



STAFF REPORT EXECUTIVE SUMMARY

STAFF REPORT NO: DSR-084-19

DATE: June 5, 2019

To: Mayor, Deputy Mayor and Members of Council

From: Jeremy Nyenhuis, Stormwater Project Manager and
Drainage Superintendent

Subject: Carson Village Drainage Award - Carson Creek
Improvements

EXECUTIVE SUMMARY:

The Carson Village Drainage Award (Carson Creek) is a municipal drain constructed under by-law A-124 dated October 2, 1961. Large sections of bank erosion, blockages and sediment load issues currently existing. It is staffs recommendation to Council to proceed with an Improvement Report under Section 78 of *the Drainage Act* for the Carson Creek Improvement.

RECOMMENDATION:

That Staff Report DSR-084-19 be received; and

That Council authorize the Town Clerk and the Drainage Superintendent to take the appropriate actions to proceed with an Engineer's Improvement Report under Section 78 of *the Drainage Act*; and

That Council approve an in-year capital budget for the "Carson Creek Improvements" in the amount of \$276,909 funded from developer contributions previously received for this purpose; and

That the Town Clerk forward a Notice advising of the proposed drainage works to the Lake Simcoe Region Conservation Authority as per Section 78(2) of *the Drainage Act*; and

That Staff report back to Council outlining the successful proponent from the RFP process in order to appoint the Drainage Engineer to complete an Improvement Report under Section 78 of *the Drainage Act*.



TOWN OF INNISFIL STAFF REPORT

Staff Report No.: DSR-084-19
Date: June 5, 2019
To: Mayor, Deputy Mayor and Members of Council
From: Jason Inwood, Strategic Leader, Operations
Jeremy Nyenhuis, Drainage Superintendent
Subject: Carson Village Drainage Award – Carson Creek Improvements

RECOMMENDATION:

That Staff Report DSR-084-19 be received; and

That Council authorize the Town Clerk and the Drainage Superintendent to take the appropriate actions to proceed with an Engineer's Improvement Report under Section 78 of the *Drainage Act*; and

That Council approve an in-year capital budget for the "Carson Creek Improvements" in the amount of \$276,909 funded from developer contributions previously received for this purpose; and

That the Town Clerk forward a Notice advising of the proposed drainage works to the Lake Simcoe Region Conservation Authority as per Section 78(2) of the *Drainage Act*; and

That Staff report back to Council outlining the successful proponent from the RFP process in order to appoint the Drainage Engineer to complete an Improvement Report under Section 78 of the *Drainage Act*.

BACKGROUND:

On April 8, 2019, the Town of Innisfil Customer Service department opened a MOAR case regarding a landowner's concern about the bank erosion of Carson Creek along their property line. This section of Carson Creek runs east-west through the unopened Water Street road allowance. The inquirer indicated that the erosion was quite substantial this year as a result of the melt and rain events to date.

On April 10, 2019, the Town's Drainage Superintendent attended the site to have a walkover with the landowner at 971 Corner Avenue. It was observed that a section of bank, approximately 20 metres long, had eroded away resulting in the loss of approximately 0.3m to 0.6m (1 ft. to 2 ft.) of land inside the property line. As can be seen in the images below, a large section of bank has eroded away, and an additional section has lost its structure integrity and will most likely erode downstream as well.



Photo looking upstream (south west) at the bank erosion along the property line of 971 Corner Avenue.



Photo looking east along the lot line of 971 Corner Avenue.

It can be seen that a section of bank has lost its structure integrity and will also erode downstream is not addressed.

On April 16 & 17, 2019, the Town's Drainage Superintendent conducted an inspection of the entire municipal drain. It was observed that there are more sections along the drain that have experienced erosion and bank stabilization issues, see attached 2019 Drain Inspection Map. Additional issues like fallen trees, log jams, blockages and overgrowth are also currently occurring throughout the drain.

As Council is also aware, Carson Creek and the sediment load that it has carried over the past years to Lake Simcoe has also been a major concern for both residents, Council members and staff. Staff have worked with upstream developers to improve the amount of sediment leaving development sites. However, bank stabilization improvements and possible additional improvements could also help alleviate the sediment issues downstream from the erosion happening upstream.

The Carson Village Drainage Award (Carson Creek) is a municipal drain constructed under by-law A-124 dated October 2, 1961. In May 1988, a report was completed by R.J. Burnside and Associates Limited entitled "Investigation of the Carson Village Municipal Drain "Carson Creek" to address the erosion problems in Lot 23, Concession 4 directly west of Ewart Street. This report recommended that the erosion problem be addressed under Section 77 of *the Drainage Act* (improvements up to \$4,500 without the report of an Engineer).

Since its construction, only two major improvements have been completed on the drain; 1990 Barry Avenue Culvert Replacement and 2006/07 slope stabilization maintenance. No record of full cleanout has been recorded since construction.

The 2007 slope stabilization maintenance work was completed in order to repair an approximate 30 metre section of erosion located in Lot 22, Concession 4 west of Ferrier Avenue. The cost of this work was \$37,349.89 and was levied accordingly.

In April 2016 Council received a report from R.J. Burnside & Associates Limited on all the Town's municipal drains which included an in depth and forecast work plan based on the file review and physical conditions of the municipal drains located within the Town's boundaries. As indicated in this inspection report, the Town is missing the existing profiles and specification for the Carson Village Drainage Award. It was recommended that a new engineer's report would need to be considered in the future for the Carson Village Drainage Award.

ANALYSIS/CONSIDERATION:

The Carson Village Drainage Award is a municipal drain that is governed under By-law A-124. It is made up of a main drain and branch drain with an overall distance of approximately 4,300m. There has been no major maintenance work completed on this drain since the improvement works were completed in 1961.

If Council is to proceed with the Section 78 Improvement Report, they shall instruct the Purchasing Services area to pursue a Drainage Engineer by way of competitive bid - Request for Proposal to conduct the works. Upon receipt of the proposal from the successful Drainage Engineer, staff will bring a report back to Council outlining the details of the proposal and the associated estimated costs for Council's consideration.

Once a successful Drainage Engineer is selected and approved by Council, Council must then appoint, by resolution, the Drainage Engineer to complete the Section 78 Improvement Report. Following the appointment of the Drainage Engineer, a site meeting will be scheduled with the neighboring landowners for their input. The Engineer will then use that input in their analysis to complete the improvement report which will include:

- Watershed Plan, Profiles and Specification of drainage works;
- Estimated Cost of the Total Work;

- Allowances payable to owners directly affected by the works;
- Construction Assessment Schedules; and
- Maintenance Assessment Schedules.

It will be the responsibility of the Drainage Engineer to prepare the assessment schedule. At this time, it is estimated that there would be approximately 1,000 affected properties on the assessment schedule. The Engineer's Final Report will be presented to Council to decide whether or not to proceed.

OPTIONS/ALTERNATIVES:

Option 1 - Do Nothing

This option is not recommended or viable as the Town has legislative responsibilities to perform maintenance works and manage the municipal drain network.

Option 2 - Perform Maintenance Works and Bank Stabilization without Original Profiles and Specifications under Section 74 of the Drainage Act

The municipality could proceed with the bank stabilization under maintenance works without having the original profile and specifications. The Town would be required to outsource an Engineer and instruct them under Section 65 of the *Drainage Act* to complete an update to the original maintenance assessment schedule to make it fair and reasonable in order to be able to assess the costs of the maintenance work out. The costs associated with Section 65 would not be eligible for grant.

However, there is a significant risk of liability from any of the assessed owners who could have a viable reason to appeal the maintenance work and any assessments. Furthermore, since the original elevations would be unknown, it would be difficult to maintain original conditions and may lead to difficulties in obtaining permits from respective authorities.

Option 3 – Proceed with an Improvement Report under Section 78 of the Drainage Act

Section 78(1&2) of the *Drainage Act* states that;

“Improving, upon examination and report of engineer

78(1) If a drainage works has been constructed under a by-law passed under this Act or any predecessor of this Act, and the council of the municipality that is responsible for maintaining and repairing the drainage works considers it appropriate to undertake one or more of the projects listed in subsection (1.1) for the better use, maintenance or repair of the drainage works or of lands or roads, the municipality may undertake and complete the project in accordance with the report of an engineer appointed by it and without the petition required by section 4.

Projects:

78(1.1) The projects referred to in subsection (1) are:

- 1. Changing the course of the drainage works.***
- 2. Making a new outlet for the whole or any part of the drainage works.***
- 3. Constructing a tile drain under the bed of the whole or any part of the drainage works.***
- 4. Construction, reconstructing or extending embankments, walls, dykes, dams, reservoirs, bridges, pumping stations or other protective works in connection with the drainage works.***

5. *Otherwise improving, extending to an outlet or altering the drainage works.*
6. *Covering all or part of the drainage works.*
7. *Consolidating two or more drainage works.*

Notice to conservation authority

78(2) *An **engineer** shall not be appointed under subsection (1) until thirty days after a notice advising of the proposed drainage works has been sent to the **secretary-treasurer** of each **conservation authority** that has jurisdiction over any of the lands that would be affected.”*

It is the recommendation of the Drainage Superintendent that the Town of Innisfil take action under Section 78 of *the Drainage Act*. This action reduces the associated risks and liabilities from option 1 or 2 with the benefits of obtaining an Engineer’s Improvement Report which will include an up-to-date watershed plan, profile, assessment schedules and specification. This will also allow the Town to maintain the municipal drain in the future.

FINANCIAL CONSIDERATION:

It should be noted that the cost for the Section 78 Improvement Report will be paid by the Town of Innisfil initially but charged back to the affected landowners as per the assessment scheduled outlined in the Engineer’s Final Report. The Drainage Superintendent and Treasurer will then apply to the Ministry of Agriculture, Food and Rural Affairs (OMAFRA) for the one-third agricultural grant for the Town of Innisfil on behalf of the agriculture properties. At this time, there is no estimate to complete the Section 78 Report.

It should also be noted that the Town collected funds from the LSAMI development in the amount of \$300,000 for future drain work and flood relief specific to the Carson Creek. To date, \$276,909 remains and is intended to be used to create an in-year budget to be used to offset the costs of the Section 78 Improvement Report and to allow an RFP to be issued to secure a qualified Drainage Engineer.

CONCLUSION:

In conclusion, staff recommend and support Option 3 to proceed with an Improvement Report under Section 78 of *the Drainage Act* for the Carson Creek Improvement including the Notice to the local conservation authority.

PREPARED BY:

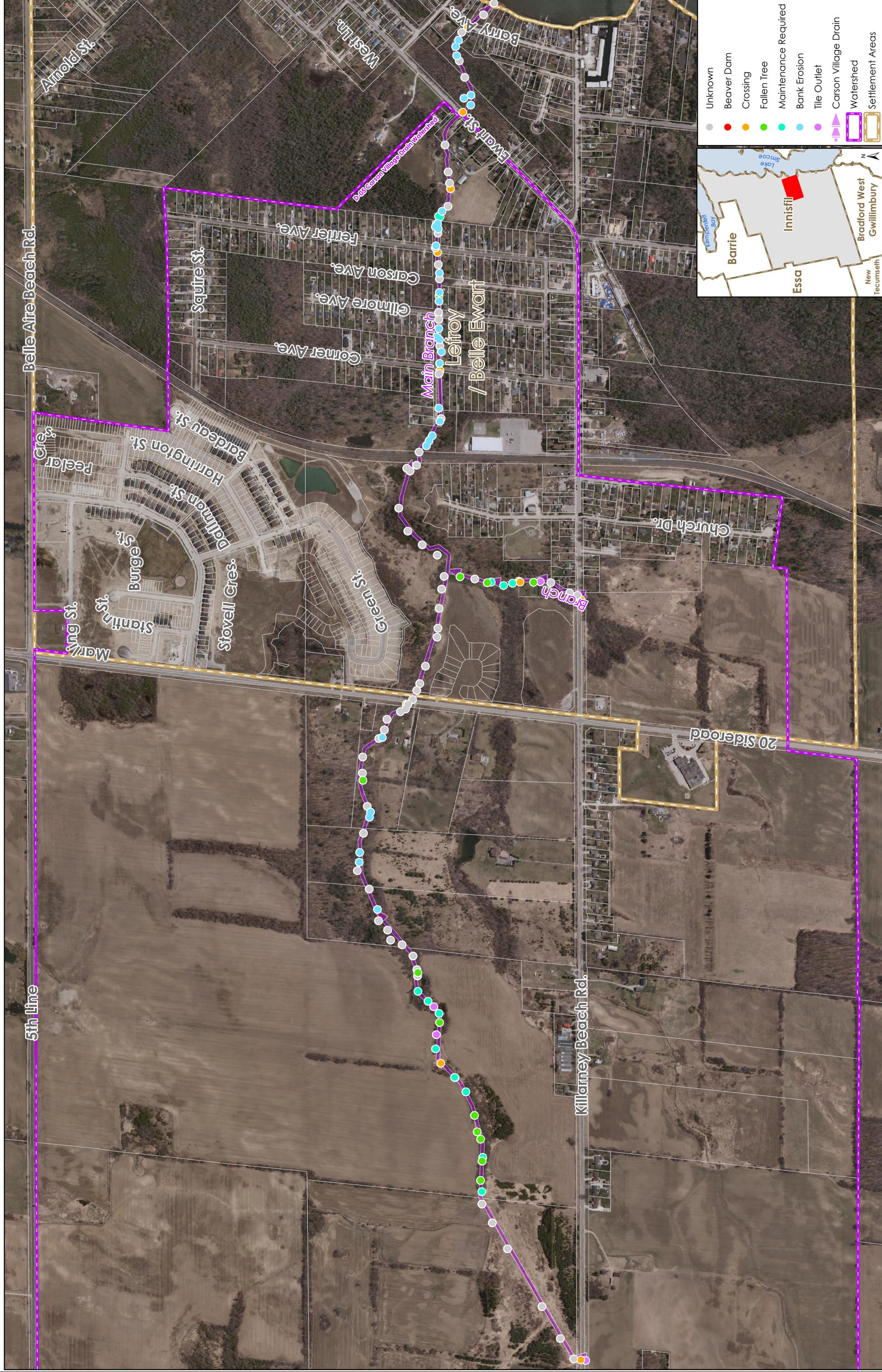
Jeremy Nyenhuis, Drainage Superintendent

APPROVED BY:

Jason Inwood, Strategic Leader, Operations

ATTACHMENTS:

2019 Drain Inspection Map – Carson Village Drainage Award



Unknown	Beaver Dam	Crossing	Fallen Tree	Maintenance Required	Bank Erosion	Tile Outlet	Carson Village Drain	Watershed	Settlement Areas
● (grey)	● (red)	● (orange)	● (green)	● (cyan)	● (blue)	● (purple)	— (purple line)	— (yellow dashed line)	— (yellow dashed line)

