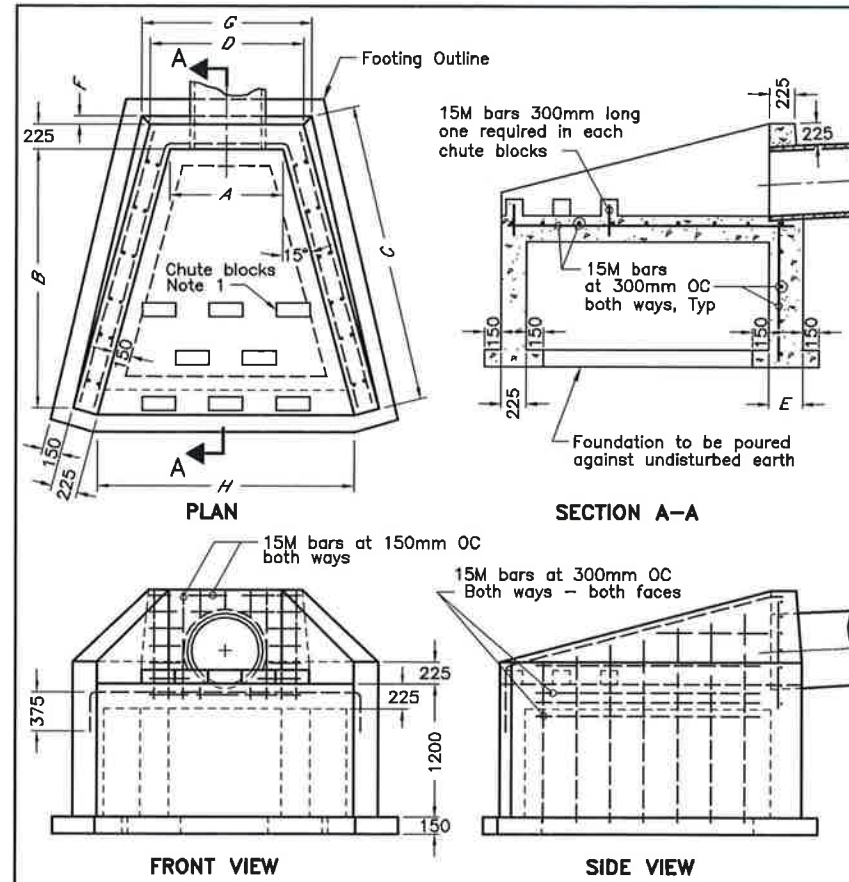
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NOTE:  
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2006	Rev 1	
<b>ROCK FLOW CHECK DAM</b> FLAT BOTTOM DITCH			
<b>OPSD 219.211</b>			



PIPE DIA	ENDWALL DIMENSIONS							
	A	B	C	D	E	F	G	H
600	1050	2400	2725	1400	300	75	1525	2350
675	1125	2400	2725	1475	300	75	1600	2425
750	1200	2400	2725	1550	300	75	1675	2500
825	1275	2400	2725	1625	300	75	1755	2575
900	1350	2400	2725	1700	300	75	1825	2650
975	1425	2400	2725	1775	375	150	1975	2725
1050	1500	3000	3400	1850	375	150	2050	3100
1200	1650	3000	3400	2000	375	150	2200	3250
1350	1800	3000	3400	2150	375	150	2350	3400
1500	1950	3000	3400	2300	375	150	2500	3550
1650	2100	3000	3400	2450	375	150	2650	3700
1800	2250	3000	3400	2600	375	150	2800	3850
2400	3000	3000	3400	3350	375	150	3550	4600

NOTES:  
 1 Poured concrete chute blocks 300x200x100mm high.  
 A This OPSD to be read in conjunction with OPSD 3940.150.  
 B Class of concrete: 30MPa.  
 C Cover to reinforcing bars: 75mm ±20mm.  
 D Granular backfill to be placed to 300mm min thickness on all sides.  
 E All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2006	Rev 0	
<b>CONCRETE HEADWALL</b> FOR SEWER OR CULVERT PIPE OUTLET			
<b>OPSD 804.040</b>			



**DILLON CONSULTING**

STANDARD DETAILS 10-1

DRAWING SCALES BASED ON A 11"x17" SHEET

SCHEDULE " G "

DRAINAGE REPORT FOR THE

**SOUTH INNISFIL CREEK DRAIN AND BRANCHES**

TOWN OF INNISFIL

1 MARCH 2013

PROJECT No. 05-4787

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Mar 06, 2013 - 3:10pm \\dillon.ca\dfs\Oakville\CAD\2005\05 4787 South Innisfil Creek Drain\2012 Update\03-Drain\02-Sheets\054787 Standard Details.dwg

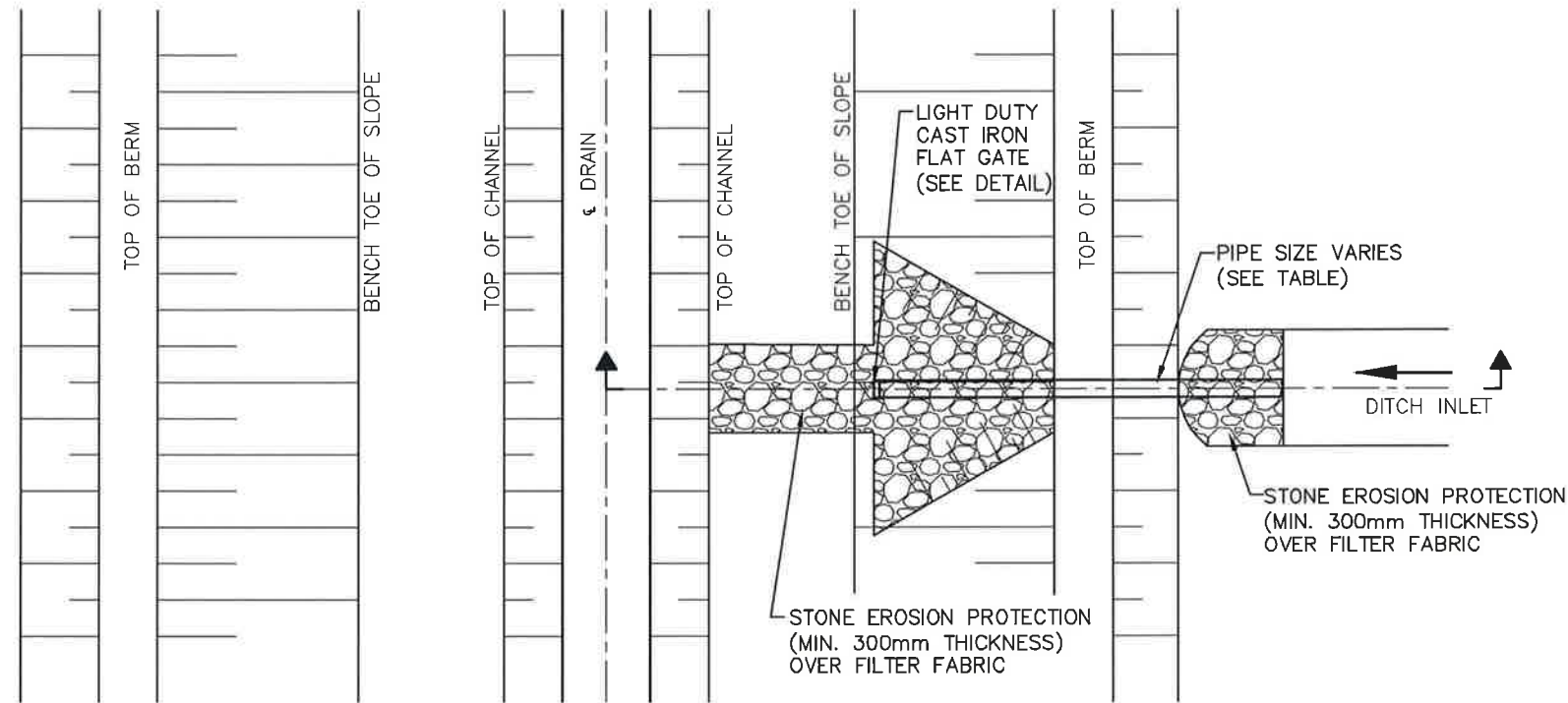
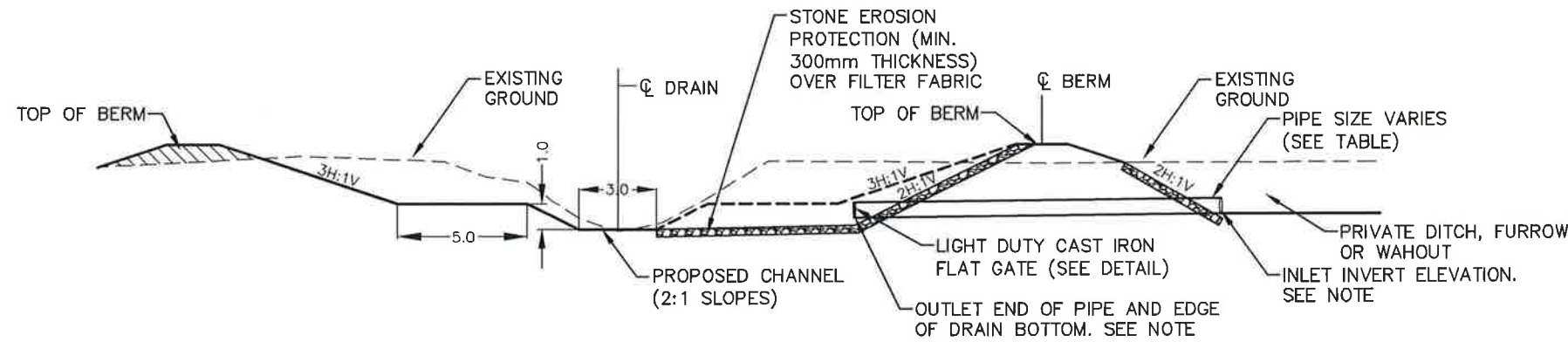
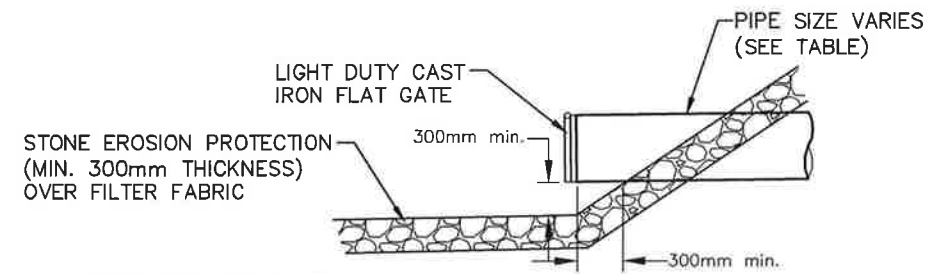


TABLE 1 - DITCH INLET PIPE INFORMATION				
BRIDGE LOCATION STATION	SIDE OF DRAIN	PIPE DIAMETER	PIPE TYPE	LENGTH OF PIPE
1+134	NORTH	600mm	HDPE	16m
1+313	NORTH	450mm	HDPE	16m
1+975	NORTH	600mm	HDPE	16m
2+482	EAST	900mm	HDPE	16m
3+012	NORTH	900mm	HDPE	16m
3+012	SOUTH	450mm	HDPE	16m
3+322	NORTH	900mm	HDPE	16m
3+711	NORTH	450mm	HDPE	16m
3+783	SOUTH	450mm	HDPE	16m
4+299	NORTH	750mm	HDPE	16m
4+871	EAST	900mm	HDPE	16m
5+556	WEST	750mm	HDPE	16m
5+578	SOUTH	300mm	HDPE	16m



NOTE:  
 OUTLET END OF PIPE TO BE SET AT EDGE OF DRAIN BOTTOM.  
 UNLESS OTHERWISE DIRECTED BY SUPERINTENDENT, INLET END OF PIPE TO HAVE ITS INVERT SET AT BOTTOM OF PRIVATE DITCH, FURROW OR WASHOUT, OR LOWER IF NECESSARY TO KEEP THE TOP OF THE PIPE BELOW EXISTING GROUND LEVEL.



NOTE: CONTRACTOR TO SHIM FLAP GATE TO PROVIDE POSITIVE CLOSURE UNDER NO FLOW CONDITION

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