Township of South Frontenac
Council Meeting Agenda

TIME: 7:00 PM,
DATE: Tuesday, November 14, 2023
PLACE: Council Chambers/Virtual Via Zoom .

1. *Call to Order*

a) Resolution

2. *Declaration of pecuniary interest and the general nature thereof*

3. *Approval of Agenda*

a) Resolution

4. ***Scheduled** Closed Session*

5. *Recess*

6. *Public Meeting*

7. *Delegations*

8. *Briefings*

a)	Representatives from Robinson Consultants will be present to speak to Council regarding Pleasant Valley Municipal Drain.	3 - 161
b)	Representatives from J. L. Richards and Associates will be present to speak to Council regarding Verona Housing Water and Wastewater Servicing Master Plan.	162 - 182

9. *Approval of Minutes*

a)	Resolution	183 - 189

10. *Reports Requiring Action*

11. *Advisory Committee Reports or Minutes*

12. *Reports Requiring Approval of By-laws*

13. *Reports for Information*

14. *Committee of the Whole*

15. *Information Items*

16. *Notice of Motions*

17. *Rise and Report regarding County Council and External Boards*

18. *Announcements/Statements by Councillors*

19. *Closed Session (if requested)*

a) Resolution - That Council resolve itself into the Committee of the Whole “Closed Meeting” to consider the following item:
a) A proposed or pending acquisition or disposition of land by the

municipality or local board - Sydenham Area

b) A proposed or pending acquisition or disposition of land by the municipality or local board - Sydenham Area

c) Resolution - That Council rise from the Committee of the Whole "Closed Meeting".

20. *Confirmatory By-law*

a) Resolution 190

21. *Adjournment*

a) Resolution

PLEASANT VALLEY MUNICIPAL DRAIN

MEETING TO REVIEW THE MAINTENANCE and SECTION 65 REPORTS

November 14, 2023

Presented by:

Lorne Franklin, C.E.T.

Robinson Consultants Inc.

SOUTH FRONTENAC

Robinson Consultants

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WHAT'S A MUNICIPAL DRAIN?

FACTSHEET

AGRICULTURAL ENGINEERING

ORDER NO. 01-059

AUGUST 2001

AGDEX 752

Ontario Ministry of Agriculture, Food and Rural Affairs

SO, WHAT'S A MUNICIPAL DRAIN?

S. Vander Veen

Perhaps you've just purchased property, and been told by your municipality that you are assessed into a municipal drain. Perhaps you have owned a property for a couple of years and have recently discovered that you are located in the watershed of a municipal drain. You're probably wondering, what does this mean? How does it affect me? What will it cost?

PHYSICALLY, WHAT IS A MUNICIPAL DRAIN?

Physically, a municipal drain is simply a drainage system. Most municipal drains are either ditches or closed systems such as pipes or tiles buried in the ground. They can also include structures such as dykes or berms, pumping stations, buffer strips, grassed waterways, storm water detention ponds, culverts and bridges. Even some creeks and small rivers are now considered to be municipal drains. Municipal drains are primarily located in rural agricultural areas of the province.

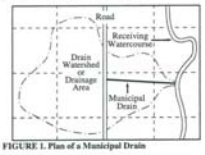

FIGURE 1. Plan of a Municipal Drain

THE PURPOSE OF MUNICIPAL DRAINS

Municipal drains have been a fixture of rural Ontario's infrastructure since the 1800's. Most municipal drains were constructed to improve the drainage of agricultural land by serving as the discharge point for private agricultural tile drainage systems. However, they also remove excess water collected by roadside ditches, residential lots, churches, schools, industrial lands, commercial lands and any other properties in rural areas. They are a vital component of the local infrastructure. Without them, many areas of the province would be subjected to regular flooding, reduced production from agricultural land and increased public health risks.

WHY IS IT CALLED A "MUNICIPAL DRAIN"?

There are many, many drainage ditches and buried pipes in the province, but not all of them are "municipal drains". So what distinguishes a municipal drain?

Municipal drains are created under the authority of the *Drainage Act*. There are 3 key elements of a municipal drain:

1) Community project — Landowners who need to solve a drainage problem may submit a prescribed petition under the *Drainage Act* to their local municipality, requesting the establishment of a municipal drain. If certain criteria are met, the municipality appoints an engineer who prepares a report, identifying the proposed solution to the problem and how the costs will be shared. There are various meetings where landowners in the watershed of the municipal drain can voice their desires and concerns. There are also several appeal stages where they can voice their objections. So, the end result of the process is a "communally accepted" project.

2) Legal Existence — After all appeals have been heard and dealt with, the municipality passes a by-law, adopting the engineer's report. The municipality then has the authority and the responsibility to construct the project. The cost of the work is assessed to the lands in the watershed in the same ratios as contained within the engineer's report. So for a ditch or a pipe to be a municipal drain, there must be a by-law adopting an engineer's report.

3) Municipal Infrastructure — Once a municipal drain has been constructed under the authority of a by-law, it becomes part of that municipality's infrastructure. The local municipality, through its drainage superintendent, is responsible for repairing and maintaining the municipal drain. In certain circumstances, the municipality can be held liable for damages for not maintaining these drains.

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WHAT'S A MUNICIPAL DRAIN?

- **A community project, enacted under Provincial legislation and administered by the Municipality on behalf of those landowners.**
- **It is not "owned" by the Municipality – ownership is retained by the individual owners along the drain.**
- **All owners "buy" a right to convey flows across others property to a legal and sufficient outlet that they would not otherwise have under "Common Law" and in return, agree to share in the costs of construction as well as the maintenance and upkeep of the constructed system.**

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INTRODUCTION

- **HISTORY – EXISTING DRAINAGE**
  - Robinson Consultants Inc (RCI) was appointed by the Township of South Frontenac to complete an Engineer's Report on the Pleasant Valley Municipal Drain, for the subsequent subdivision of land **(within the village of Hartington)** under Section 65 of the *Drainage Act.*
  - The Pleasant Valley Municipal Drain was originally constructed in in 1985 under provision of an Engineer's Report by A.D. Revill Associates Ltd. and associated By-Law adopted by the Township of South Frontenac (1985 Report).

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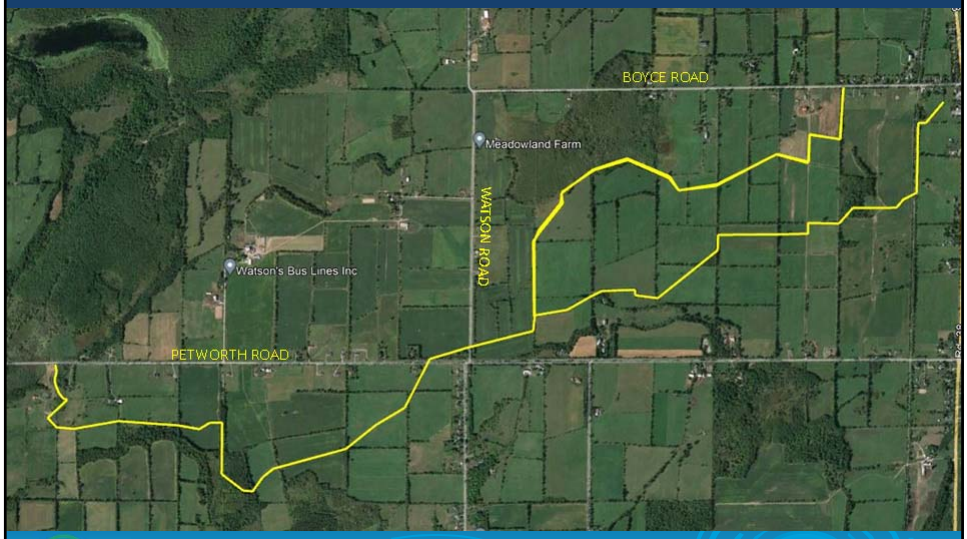
INTRODUCTION



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INTRODUCTION

- **HISTORY – EXISTING DRAINAGE**
  - In advance of the Engineer's Report, a partial maintenance inspection of the drain was completed by RCI in consultation with Township staff and the former Twp. Drainage Superintendent (Alan Revill), A report entitled **"Inspection Report – Pleasant Valley Municipal Drain, Township of South Frontenac,"** dated May 6, 2021, by Robinson Consultants Inc., was prepared and submitted.

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INTRODUCTION

- **HISTORY – EXISTING DRAINAGE**
  - Subsequently, the Section 65 Report was prepared and submitted by RCI entitled **"Engineer's Report for the – Subsequent Subdivisions of Lands – Pleasant Valley Municipal Drain – Township of South Frontenac",** dated April 4, 2022. The findings of the Section 65 Report indicated that drain maintenance must be completed prior to the development (full build-out) of the subdivision and planned incorporation of the Storm Water Management (SWM) pond.

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WHAT IS A S.65 REPORT?

- **Section 65(3)**
  - If an owner of land that is not assessed for a drainage works subsequently connects the land with the drainage works for the purpose of drainage, or if the nature or extent of the use of a drainage works by land assessed for the drainage works is subsequently altered, the clerk of the local municipality in which the land is situate shall instruct an engineer in writing to inspect the land and assess it for a just proportion of the drainage works, taking into account any compensation paid to the owner of the land in respect of the drainage works.
- **S.65 allows for the subdivision of lands and the distribution or correction of the assessments provided there is no significant impact on the flow in the drain or on other properties**

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INTRODUCTION

- **HISTORY – EXISTING DRAINAGE**
  - Most recently, a Maintenance Report was prepared and submitted by RCI, entitled **"Maintenance Report - Pleasant Valley Municipal Drain - Township of South Frontenac"**, dated October 27, 2023. The findings of the Maintenance Report outline the recommended maintenance to be completed.

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FINDINGS OF THE ENGINEER

- Observation of deficiencies such as (2) beaver dams, (2)areas of erosion, and (8) dead trees were found within the drain.
- On the next slide, dead trees are indicated with an orange arrow, areas of erosion are highlighted in blue

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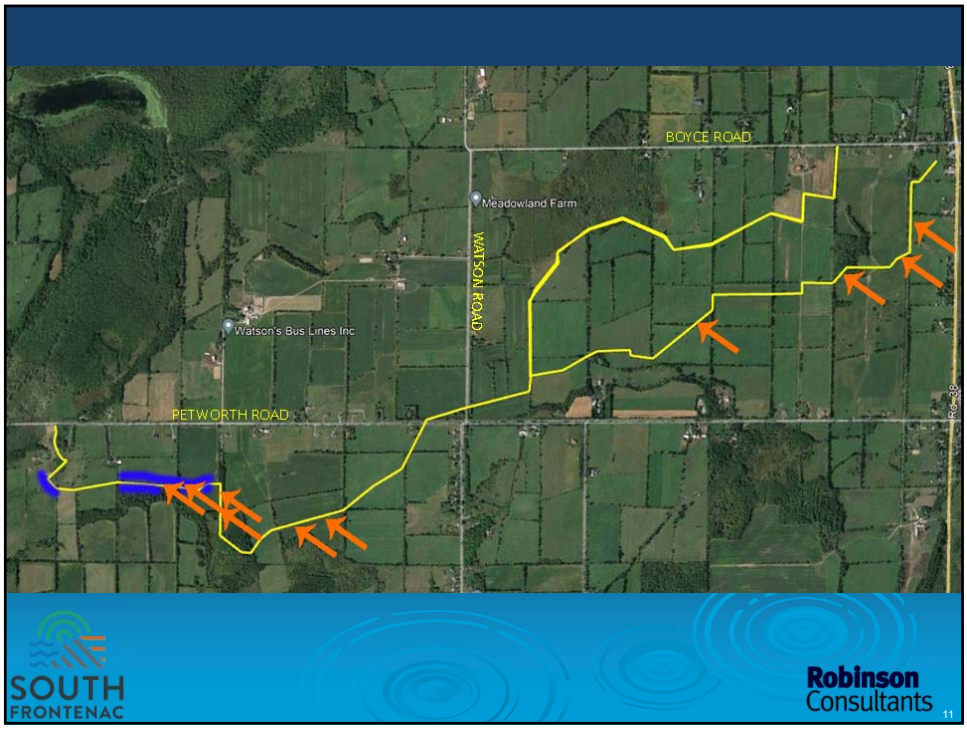

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FINDINGS OF THE ENGINEER

- Crossings (culverts) at locations prescribed by the Engineer's Report appeared to be in general conformance and of adequate condition.
- These are typically roadway or other significant crossings and are noted by red arrows in the following slide.

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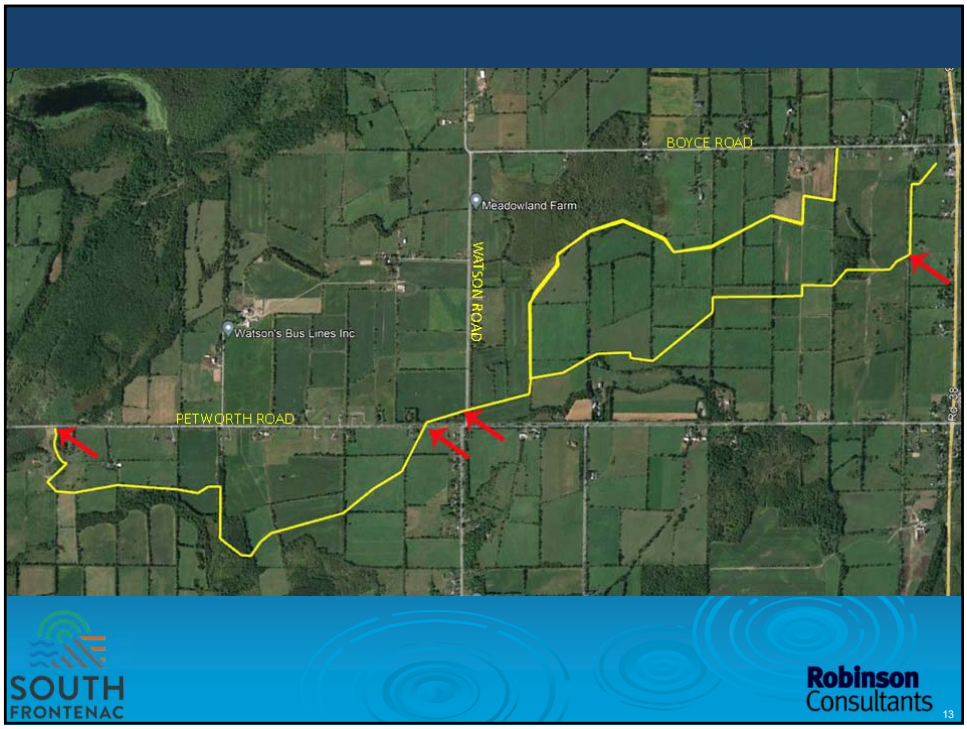

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FINDINGS OF THE ENGINEER

- Additional private farm crossings, not forming part of the Engineer's Report were observed in the inspected portion of the drain. They are noted by blue arrows in the following slide.
- Typically, the 1985 Report did not allow for private culvert crossings as the shallow nature of the drain does not support a culvert of the proper size to convey the required flow.
- Fords (low-level crossings) were noted as the preferred methodology for private crossings.

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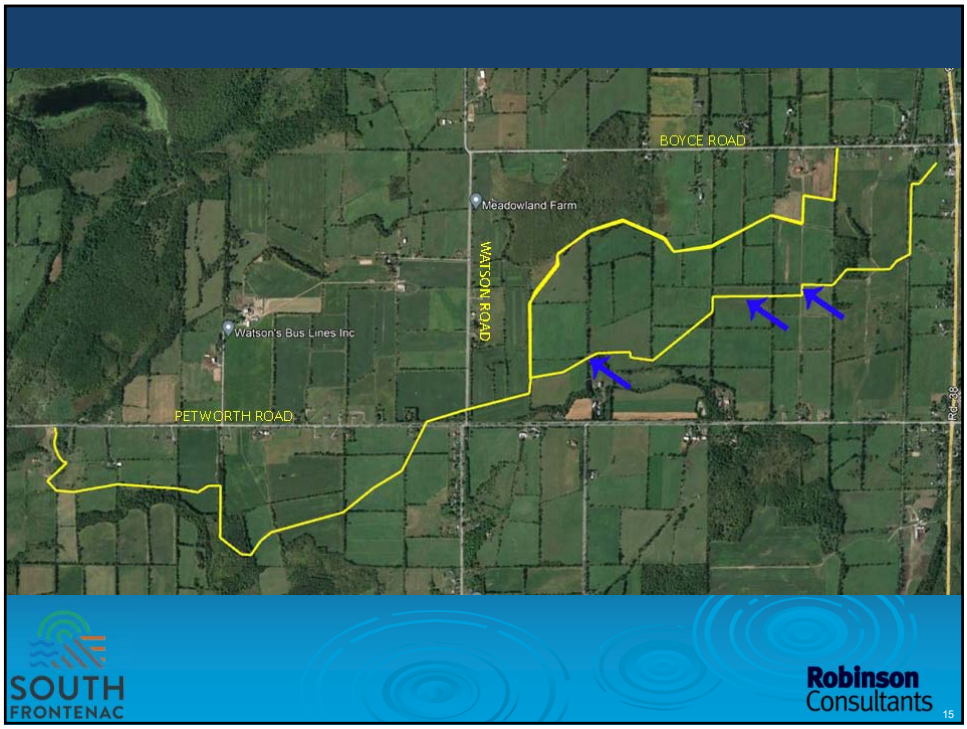

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FINDINGS OF THE ENGINEER

- It is not clear without further engineering and sizing if private crossings at the know locations can be supported.
- Undersized culverts can cause flooding for upstream landowners and cause further damage to the existing Municipal Drainage system.
- The recommendation is for removal of these crossings, however, this may not be supported by the owners that require the crossing.

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RECOMMENDATIONS

- **Maintenance is broken down into three categories:**
  - Vegetation Management – where the existing profile is below the 1985 Profile.
  - Vegetation Management and Bottom Cleanout – where the existing profile is within 0.1m of the 1985 Profile.
  - Full Cleanout – areas of more significant excavation, greater than 0.1m difference between the existing and 1985 profile, will require a full cleanout to restore the profile and banks
- **Typically, a full cleanout is required when there is greater than 0.3m of difference, however due to the shallow nature of the drain, it is recommended to complete a full cleanout at a lower difference.**

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RECOMMENDATIONS

- **Leaving some vegetation in place is preferred/recommended by environmental agencies.**
- **It is recommended that excavation and clean out be completed across the bottom and one side only, with the opposite bank left untouched.**

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RECOMMENDATIONS

- Maintenance is recommended for the full extent of the Drain. The maintenance cost is estimated at **$88,457.42**.
- It is recommended to repair the deficiencies during maintenance work outlined within this presentation and in the Maintenance Report.
- It is recommended to proceed with a culvert cleanout for the Pedestrian Path (K&P Trail system) culvert. No other maintenance is recommended at this time on the crossings prescribed by the Engineer's Report.

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NEXT STEPS

- **PERMITS**
  - Cleanout may require permits or authorizations from environmental agencies, prior to any maintenance or construction activity, such as:
    - Department of Fisheries and Oceans (DFO)
    - Quinte Region Conservation Authority (QRCA)
    - Ontario Ministry of Environment Conservation and Parks (MECP) with regard to Species at Risk (SAR)
    - Ontario Ministry of Environment Conservation and Parks (MECP)
  - The typical in-water work window will also be defined in this section (July 15 – October 15 of any year), however, the majority of this drain would not be considered in-water work due to the shallow nature of the drain.

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NEXT STEPS

- **PROPOSED WORK**
  - Maintenance work is proposed to be tendered and completed in 2024. The maintenance cost is estimated at **$88,457.42**.
  - In accordance with the Drainage Act, all costs associated with Maintenance work are to be assessed as per the most recent assessment schedule, which would be those in the 1985 Report.
  - Maintenance work requires that the profile of the Municipal Drain is returned to the 1985 Report as well.
  - It is recommended to provide mailouts to landowners and conduct a meeting with the affect landowners prior to work commencing.

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NEXT STEPS

- **Tendering, Contract Administration and Inspection are considered to be the "duty of the Drainage Superintendent". These costs are not recoverable/accessible to the other owners. Provided that the officially appointed Drainage Superintendent does this work, a grant of 50% of the costs may be available for the drainage Superintendent services. An amount of $17,500.00 is included within the cost estimate of $88,457.42.**
- **In accordance with the 1985 Report, the Municipality is responsible for approximately 1.12% of the cost (assessed for lands and roads). This represents approximately $851.49 of the remaining estimated $70,957.42 maintenance cost. The remainder ($70,105.93) is assessed to other properties within the drainage area.**

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GRANT ELIGIBILTY

- The Ontario Ministry of Agriculture, Foods and Rural Affairs (OMAFRA) outlines the policies and procedures with regard to the 1/3 grant available to properties determined to be "Agricultural Lands" under the Agricultural Drainage Infrastructure Program (ADIP).
- In general, to be eligible for a grant, the property must be eligible for the Farm Tax Class (FTC).

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FARM TAX CLASS (FTC)

To be eligible for the FTC a property must:

- Be assessed as farmland by the Municipal Property Assessment Corporation.
- Used as part of an ongoing farming operation generating at least $7,000 in annual revenue.
- Hold a valid Farm Business Registration Number and be registered with AgriCorp.
- Have more than 50% Canadian ownership.

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Maintenance Report
Pleasant Valley Municipal Drain
Township of South Frontenac

Prepared For:

SOUTH FRONTENAC

The Township of South Frontenac

Prepared By:

Robinson Consultants Inc.
Consulting Engineers

Project No. 22037
October 2023

Robinson Consultants

October 27, 2023

Township of South Frontenac
4432 George Street, Box 100
Sydenham, ON K0H 2T0

Attention: **Troy Dunlop. C.E.T.**
Manager of Engineering and Capital Projects
Public Services Department

Reference: **Maintenance Report**
Pleasant Valley Municipal Drain
Township of South Frontenac
Our Project No. 22037

Dear Sir:

This Maintenance Report for the Pleasant Valley Municipal Drain, Township of South Frontenac, is respectfully submitted for your consideration.

This Report is provided to Council in support of the recommended/required maintenance as defined in the previously submitted S.65 Engineer's Report (Engineer's Report for the – Subsequent Subdivisions of Lands – Pleasant Valley Municipal Drain – Township of South Frontenac, April 4, 2022, Robinson Consultants Inc.).

If you have any questions, please feel free to contact the undersigned via e-mail at lfranklin@rcii.com or by cell at 613-791-1335.

Yours very truly,

ROBINSON CONSULTANTS INC.

Lorne Franklin, L.E.T., C.E.T., rcca, CISEC
Licensed Drainage Technologist
Drainage Superintendent

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LIST OF APPENDICES

1.0 INTRODUCTION

Robinson Consultants Inc. was appointed by the Township of South Frontenac to complete an Engineer's Report on the Pleasant Valley Municipal Drain for the subsequent subdivision of land under Section 65 of the Ontario Drainage Act, R.S.O. 1990 c. D.17. The land use change is designated as the Hartington Subdivision. The proposed subdivision represents 31.41 ha of the 715.64 ha drainage area of the Pleasant Valley Municipal Drain.

In advance of the Engineer's Report, a maintenance inspection of the drain was completed by Robinson Consultants Inc. in consultation with Township staff and the former Twp. Drainage Superintendent (Alan Revill), A report entitled **"Inspection Report – Pleasant Valley Municipal Drain, Township of South Frontenac,"** dated May 6, 2021, by Robinson Consultants Inc., was prepared and submitted.

Subsequently, the Section 65 Report was prepared and submitted by Robinsons Consultants Inc. entitled **"Engineer's Report for the – Subsequent Subdivisions of Lands – Pleasant Valley Municipal Drain – Township of South Frontenac",** dated April 4, 2022. The findings of the Section 65 Report indicated that drain maintenance must be completed prior to the development (full build-out) of the subdivision and planned incorporation of the Storm Water Management (SWM) pond.

To facilitate the maintenance, a more thorough inspection of the drain was completed including survey, comparative analysis (survey vs. 1985 profile) and a cost estimate of the required maintenance. The findings of this inspection, analysis, and estimate are provided in the following sections. The Leonard Branch of the Pleasant Valley Municipal Drain was not inspected at that time, as per Township direction.

1.1 History

The Pleasant Valley Municipal Drain was originally constructed in 1985 under provision of an Engineer's Report by A.D. Revill Associates Ltd. and associated By-Law adopted by the Township of South Frontenac.

The date of the last maintenance (clean-out) of the Drain was reported by Mr. Revill, in attendance during the inspection of the drain, to have been completed in 1992 with a further partial clean-out in 2012 from Sta. 3+139 to 4+100.

Associated reports prepared by Robinson Consultants Inc. include the following:

- "Inspection Report – Pleasant Valley Municipal Drain, Township of South Frontenac," dated May 6, 2021.
- Section 65 Report - "Engineer's Report for the – Subsequent Subdivisions of Lands – Pleasant Valley Municipal Drain – Township of South Frontenac", dated April 4, 2022.

A copy of the 1985 Engineer's Plans are included in **Appendix A** of this report.

2.0 REVIEW AND MAINTENANCE INSPECTION DETAILS

The 1985 Engineer's Report (and current By-Law) noted a high bedrock level for this area that restricted the design channel depth and grade. As a result, the 1985 Report provides for a shallow drain but one that generally satisfied the needs of the affected properties while reducing the overall construction cost. However, due to the shallow nature of the drain, the capacity of the drain is susceptible to restrictions based on sediment, vegetation growth, fallen trees, beaver dams, or other blockages/restrictions.

The initial visual inspection of the drain was completed from Watson Rd. (Sta. 3+139) to the upstream Limit of Construction in the Village of Hartington (Sta. 6+385) in May 2021. Maintenance Inspection of the drain was completed in May 2022 to detail the extent of maintenance requirements and document existing structure locations along the full extent of the Main Drain portion of the Pleasant Valley Municipal Drain. Findings of the surveys are detailed below.

2.1 Initial Inspection Details (May 2021)

A visual review of the Drain was completed from Watson Rd. (Sta. 3+139) to the upstream Limit of Construction in the village of Hartington (Sta. 6+385) in May 2021. The downstream extent of the Drain (Sta 0+000 to 3+139) was not inspected at that time. The inspection found the alignment and cross-sectional widths of the Drain to be in general conformity with the 1985 Engineer's Report. However, some sedimentation and debris deposits were evident throughout the observed extent of the drain. Typically, the extent of sedimentation and debris deposits would be considered insignificant to minor, however, due to the shallow nature of the drain even minor deposition is anticipated to have an impact on the capacity of the Drain.

No significant erosion of the channel banks was observed during this inspection.

In non-cropped (forested or fence line) areas, moderate woody vegetation (scrub) is evident on the banks of the drain. Woody vegetation within the banks of the drain may impact channel capacity.

The field located in Lot 11 Con 7 was reported to flood quite frequently with occasional damage to crops. Some evidence of recent inundation was noted at the time of inspection.

No tile outlets were observed at the time of the inspection. It is noted that due to the proximity of the underlying rock, tile systems are typically not viable in this area.

2.2 Maintenance Inspection Details (May 2022)

A survey of the drain was completed from the outlet at Petworth Rd. (Sta. 0+000) to the upstream Limit of Construction in the Village of Hartington (Sta. 6+385) in May 2022. A copy of the inspection reports can be found in **Appendix B.**

From Sta. 0+225 to 1+125 the drain was notably dry with sinkholes appearing throughout the bottom of the drain. It was also noted at Sta. 0+225 that there was water flowing through the existing bank into the drain. It is assumed that the main channel is used primarily for spring melt, while the remainder of the year the water flows under the limestone bedrock (Karst topography), but ultimately ends up in the drain.

Consistent with the 1985 Report, there are minimal culverts along the drain and drive through areas (low level crossings) are used to cross the drain. Generally, where they exist along the drain, culverts are generally in good condition, however for culverts not defined in the 1985 Report it is uncertain if these culverts are properly sized. The only areas of concern are the Watson Rd. culvert (Sta. 3+100) and the Pedestrian Trail culvert (Sta. 5+750).

The Watson Rd. culvert is in good condition, however there is only ~30cm between the top of the culvert and the top of the road, which could result in failure if the culvert deteriorates. The Pedestrian Trail culvert is in good condition, however there is a significant amount of sediment within the culvert that is blocking flow from upstream.

Two (2) beaver dams were found at Sta. 1+350 and Sta. 1+400 which causes the drain to back up to Sta. 1+700 and causes flooding in the nearby fields.

Additionally, erosion occurring on the existing banks was noted at Sta. 0+400, 0+875 – 0+925, and dead trees were found within the drain at Sta. 0+925, 1+000, 2+075, 2+200, 4+425, 5+375, 5+725, and 5+825.

A profile conversion and comparative analysis was completed to determine the excavation required to return the drain to the 1985 profile. The results of the conversion and comparative analysis, complete with detailed maintenance recommendations, are provided in **Table C.1**, provided in **Appendix C.**

3.0 MAINTENANCE RECOMMENDATIONS

Vegetation management is recommended for the full extent of the Drain. Where the current profile exceeds the prescribed 1985 profile and/or where the prescribed cross section width is not met, Vegetation Management and Bottom Cleanout is recommended.

Areas of more significant excavation have been noted as “Full Cleanout.” Leaving some vegetation in place is preferred/recommended by environmental agencies for wildlife habitat and watercourse shading – as such it is recommended that excavation and clean out be completed across the bottom and one side only, with the opposite bank left untouched.

For purposes of cost estimating, vegetation removal, vegetation and bottom cleanout, and full bottom cleanout is estimated at a per linear meter cost. A Detailed Cost Estimate for the proposed works/required maintenance is provided in **Appendix D.**

3.1 Culverts

Crossings (culverts) at locations prescribed by the Engineer’s Report appeared to be in general conformance and of adequate condition. Additional private farm crossings, not forming part of the Engineer’s Report were observed in the inspected portion of the drain. Engineering review would be required to determine if the additional crossings meet the standard 10 year return period design as prescribed by the Engineer’s report, as well as meeting installation standards

For the purpose of maintenance, it is assumed that non-conforming culverts will be removed and not replaced until such time as they are sized and accommodated by a separate Engineer’s Report. A full list of culverts and associated recommendations is provided in **Table 3.1** below.

Table 3.1
Culvert Locations and Recommendations

Location (Station)	Identified in 1985 Report	Crossing Type	Approximate size and Material	Recommendations
0+000	Y	Petworth Road	4-750mm HDPE	N/A – Road Authority
2+900	Y	Petworth Road	2-1800mm CSP	N/A – Road Authority
3+100	Y	Watson Road	3500mm x 1500mm CSPA	N/A – Road Authority
3+700	N	ATV Bridge	Wood	May remain in place
3+825	N	Field Crossing	800mm CSP	Removal/Engineer’s Report
4+625	N	Field Crossing	2-450mm HDPE	Removal/Engineer’s Report
5+100	N	Field Crossing (Landowner Road)	650mm CSP	Removal/Engineer’s Report
5+750	Y	Pedestrian Trail (former Rail Corridor)	1500mm x 600mm Concrete Box	Culvert cleanout

It is recommended to proceed with a culvert cleanout for the Pedestrian Path culvert. No other maintenance is required at this time on the crossings prescribed by the Engineer's Report.

Further engineering review for the private farm crossings is recommended to determine if the crossings meet the standard 10-year design storm prescribed by the Engineer's Report and were correctly installed. Where applicable, it is recommended that an amendment to the Engineer's Report be initiated to incorporate the required crossings into the Report and By-Law.

4.0 PERMITS

Municipal Drain cleanout may require permits or authorizations from environmental agencies. Prior to any maintenance or construction activity. It is recommended that the township seek the advice of (but not limited to) the following:

- The federal Department of Fisheries and Oceans (DFO, with regard to Fish and Fish Habitat Regulations.
- The Quinte Region Conservation Authority (QRCA) with regard to fill, construction, alteration to waterways and wetlands regulations.
- The Ontario Ministry of Environment Conservation and Parks (MECP) with regard to Species at Risk (SAR) legislation/regulations.
- The Ontario Ministry of Natural Resources and Forestry (MNRF) with regard to other environmental legislation/regulations.

The typical in-water work window will also be defined in this section (July 15 – October 15 of any year), however, the majority of this drain would not be considered in-water work. Requirements may also be modified by any advice given by the agencies as per the above noted required consultation.

5.0 CONCLUSIONS

It is recommended that maintenance be conducted as noted above prior to the development of the proposed subdivision. A cost estimate for the maintenance work is provided in **Appendix D**. The maintenance cost is estimated at **$88,457.42**. It is noted that the maintenance estimate does not provide for the replacement of culverts not prescribed by the 1985 report – inclusion of these culverts and sizing must be completed by a separate Engineer's Report. For the purpose of this estimate it is assumed that non-conforming culverts are removed and not replaced.

We trust that the information provided by this Maintenance Report is satisfactory in addressing the requirements of the Municipality.

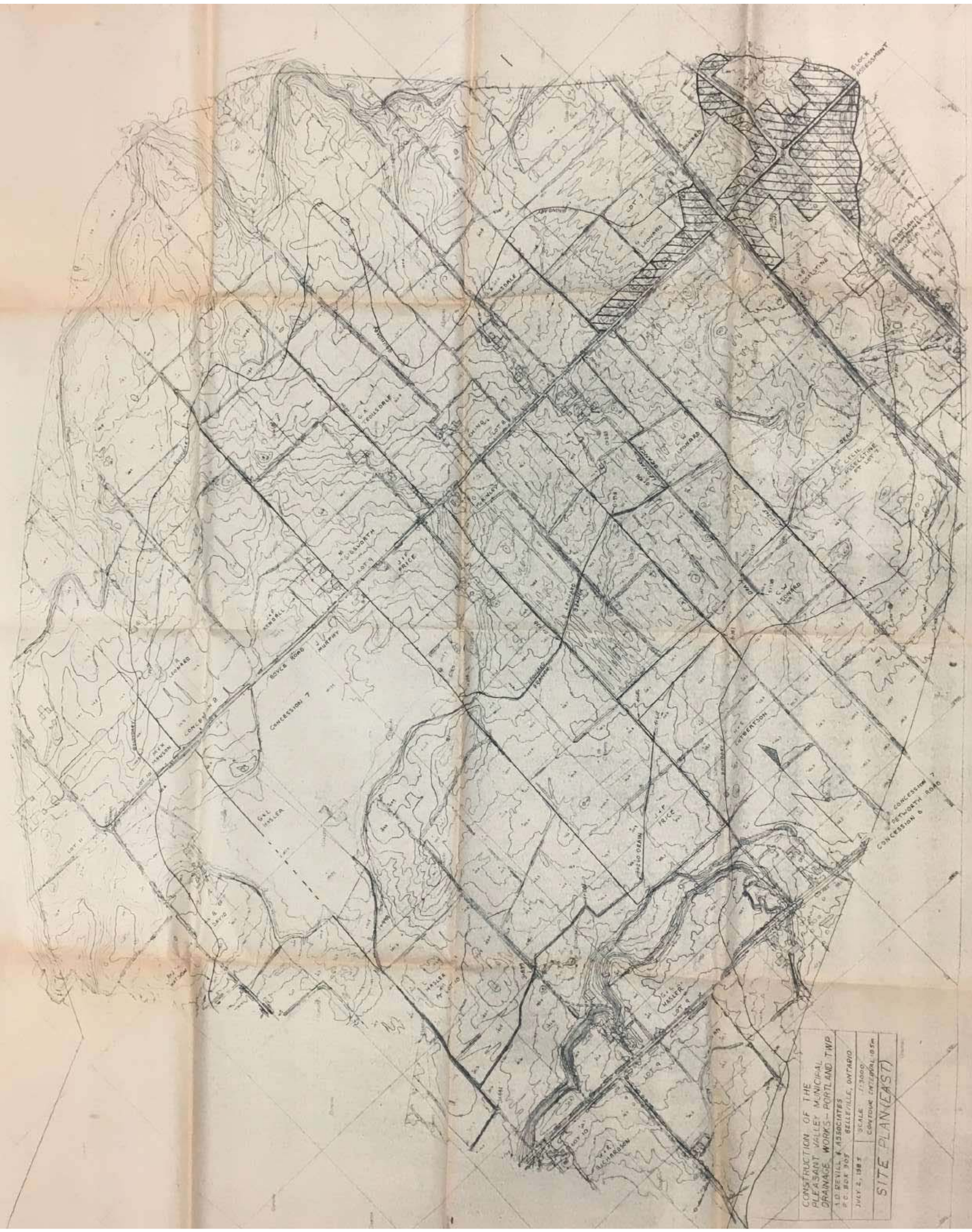
All of which is respectfully submitted,

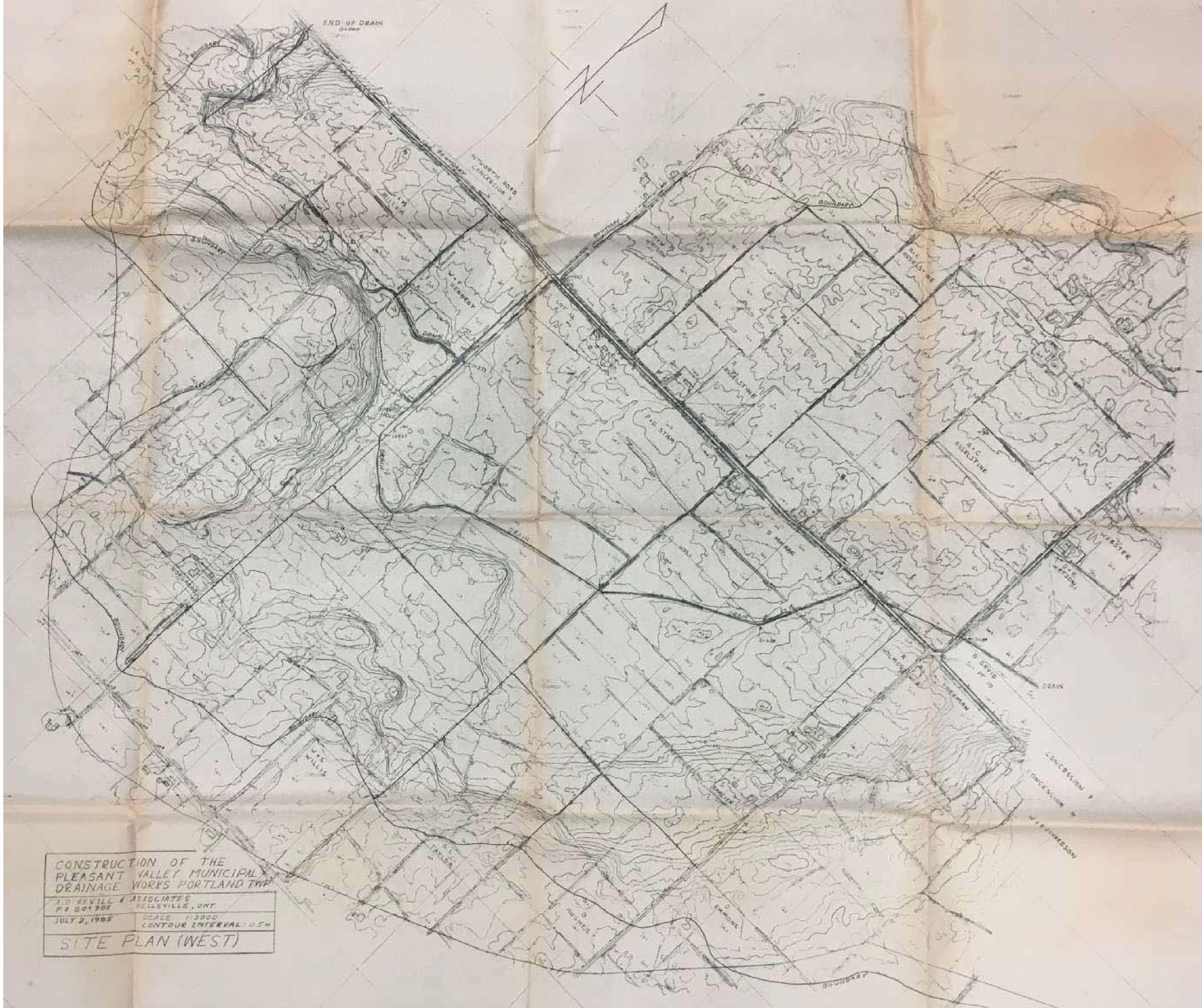
ROBINSON CONSULTANTS INC.

Lorne Franklin, L.E.T., C.E.T., rcca, CISEC
Licensed Drainage Technologist
Drainage Superintendent

Appendix A

1985 Engineer's Plans


CONSTRUCTION OF THE
PLEASANT VALLEY MUNICIPAL
DRAINAGE WORKS - PORTLAND TWP.
A.D. REVILL & ASSOCIATES
P.O. BOX 307 BELLEVILLE, ONTARIO
JULY 2, 1985 SCALE 1:3000
CONTOUR INTERVAL 0.5m
SITE PLAN (EAST)
CONCESSION 7
BOYCE ROAD
CONCESSION 6
PETWORTH ROAD
BLOCK ASSESSMENT


END OF DRAIN
CONSTRUCTION OF THE
PLEASANT VALLEY MUNICIPAL
DRAINAGE WORKS PORTLAND TWP
A.D. REVILL & ASSOCIATES
P.O. BOX 305 BELLEVILLE, ONT.
JULY 2, 1985
SCALE 1:3000
CONTOUR INTERVAL: 0.5m
SITE PLAN (WEST)
CONCESSION 7
CONCESSION 6
BOUNDARY
DRAIN
WEBSTER

Appendix B

Inspection Photos

Robinson Consultants

Drainage Report

Form Name:	Drainage Report
Submitter Name:	Dakota Dumont (ddumont@rcii.com) | ddumont@rcii.com
Submission Date:	Thursday, May 12, 2022 8:25 AM
Location:	350 Palladium Dr #104, Kanata, ON K2V 1A8, Canada Thursday, May 12, 2022 8:25 AM [View Map]

DRAINAGE REPORT

Project Name	Pleasant Valley Maintenance 3
Project Number	22037
Survey Date	Friday, May 6, 2022
Start Time	8:30 AM

MAIN CHANNEL

Main Channel 1 OF 15

Station 0+000

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 2 OF 15

Station	0+100
Photo 1 Description	Upstream
Photo 1	
Photo 2 Description	Downstream
Photo 2	

Main Channel 3 OF 15

Station	0+200
Photo 1 Description	Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 4 OF 15

Station 0+300

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 5 OF 15

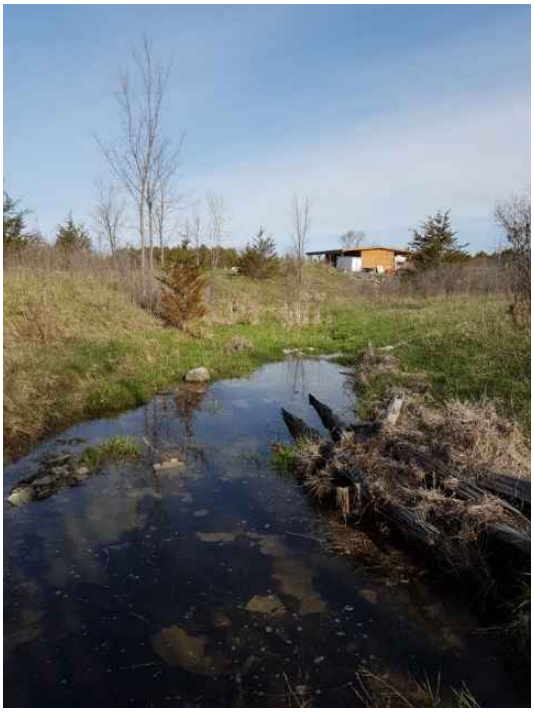
Station 0+400

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2



Main Channel 6 OF 15

Station 0+500

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 7 OF 15

Station 0+600

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 8 OF 15

Station 0+700

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 9 OF 15

Station 0+800

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 10 OF 15

Station 0+900

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 11 OF 15

Station 1+000

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 12 OF 15

Station 1+100

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 13 OF 15

Station 1+200

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 14 OF 15

Station 1+300

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 15 OF 15

Station 1+400

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

CROSSING

Crossing 1 OF 1

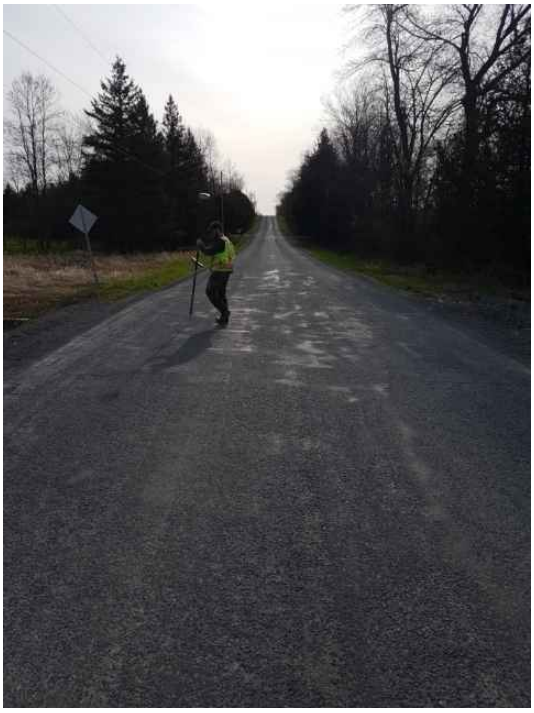
Station	0+000
Street Name	Petworth Road
Photo 1 Description	Road
Photo 1	
Photo 2 Description	US end 4-750mm HDPE, good condition
Photo 2	
Photo 3 Description	DS end

Photo 3

KEY FEATURES

Key Features 1 OF 21

Station	0+175
Photo 1 Description	small rapids
Photo 1	

Key Features 2 OF 21

Station	0+200
Photo 1 Description	Rocky Area

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Key Features 3 OF 21

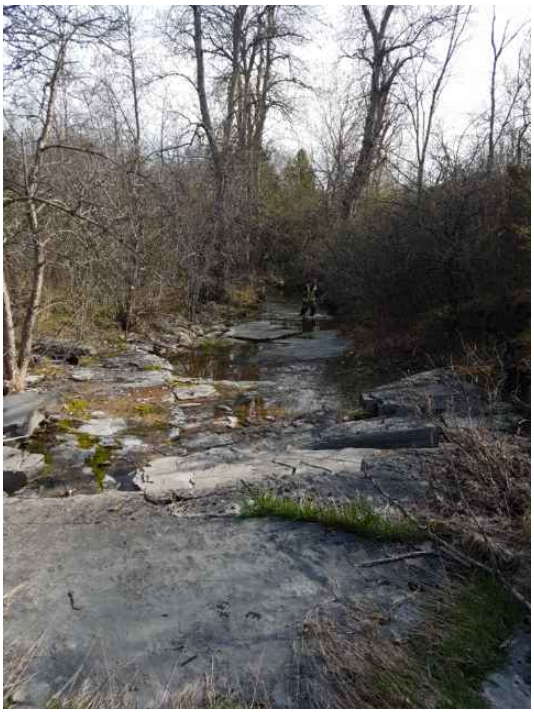
Station 0+225

Photo 1 Description small waterfall area

Photo 1

Photo 2

Photo 3



Key Features 4 OF 21

Station	0+275
Photo 1 Description	rock in area appears to be used for overland flow in spring time, water appears to flow under shale

Photo 1

Photo 2

Key Features 5 OF 21

Station	0+400
Photo 1 Description	Erosion on bank

Photo 1

Key Features 6 OF 21

Station 0+425

Photo 1 Description rock deposits

Photo 1

Photo 2

Photo 3

Key Features 7 OF 21

Station	0+475
Photo 1 Description	rock deposits

Photo 1

Photo 2

Key Features 8 OF 21

Station	0+600
Photo 1 Description	Low level crossing

Photo 1

Key Features 9 OF 21

Station 0+625

Photo 1 Description Hole in drain, potential area where water enters under the field

Photo 1

Key Features 10 OF 21

Station 0+700

Photo 1 Description Pool and side ditch

Photo 1

Photo 2

Key Features 11 OF 21

Station	0+875
Photo 1 Description	Erosion on bank and rock deposits

Photo 1

Photo 2

Photo 3

Key Features 12 OF 21

Station 0+900

Photo 1 Description Erosion on bank and rock deposits

Photo 1

Key Features 13 OF 21

Station 0+925

Photo 1 Description Tree in drain

Photo 1

Key Features 14 OF 21

Station 1+000
Photo 1 Description Tree in drain
Photo 1

Key Features 15 OF 21

Station 1+125
Photo 1 Description water in drain

Photo 1

Key Features 16 OF 21

Station 1+125
Photo 1 Description hole in drain
Photo 1

Key Features 17 OF 21

Station 1+250
Photo 1 Description low level crossing

Photo 1

Key Features 18 OF 21

Station 1+250
Photo 1 Description side ditch
Photo 1

Key Features 19 OF 21

Station 1+300
Photo 1 Description Flooding in nearby field

Photo 1

Photo 2 Description flooding from nearby field

Photo 2

Photo 3

Key Features 20 OF 21

Station 1+350
Photo 1 Description Beaver dam
Photo 1

Key Features 21 OF 21

Station 1+400
Photo 1 Description Beaver Dam

Photo 1

Photo 2

Robinson Consultants

Drainage Report

Form Name:	Drainage Report
Submitter Name:	Dakota Dumont (ddumont@rcii.com) | ddumont@rcii.com
Submission Date:	Thursday, May 12, 2022 8:25 AM
Location:	350 Palladium Dr #104, Kanata, ON K2V 1A8, Canada Thursday, May 12, 2022 8:25 AM [View Map]

DRAINAGE REPORT

Project Name	Pleasant Valley Maintenance 4
Project Number	22037
Survey Date	Friday, May 6, 2022
Start Time	8:30 AM

MAIN CHANNEL

Main Channel 1 OF 14

Station	1+500
Photo 1 Description	Upstream
Photo 1 Additional Description	1m deep due to beaver dam
Photo 1	
Photo 2 Description	Downstream

Photo 2

Main Channel 2 OF 14

Station 1+600

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 3 OF 14

Station 1+700

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 4 OF 14

Station 1+800

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 5 OF 14

Station 1+900

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 6 OF 14

Station 2+000

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 7 OF 14

Station 2+100

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 8 OF 14

Station 2+200

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 9 OF 14

Station 2+300

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 10 OF 14

Station 2+400

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 11 OF 14

Station 2+500

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 12 OF 14

Station 2+600

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 13 OF 14

Station 2+700

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 14 OF 14

Station 2+800

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

KEY FEATURES

Key Features 1 OF 7

Station	1+675
Photo 1 Description	Owl feather
Photo 1	

Key Features 2 OF 7

Station	1+900
Photo 1 Description	low level crossing and side ditch

Photo 1

Photo 2

Photo 3

Key Features 3 OF 7

Station 2+075
Photo 1 Description debris - tree
Photo 1

Key Features 4 OF 7

Station 2+200
Photo 1 Description debris - tree in drain

Photo 1

Photo 2

Key Features 5 OF 7

Station	2+225
Photo 1 Description	side ditch

Photo 1

Key Features 6 OF 7

Station 2+600
Photo 1 Description Loose rocks
Photo 1

Key Features 7 OF 7

Station 2+700
Photo 1 Description low level crossing

Photo 1

Robinson Consultants

Drainage Report

Form Name:	Drainage Report
Submitter Name:	Dakota Dumont (ddumont@rcii.com) | ddumont@rcii.com
Submission Date:	Thursday, May 12, 2022 8:24 AM
Location:	350 Palladium Dr #104, Kanata, ON K2V 1A1, Canada Thursday, May 12, 2022 8:24 AM [View Map]

DRAINAGE REPORT

Project Name	Pleasant Valley Maintenance
Project Number	22037
Survey Date	Thursday, May 5, 2022
Start Time	9:00 AM

MAIN CHANNEL

Main Channel 1 OF 21

Station 2+900

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 2 OF 21

Station	3+000
Photo 1 Description	Upstream
Photo 1	
Photo 2 Description	Downstream
Photo 2	

Main Channel 3 OF 21

Station	3+100
Photo 1 Description	Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 4 OF 21

Station 3+200

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 5 OF 21

Station 3+300

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 6 OF 21

Station 3+400

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 7 OF 21

Station 3+500

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 8 OF 21

Station 3+600

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 9 OF 21

Station 3+700

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 10 OF 21

Station 3+800

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 11 OF 21

Station 3+900

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 12 OF 21

Station 4+000

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 13 OF 21

Station 4+100

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 14 OF 21

Station 4+200

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 15 OF 21

Station 4+300

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 16 OF 21

Station 4+400

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 17 OF 21

Station 4+500

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 18 OF 21

Station 4+600

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 19 OF 21

Station 4+700

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 20 OF 21

Station 4+800

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 21 OF 21

Station 4+900

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

CROSSING

Crossing 1 OF 5

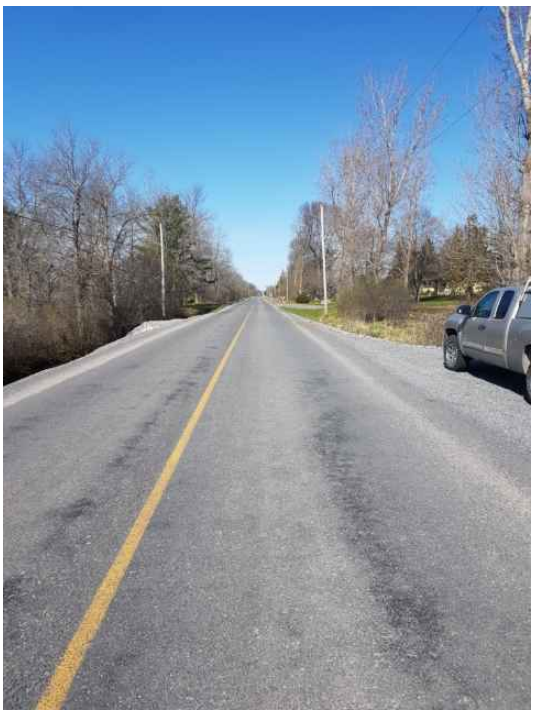
Station	2+900
Street Name	Petworth Rd
Photo 1 Description	Road
Photo 1	
Photo 2 Description	US end, 2-1800mm CSP, both good condition
Photo 2	
Photo 3 Description	DS end

Photo 3

Crossing 2 OF 5

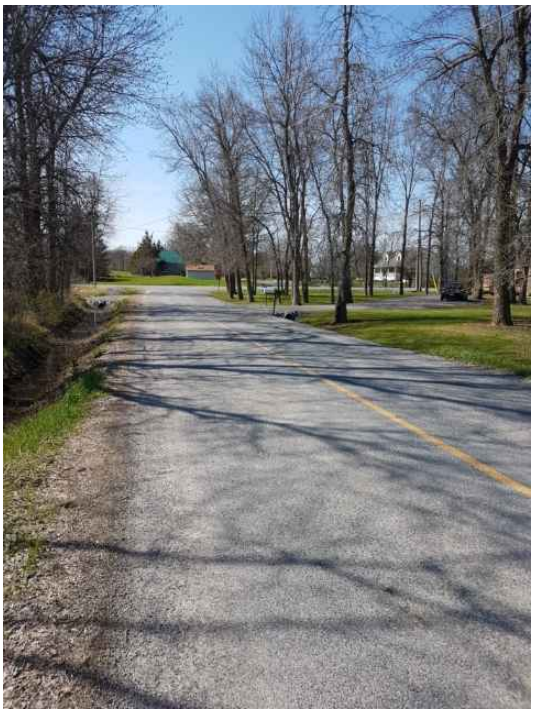
Station	3+100
Street Name	Watson Rd
Photo 1 Description	Road
Photo 1	
Photo 2 Description	US end, ~3500mm x ~1500mm CSPA, good condition, does not appear to have a lot of cover over the culvert to the road, ~6 inch different between culvert and road

Photo 2

Photo 3 Description DS end

Photo 3

Crossing 3 OF 5

Station 3+700
Street Name Small Wooden ATV Bridge
Photo 1 Description Bridge

Photo 1

Photo 2 Description US end

Photo 2

Photo 3 Description DS end

Photo 3

Crossing 4 OF 5

Station	3+825
Street Name	Field Crossing
Photo 1 Description	Crossing

Photo 1

Photo 2 Description	US end, 800mm CSP, 600mm Steel, moderate conditions

Photo 2

Photo 3 Description DS end

Photo 3

Crossing 5 OF 5

Station 4+625
Street Name Field Crossing
Photo 1 Description Crossing

Photo 1

Photo 2 Description US end, 2-450mm HDPE, good condition

Photo 3 Description DS end

Photo 3

KEY FEATURES

Key Features 1 OF 14

Station	2+900
Photo 1 Description	Side Ditch South Side
Photo 1	
Photo 2	
Photo 3 Description	Side Ditch North Side

Photo 3

Key Features 2 OF 14

Station 3+000

Photo 1 Description appears to be another ditch running along side the drain, potential realigned portion due to culvert replacement

Photo 1

Key Features 3 OF 14

Station 3+050

Photo 1 Description flooding next to drain

Photo 1

Key Features 4 OF 14

Station 3+100

Photo 1 Description Side ditch west side

Photo 1

Photo 2 Description side ditch east side

Photo 2

Photo 3

Key Features 5 OF 14

Station	3+225
Photo 1 Description	Side Ditch North

Photo 1

Key Features 6 OF 14

Station 3+475

Photo 1 Description Side Ditch/Loenard Branch

Photo 1

Photo 2 Description unable to tell which one is a side ditch or the branch drain, 2nd photo is the assumed branch

Photo 2

Key Features 7 OF 14

Station 3+675

Photo 1 Description Low level Crossing

Photo 1

Key Features 8 OF 14

Station 3+800

Photo 1 Description Side ditch to farmers field

Photo 1

Key Features 9 OF 14

Station 4+200
Photo 1 Description Overland Swale
Photo 1

Key Features 10 OF 14

Station 4+425
Photo 1 Description Tree in Drain

Photo 1

Key Features 11 OF 14

Station 4+450
Photo 1 Description Low level Crossing
Photo 1

Key Features 12 OF 14

Station 4+475
Photo 1 Description Swale/side ditch

Photo 1

Key Features 13 OF 14

Station 4+900

Photo 1 Description low level crossing

Photo 1

Key Features 14 OF 14

Station 4+975

Photo 1 Description Swale

Photo 1

Robinson Consultants

Drainage Report

Form Name:	Drainage Report
Submitter Name:	Dakota Dumont (ddumont@rcii.com) | ddumont@rcii.com
Submission Date:	Thursday, May 12, 2022 8:25 AM
Location:	350 Palladium Dr #104, Kanata, ON K2V 1A1, Canada Thursday, May 12, 2022 8:25 AM [View Map]

DRAINAGE REPORT

Project Name	Pleasant Valley Maintenance 2
Project Number	22037
Survey Date	Thursday, May 5, 2022
Start Time	9:00 AM

MAIN CHANNEL

Main Channel 1 OF 14

Station 5+000

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 2 OF 14

Station	5+100
Photo 1 Description	Upstream
Photo 1	
Photo 2 Description	Downstream
Photo 2	

Main Channel 3 OF 14

Station	5+200
Photo 1 Description	Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 4 OF 14

Station 5+300

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 5 OF 14

Station 5+400

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 6 OF 14

Station 5+500

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 7 OF 14

Station 5+600

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 8 OF 14

Station 5+700

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 9 OF 14

Station 5+800

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 10 OF 14

Station 5+900

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 11 OF 14

Station 6+000

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 12 OF 14

Station 6+100

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 13 OF 14

Station 6+200

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

Main Channel 14 OF 14

Station 6+291

Photo 1 Description Upstream

Photo 1

Photo 2 Description Downstream

Photo 2

CROSSING

Crossing 1 OF 2

Station	5+100
Street Name	Road Allowance
Photo 1 Description	Crossing
Photo 1	
Photo 2 Description	US end, 650mm CSP, good condition
Photo 3 Description	DS end

Photo 3

Crossing 2 OF 2

Station	5+750
Street Name	Pedestrian path
Photo 1 Description	Path
Photo 1	
Photo 2 Description	US end, 1500mm x 500mm Concrete box, good condition, in need of a cleanout

Photo 2

Photo 3 Description DS end

Photo 3

KEY FEATURES

Key Features 1 OF 7

Station	5+100
Photo 1 Description	Side ditch west
Photo 1	
Photo 2	
Photo 3 Description	Side ditch east

Photo 3

Key Features 2 OF 7

Station 5+300

Photo 1 Description side ditches

Photo 1

Photo 2

Photo 3

Key Features 3 OF 7

Station	5+375
Photo 1 Description	debris - trees in drain

Photo 1

Key Features 4 OF 7

Station 5+550
Photo 1 Description low level crossing
Photo 1

Key Features 5 OF 7

Station 5+725
Photo 1 Description Tree in Drain

Photo 1

Key Features 6 OF 7

Station 5+875

Photo 1 Description debris - tree in drain

Photo 1

Photo 2

Key Features 7 OF 7

Station	6+100
Photo 1 Description	low level crossing

Photo 1

Appendix C

Comparative Analysis

Table C.1
Maintenance Recommendations – Pleasant Valley Municipal Drain

Station	*Excavation (m)*	*Recommendations*
0+000	0.32	Vegetation Management
0+012.69	0.39	Vegetation Management
0+015.12	0.39	Vegetation Management
0+042.81	0.06	Vegetation Management
0+069.75	0.02	Vegetation Management
0+083.98	-0.03	Vegetation Management
0+087.63	0.16	Vegetation Management
0+093.81	0.02	Vegetation Management
0+117.84	-0.03	Vegetation Management
0+130.52	0.10	Vegetation Management
0+135.96	-0.14	Vegetation Management
0+141.65	0.09	Vegetation Management
0+153.67	0.22	Vegetation Management
0+157.88	0.19	Vegetation Management
0+163.56	0.06	Vegetation Management
0+175.11	-0.09	Vegetation Management
0+196.59	0.21	Vegetation Management
0+208.62	0.66	Vegetation Management
0+214.84	0.66	Vegetation Management
0+226.51	0.63	Vegetation Management
0+235.73	0.27	Vegetation Management
0+245.28	-0.06	Vegetation Management
0+252.20	0.45	Vegetation Management
0+254.25	1.00	Vegetation Management
0+257.15	1.16	Vegetation Management
0+259.02	0.30	Vegetation Management
0+273.31	0.34	Vegetation Management
0+273.31	0.11	Vegetation Management
0+295.84	0.07	Vegetation Management
0+310.26	0.25	Vegetation Management
0+324.11	0.45	Vegetation Management
0+324.11	0.45	Vegetation Management
0+339.01	0.24	Vegetation Management
0+344.14	0.19	Vegetation Management
0+366.18	0.19	Vegetation Management
0+375.17	-0.12	Vegetation Management
0+383.85	-0.23	Vegetation Management
0+394.52	-0.20	Vegetation Management
0+397.88	-0.44	Vegetation Management

0+406.08	**-0.65**	**Vegetation Management**
0+421.49	**-0.37**	**Vegetation Management**
0+438.99	**-0.33**	**Vegetation Management**
0+467.28	**-0.01**	**Vegetation Management**
0+477.22	**-0.44**	**Vegetation Management**
0+491.65	**-0.06**	**Vegetation Management**
0+506.85	**-0.18**	**Vegetation Management**
0+514.97	**-0.29**	**Vegetation Management**
0+539.84	**-0.24**	**Vegetation Management**
0+568.75	**-0.25**	**Vegetation Management**
0+598.75	**-0.18**	**Vegetation Management**
0+639.10	**-0.38**	**Vegetation Management**
0+648.24	**-0.40**	**Vegetation Management**
0+654.99	**-0.19**	**Vegetation Management**
0+666.89	**-0.02**	**Vegetation Management**
0+691.18	**-0.19**	**Vegetation Management**
0+702.91	**-0.17**	**Vegetation Management**
0+706.95	**-0.46**	**Vegetation Management**
0+718.69	**-0.12**	**Vegetation Management**
0+748.85	**-0.11**	**Vegetation Management**
0+765.88	**-0.15**	**Vegetation Management**
0+787.18	**-0.13**	**Vegetation Management**
0+813.29	**0.11**	**Vegetation Management**
0+841.71	**0.46**	**Vegetation Management**
0+868.57	**0.14**	**Vegetation Management**
0+889.48	**-0.41**	**Vegetation Management**
0+939.41	**-0.31**	**Vegetation Management** **Remove Debris (Tree)**
0+968.83	**-0.24**	**Vegetation Management**
0+992.27	**-0.30**	**Vegetation Management** **Remove Debris (Tree)**
1+016.72	**-0.28**	**Vegetation Management**
1+046.99	**-0.32**	**Vegetation Management**
1+090.59	**-0.15**	**Vegetation Management**
1+124.63	**-0.10**	**Vegetation Management**
1+132.20	**-0.17**	**Vegetation Management**
1+149.93	**-0.10**	**Vegetation Management**
1+179.71	**-0.21**	**Vegetation Management**
1+230.11	**-0.26**	**Vegetation Management**
1+237.38	**-0.24**	**Vegetation Management**
1+250.96	**-0.28**	**Vegetation Management**
1+265.58	**-0.19**	**Vegetation Management**
1+295.81	**-0.22**	**Vegetation Management**

1+333.88	**-0.14**	**Vegetation Management** **Beaver Dam Cleanout**
1+363.76	**-0.22**	**Vegetation Management**
1+382.59	**-0.14**	**Vegetation Management** **Beaver Dam Cleanout**
1+435.04	**-0.11**	**Vegetation Management**
1+448.60	**-0.07**	**Vegetation Management**
1+492.62	**0.00**	**Vegetation Management**
1+527.77	**-0.05**	**Vegetation Management**
1+559.51	**-0.06**	**Vegetation Management**
1+606.76	**-0.03**	**Vegetation Management**
1+647.72	**-0.11**	**Vegetation Management**
1+655.42	**-0.28**	**Vegetation Management**
1+691.33	**-0.17**	**Vegetation Management**
1+706.96	**-0.03**	**Vegetation Management**
1+737.11	**-0.09**	**Vegetation Management**
1+764.12	**-0.24**	**Vegetation Management**
1+797.52	**-0.18**	**Vegetation Management**
1+827.74	**-0.29**	**Vegetation Management**
1+845.16	**-0.12**	**Vegetation Management**
1+875.66	**-0.24**	**Vegetation Management**
1+902.64	**-0.04**	**Vegetation Management**
1+918.87	**-0.16**	**Vegetation Management**
1+948.97	**-0.24**	**Vegetation Management**
1+975.12	**-0.20**	**Vegetation Management**
2+000.14	**-0.15**	**Vegetation Management**
2+026.18	**-0.21**	**Vegetation Management**
2+053.73	**-0.14**	**Vegetation Management**
2+081.22	**-0.16**	**Vegetation Management** **Remove Debris (Tree)**
2+100.00	**-0.20**	**Vegetation Management**
2+138.27	**-0.16**	**Vegetation Management**
2+159.26	**-0.19**	**Vegetation Management**
2+197.76	**-0.36**	**Vegetation Management** **Remove Debris (Tree)**
2+229.48	**-0.43**	**Vegetation Management**
2+236.55	**-0.31**	**Vegetation Management**
2+243.93	**-0.22**	**Vegetation Management**
2+254.74	**-0.19**	**Vegetation Management**
2+277.80	**-0.29**	**Vegetation Management**
2+302.75	**-0.31**	**Vegetation Management**
2+333.29	**-0.15**	**Vegetation Management**
2+354.28	**-0.16**	**Vegetation Management**

2+377.59	**-0.03**	**Vegetation Management**
2+402.32	**-0.14**	**Vegetation Management**
2+425.26	**-0.07**	**Vegetation Management**
2+453.90	**0.07**	**Vegetation Management**
2+478.42	**0.03**	**Vegetation Management**
2+504.90	**-0.20**	**Vegetation Management**
2+526.53	**-0.27**	**Vegetation Management**
2+552.16	**-0.15**	**Vegetation Management**
2+577.31	**-0.04**	**Vegetation Management**
2+606.00	**0.05**	**Vegetation Management**
2+623.34	**0.16**	**Vegetation Management**
2+631.54	**0.07**	**Vegetation Management**
2+654.27	**-0.08**	**Vegetation Management**
2+676.94	**0.06**	**Vegetation Management**
2+697.79	**0.03**	**Vegetation Management**
2+727.79	**-0.19**	**Vegetation Management**
2+755.96	**-0.13**	**Vegetation Management**
2+780.66	**-0.23**	**Vegetation Management**
2+826.70	**0.01**	**Vegetation Management**
2+848.23	**-0.05**	**Vegetation Management**
2+855.68	**-0.05**	**Vegetation Management**
2+860.40	**-0.06**	**Vegetation Management**
2+908.18	**-0.13**	**Vegetation Management**
2+912.41	**-0.12**	**Vegetation Management**
2+927.07	**-0.20**	**Vegetation Management**
2+955.16	**-0.05**	**Vegetation Management**
2+975.60	**-0.02**	**Vegetation Management**
3+006.29	**-0.14**	**Vegetation Management**
3+029.98	**-0.12**	**Vegetation Management**
3+054.97	**-0.01**	**Vegetation Management**
3+080.92	**-0.12**	**Vegetation Management**
3+092.26	**-0.18**	**Vegetation Management**
3+097.96	**-0.08**	**Vegetation Management**
3+109.78	**0.00**	**Vegetation Management**
3+122.11	**-0.11**	**Vegetation Management**
3+153.96	**-0.05**	**Vegetation Management**
3+181.44	**-0.02**	**Vegetation Management**
3+208.02	**-0.01**	**Vegetation Management**
3+232.44	**0.11**	**Vegetation and Bottom Cleanout**
3+255.28	**0.13**	**Vegetation and Bottom Cleanout**
3+282.07	**0.13**	**Vegetation and Bottom**

		Cleanout
3+318.99	0.15	Vegetation and Bottom Cleanout
3+351.69	0.26	Vegetation and Bottom Cleanout
3+379.85	0.23	Vegetation and Bottom Cleanout
3+406.84	0.20	Vegetation and Bottom Cleanout
3+414.11	0.15	Vegetation and Bottom Cleanout
3+420.03	0.20	Vegetation and Bottom Cleanout
3+454.38	0.32	Vegetation and Bottom Cleanout
3+479.91	0.11	Vegetation and Bottom Cleanout
3+490.19	0.03	Vegetation and Bottom Cleanout
3+495.94	0.28	Vegetation and Bottom Cleanout
3+522.13	0.21	Vegetation and Bottom Cleanout
3+547.21	0.28	Vegetation and Bottom Cleanout
3+571.19	0.27	Vegetation and Bottom Cleanout
3+592.81	0.24	Vegetation and Bottom Cleanout
3+620.74	0.10	Vegetation and Bottom Cleanout
3+647.46	0.10	Vegetation and Bottom Cleanout
3+663.10	0.00	Vegetation and Bottom Cleanout
3+668.60	0.07	Vegetation and Bottom Cleanout
3+707.21	-0.04	Vegetation Management
3+748.42	-0.04	Vegetation Management
3+780.24	-0.04	Vegetation Management
3+791.85	-0.14	Vegetation Management
3+795.48	-0.23	Vegetation Management
3+799.12	-0.34	Vegetation Management
3+809.98	-0.29	Vegetation Management
3+816.50	-0.12	Vegetation Management
3+824.78	-0.21	Vegetation Management

		Culvert Removal
3+841.85	**-0.17**	**Vegetation Management**
3+861.93	**0.45**	**Vegetation and Bottom Cleanout**
3+899.04	**0.17**	**Vegetation and Bottom Cleanout**
3+925.24	**0.27**	**Vegetation and Bottom Cleanout**
3+949.92	**0.41**	**Vegetation and Bottom Cleanout**
3+963.56	**0.56**	**Vegetation and Bottom Cleanout**
3+980.71	**0.34**	**Vegetation and Bottom Cleanout**
4+011.22	**0.49**	**Vegetation and Bottom Cleanout**
4+024.50	**0.47**	**Vegetation and Bottom Cleanout**
4+031.94	**0.48**	**Vegetation and Bottom Cleanout**
4+035.63	**0.41**	**Vegetation and Bottom Cleanout**
4+039.56	**0.58**	**Vegetation and Bottom Cleanout**
4+053.43	**0.47**	**Vegetation and Bottom Cleanout**
4+066.16	**0.47**	**Vegetation and Bottom Cleanout**
4+070.05	**0.38**	**Vegetation and Bottom Cleanout**
4+073.64	**0.42**	**Vegetation and Bottom Cleanout**
4+115.55	**0.34**	**Vegetation and Bottom Cleanout**
4+143.43	**0.45**	**Vegetation and Bottom Cleanout**
4+163.00	**0.56**	**Vegetation and Bottom Cleanout**
4+178.21	**0.73**	**Vegetation and Bottom Cleanout**
4+201.80	**0.83**	**Vegetation and Bottom Cleanout**
4+223.81	**0.71**	**Vegetation and Bottom Cleanout**
4+258.73	**0.50**	**Vegetation and Bottom Cleanout**
4+287.25	**0.42**	**Vegetation and Bottom**

		Cleanout
4+317.32	**0.27**	**Vegetation and Bottom Cleanout**
4+357.70	**0.18**	**Vegetation and Bottom Cleanout**
4+382.63	**0.12**	**Vegetation and Bottom Cleanout**
4+408.55	**0.06**	**Vegetation and Bottom Cleanout**
4+431.88	**0.14**	**Vegetation and Bottom Cleanout**
		Remove Debris (Tree)
4+456.34	**0.10**	**Vegetation and Bottom Cleanout**
4+488.56	**0.13**	**Vegetation and Bottom Cleanout**
4+515.05	**0.00**	**Vegetation and Bottom Cleanout**
4+560.13	**-0.06**	**Vegetation and Bottom Cleanout**
4+566.49	**0.15**	**Vegetation and Bottom Cleanout**
4+602.99	**-0.01**	**Vegetation Management**
4+640.59	**-0.18**	**Vegetation Management**
		Culvert Removal
4+645.32	**0.00**	**Vegetation Management**
4+648.38	**-0.04**	**Vegetation Management**
4+650.54	**0.02**	**Vegetation Management**
4+657.07	**0.01**	**Vegetation Management**
4+657.79	**-0.02**	**Vegetation Management**
4+680.36	**0.05**	**Vegetation and Bottom Cleanout**
4+704.44	**0.12**	**Vegetation and Bottom Cleanout**
4+730.97	**0.20**	**Vegetation and Bottom Cleanout**
4+755.20	**0.14**	**Vegetation and Bottom Cleanout**
4+779.56	**0.23**	**Vegetation and Bottom Cleanout**
4+805.61	**0.16**	**Vegetation and Bottom Cleanout**
4+829.29	**0.13**	**Vegetation and Bottom Cleanout**
4+860.42	**0.20**	**Vegetation and Bottom Cleanout**
4+882.15	**0.17**	**Vegetation and Bottom**

		Cleanout
4+913.08	**0.09**	**Vegetation and Bottom Cleanout**
4+956.35	**0.03**	**Vegetation and Bottom Cleanout**
5+005.41	**-0.05**	**Vegetation Management**
5+032.96	**-0.03**	**Vegetation Management**
5+055.50	**-0.02**	**Vegetation Management**
5+082.55	**0.00**	**Vegetation Management**
5+087.99	**-0.13**	**Vegetation Management**
5+089.62	**-0.04**	**Vegetation Management**
5+096.12	**-0.12**	**Vegetation Management**
5+096.83	**-0.11**	**Vegetation Management**
5+101.52	**-0.11**	**Vegetation Management**
		Culvert Removal
5+125.39	**-0.19**	**Vegetation Management**
5+149.91	**-0.30**	**Vegetation Management**
5+167.92	**0.42**	**Vegetation and Bottom Cleanout**
5+172.27	**0.52**	**Vegetation and Bottom Cleanout**
5+191.77	**0.38**	**Vegetation and Bottom Cleanout**
5+218.17	**0.29**	**Vegetation and Bottom Cleanout**
5+254.16	**0.18**	**Vegetation and Bottom Cleanout**
5+286.42	**0.06**	**Vegetation and Bottom Cleanout**
5+313.17	**0.02**	**Vegetation and Bottom Cleanout**
5+321.23	**0.08**	**Vegetation and Bottom Cleanout**
5+322.65	**-0.63**	**Vegetation and Bottom Cleanout**
5+328.78	**-0.14**	**Vegetation and Bottom Cleanout**
5+355.92	**-0.12**	**Vegetation and Bottom Cleanout**
5+379.64	**0.04**	**Vegetation and Bottom Cleanout**
		Remove Debris (Tree)
5+421.29	**-0.03**	**Vegetation and Bottom Cleanout**
5+457.20	**0.11**	**Vegetation and Bottom Cleanout**

5+488.19	**0.06**	**Vegetation and Bottom Cleanout**
5+520.68	**0.05**	**Vegetation and Bottom Cleanout**
5+556.14	**0.02**	**Vegetation and Bottom Cleanout**
5+573.09	**0.09**	**Vegetation and Bottom Cleanout**
5+598.12	**0.05**	**Vegetation and Bottom Cleanout**
5+617.00	**0.00**	**Vegetation and Bottom Cleanout**
5+628.10	**-0.04**	**Vegetation and Bottom Cleanout**
5+646.05	**-0.04**	**Vegetation and Bottom Cleanout**
5+660.35	**0.05**	**Vegetation and Bottom Cleanout**
5+676.08	**0.02**	**Vegetation and Bottom Cleanout**
5+696.79	**0.08**	**Vegetation and Bottom Cleanout**
5+721.99	**0.04**	**Vegetation and Bottom Cleanout** **Remove Debris (Tree)**
5+732.41	**0.02**	**Vegetation and Bottom Cleanout**
5+739.20	**0.13**	**Vegetation and Bottom Cleanout**
5+745.28	**-0.08**	**Vegetation and Bottom Cleanout**
5+746.53	**0.04**	**Vegetation and Bottom Cleanout**
5+751.37	**0.12**	**Vegetation and Bottom Cleanout**
5+755.94	**0.23**	**Full Cleanout**
5+779.00	**0.24**	**Full Cleanout**
5+794.26	**0.19**	**Full Cleanout**
5+822.96	**0.33**	**Full Cleanout** **Remove Debris (Tree)**
5+837.21	**0.43**	**Full Cleanout**
5+862.59	**0.51**	**Full Cleanout**
5+882.90	**0.48**	**Full Cleanout**
5+920.60	**0.40**	**Full Cleanout**
5+936.30	**0.37**	**Full Cleanout**
5+968.65	**0.37**	**Full Cleanout**

5+993.14	**0.31**	**Full Cleanout**
6+028.49	**0.34**	**Full Cleanout**
6+058.37	**0.25**	**Full Cleanout**
6+092.51	**0.36**	**Full Cleanout**
6+110.83	**0.38**	**Full Cleanout**
6+116.35	**0.34**	**Full Cleanout**
6+119.49	**0.33**	**Full Cleanout**
6+121.79	**0.46**	**Full Cleanout**
6+149.81	**0.38**	**Full Cleanout**
6+174.83	**0.42**	**Full Cleanout**
6+199.63	**0.49**	**Full Cleanout**
6+228.40	**0.47**	**Full Cleanout**
6+250.73	**1.08**	**Full Cleanout**
6+277.74	**0.92**	**Full Cleanout**
6+288.38	**0.95**	**Full Cleanout**

Appendix D

Maintenance Cost Estimate

DETAILED COST ESTIMATE
Maintenance Requirement
Pleasant Valley Municpal Drain

Robinson Consultants

Project No: 22037
Date: 27-Oct-23

Type	Item No.	Item	Unit	Cost/Unit	Quantity	Total
Construction						
Construction	**Site Preparation Activities**					
		Mobilization (maximum 2% of total construction cost)	LS	$ 1,200.00	1.00	$ 1,200.00
		Erosion and Sediment Control Plan	LS	$ 500.00	1.00	$ 500.00
		- Straw Bale Check Dam	each	$ 250.00	8.00	$ 2,000.00
		Clearing/Grubbing/Brushing (including scrub/tree removals)	ha	$ 3,500.00	3.00	$ 10,500.00
		Fence Removal and Reinstatement	m	$ 20.00	890.00	$ 17,800.00
	Excavation Activities					
		Earth Ex. - Ditch Cleanout - Incl. Spreading	m	$ 4.00	6385.00	$ 25,540.00
		Culvert Removal (no replacement)	each	$ 500.00	3.00	$ 1,500.00
		Culvert Cleanout	each	$ 500.00	1.00	$ 500.00
		Beaver dam removal	LS	$ 1,000.00	2.00	$ 2,000.00
	Reinstatement Activities					
		Rock Protection - Erosion Control	m^2	$ 27.50	105.00	$ 2,887.50
		Sub-Total - Construction Costs				**$ 64,427.50**
		Contingency Allowance - Construction				**$ 5,000.00**
		Total - Construction Costs				**$ 69,427.50**
Engineering/Administration						
		Contract Administration/Inspection	LS	$ 15,000.00	1.00	$ 15,000.00
		Tendering Assistance	LS	$ 2,500.00	1.00	$ 2,500.00
		Sub-Total - Routine Engineering				**$ 17,500.00**
Total - Engineering/Administration						**$ 17,500.00**
Other						
		Net HST	L.S	(1.76% of Costs Above)		$ 1,529.92
Total - Other Costs						**$ 1,529.92**
Sub-Total - Net Costs						**$ 88,457.42**
Total Net Costs - Section 1 (For Distribution to Properties)						**$ 88,457.42**

November 14, 2023

Verona Housing Water and Wastewater Servicing Master Plan Progress Update for Council

CANADA BEST MANAGED COMPANIES Platinum member

J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS

Background

Project Background

2020

- The Township acquired two parcels of land in the Village of Verona (A and B) with frontage on Verona Street for a mixed-housing development project.

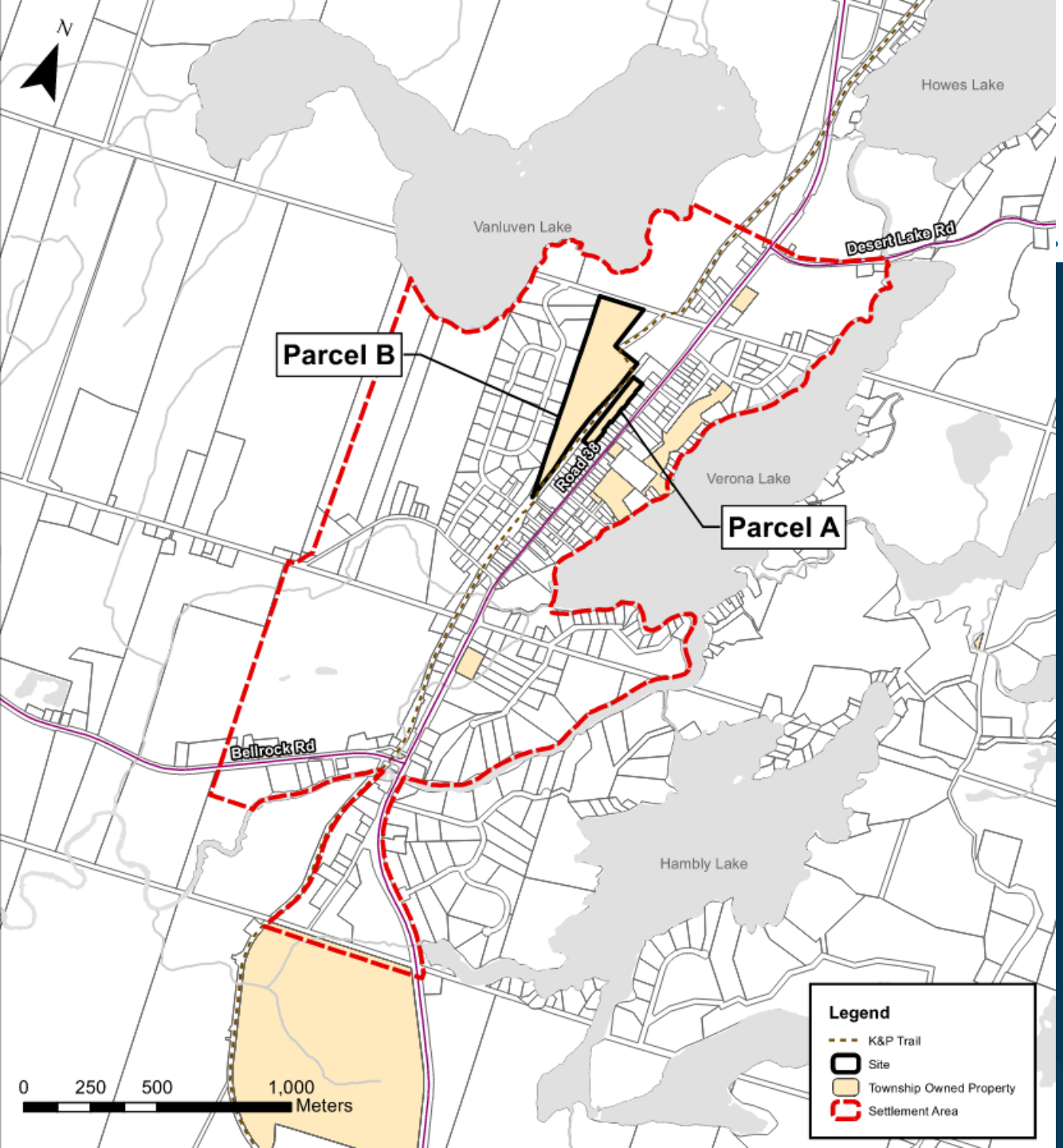
2021

- The Township Council supported the creation of a Master Plan for the affected lands. This culminated in the Verona Housing Master Plan (VHMP)

2022

- Council endorsed the VHMP. The Township retained J.L. Richards & Associates Limited (JLR) to undertake the Verona Housing Water and Wastewater Servicing Master Plan to evaluate various municipal water and wastewater infrastructure options to ensure the preferred solution(s) can service the mixed-housing development project within the Village.

Study Area Overview



<u>Parcel A</u> is located on the east side of Verona Street and is approximately 1.23 hectares (ha.)

- The parcel is undeveloped and treed, with telephone lines extending along the street frontage. It is divided by an easement for drainage infrastructure.

<u>Parcel B</u> is located on the west side of Verona Street and is approximately 8.95 ha..

- The parcel is undeveloped and treed, with its northerly portion constrained by floodplain/wetland features.

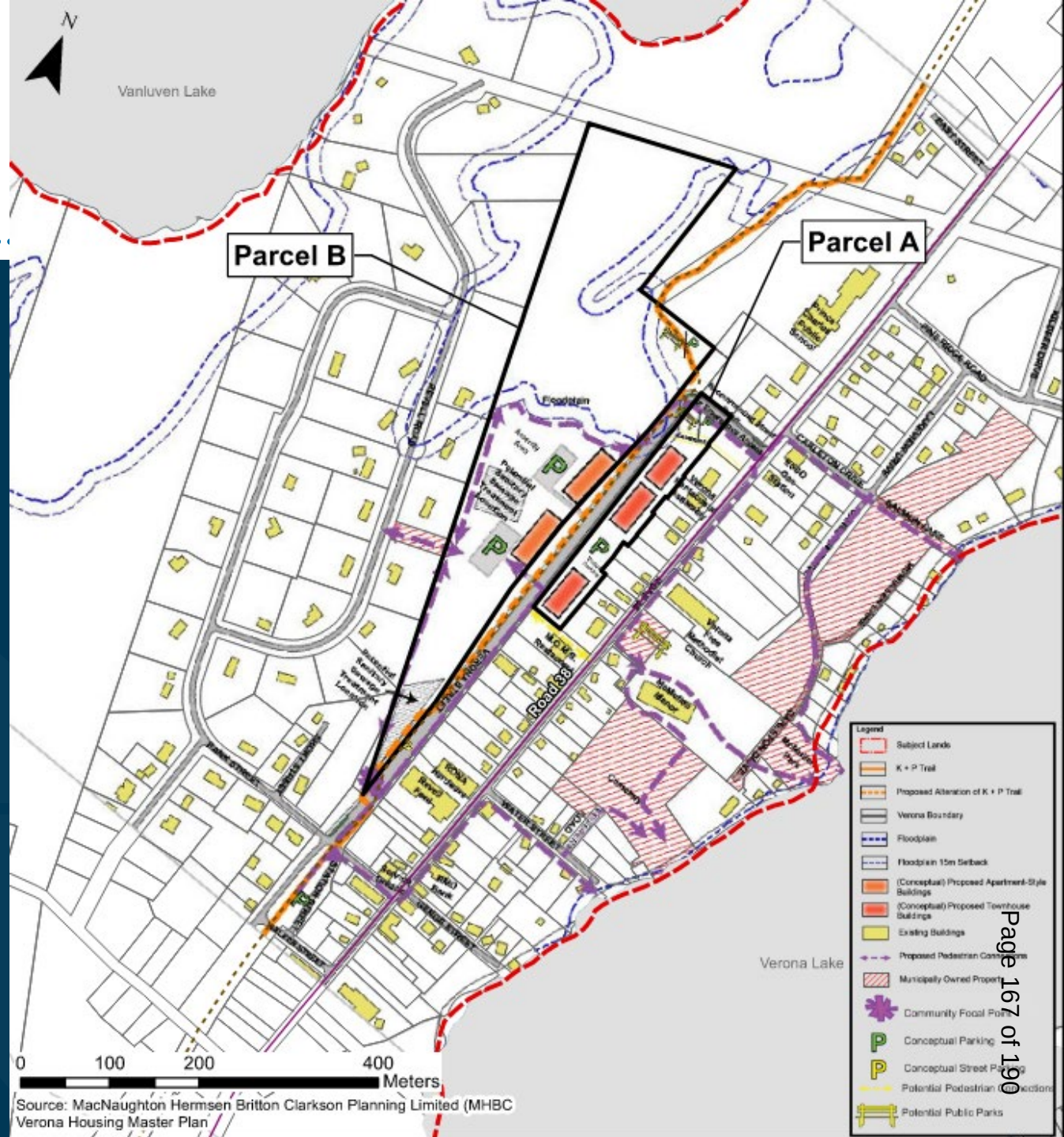
MHBC Population Projections

	BUILDING AREA (m^2)	MINIMUM UNIT YIELD (79 m^2 unit area)	MAXIMUM UNIT YIELD (51 m^2 unit area)
PARCEL A TOWNHOMES (3 Blocks)			
Total		12	18
PARCEL B APARTMENTS (2 Buildings)			
Total (2 Buildings):			
at 2 storeys each:	3,718	46	72
at 3 storeys each:	6,006	74	116
TOTAL UNIT YIELDS (PARCEL A + PARCEL B)			
2 two-storey apartments on (B):		**12 (A) + 46 (B) = 58 units**	18 (A) + 72 (B) = 90 units
2 three-storey apartments on (B):		12 (A) + 74 (B) = 86 units	**18 (A) + 116 (B) = 134 units**

Verona Housing Master Plan

Site Design

by MacNaughton Hemsen Britton Clarkson Planning Ltd.



MCEA Master Plan Phase 1 Overview

Municipal Class Environmental Assessment Master Plan Process

Class EA Process

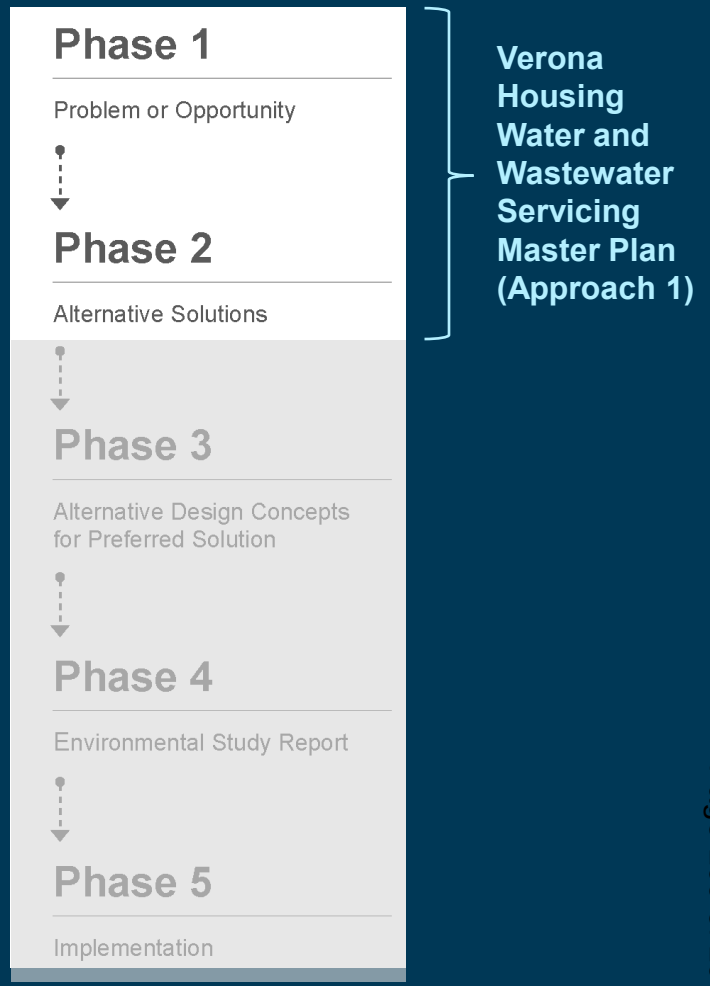
- The *Ontario Environmental Assessment (EA) Act*, R.S.O., 1990 requires that projects corresponding to municipal infrastructure projects, including roads, water, and wastewater projects follow an approved planning process set out in the Municipal Class EA document prepared by the Municipal Engineers Association (MEA).

Master Plan Process

- Master Plans are conducted under the framework of the MEA Class EA Process. They are a planning tool that identifies infrastructure and other requirements for the existing and future land use, through the application of environmental assessment principles. The current Master Plan is intended to satisfy Phases 1 and 2 of the Municipal Class EA process (i.e., *Approach 1*).

Master Plan Approach 1

- This approach concludes at the end of Phases 1 and 2. With this approach, the Master Plan is being completed at a broad level of assessment and may require further detailed assessment at the project-specific level.



Legislative Framework

Water Servicing

- Future system is considered a municipal drinking-water system.
- Applicable legislations and regulations for a municipal drinking-water system of this size:
  - *Safe Water Drinking Act, 2002*
  - *Clean Water Act, 2006*
  - *Ontario Water Resources Act,1990*
  - The Drinking-Water Systems Regulation (O.Reg. 170/03)
  - The Ontario Drinking-Water Quality Standards Regulation (O.Reg. 169/03)
  - New Requirements for Municipal Drinking Water System Owners, 2018
  - MECP Design Guidelines for Drinking-Water Systems, 2008

Wastewater Servicing

- Future system is considered a municipal wastewater system.
- Applicable legislations for a municipal drinking-water system of this size:
  - *Ontario Water Resources Act,1990*
  - B-1, Water Management Policies, Guidelines and Provincial Water Quality Objectives.
  - F-5, Levels of Treatment for Municipal and Private Sewage Treatment Works Discharging to Surface Waters
  - Guideline B-7 Incorporation of the Reasonable Use Concept into MOEE Groundwater Management Activities
  - Procedure B-7-1 Determination of Contaminant Limits and Attenuation Zones
  - MECP Design Guidelines for Sewage Works, 2008

Problem/Opportunity Statement

The Township of South Frontenac plans to develop two municipally owned land parcels in the Village of Verona for mixed housing use. There is currently no municipal water and wastewater services in the Village, and existing services are provided through private well and septic beds.

The Township is developing an approach to the municipal water and wastewater services to allow the proposed development to move forward. In developing the preferred servicing solution, there is an opportunity to consider impacts to neighboring properties, impacts to natural and social environment, infrastructure spending, operation and maintenance effort, climate change, and growth opportunities.

Alternative Solutions

Option	Title	Description
1	**Do Nothing**	Maintain existing conditions and do not provide municipal servicing to the Verona Housing project. Option included as a basis for the Master Plan evaluation.
2	**Onsite Groundwater Well & Onsite Septic System**	Drilling or reusing a groundwater well within the site. Creating a subsurface sewage disposal system on site.
3	**Onsite Surface Water Treatment & Onsite Septic System**	Take raw water from Verona Lake and convey the raw water to be treated on the site. Creating a subsurface sewage disposal system on site.
4	**Offsite Surface Water Treatment & Onsite Septic System**	Take raw water from Verona Lake to be treated in a new facility adjacent to the lake and convey the treated water to site through a watermain. Creating a subsurface sewage disposal system on site.
5	**Offsite Groundwater Well & Onsite Septic System**	Drilling a groundwater well off site and bring to site through a watermain. Creating a subsurface sewage disposal system on site.
6	**Onsite Groundwater Well & Wastewater Treatment Discharging to an Approved Surface Water Outlet**	Drilling a groundwater well within the site. Building a wastewater treatment system on site and discharging treated water to an approved surface water outlet through a wastewater conveyance system.

Consultation Summary

Consultation Overview

- Notice of Commencement issued February 14, 2023
- Notice of Public Information Centre (PIC) issued April 5, 2023

Distribution Method	Dates
Township website	March 27
Frontenac Newspaper	March 15, 22, 29, April 5 and 13
Social Media Notices	March 28, April 18
Engage South Frontenac website	March 27
Mailed to 83 Property Owners within 120 m of the site, and agency stakeholders	April 5
Digital sign at Township Office	April 11 to April 19

- Phase 1 PIC held April 19, 2023

Phase 1 Public Comments

Received public feedback from:

- One (1) email after the Notice of Commencement was delivered.
- Twenty-four (24) attendees of the April 2023 PIC.
- Four (4) completed PIC comment sheets.

Several comments not directly related to the water & wastewater Master Plan:

- Questions about the potential demographics of the housing.
- Concerns about the impacts of potential new residents on the community.
- Concerns related to McMullen Manor operated by Kingston and Frontenac Housing Corporation
- Concern about how the project was funded related to land acquisition.

Summary of Public Comments

Consultation Process

Some only learned of the PIC through word of mouth, despite advertising efforts.

Preferred a presentation with seating rather than the self-directed open house format.

Not all feedback and responses to questions were cohesive and clear.

Continue consultation with property owners.

“So far so good.”

Technical Aspects

Wanted more, simplified technical information.

Concerns about impacts on water quality and quantity in nearby lakes, aquifers, and residential wells.

Concerns about impacts from potential subsurface wastewater treatment and disposal system on nearby properties.

Want to be notified of on-site studies that may affect nearby properties.

PIC 2 Format Improvements

- Comments addressed by
  - Responding to email directly.
  - Replying to comment sheet responses in the Phase 1 report.
- Phase 2 PIC will be formatted as a presentation instead of a self-directed open house.
  - Present slideshow to attendees rather than letting attendees read boards.
  - Microphones for presenters.
  - Seats for attendees.
- Future notices will be sent to original recipients with the addition of PIC attendees and those who submitted comments.

Phase 2 Progress

Subconsultant Studies

JLR retained Cambium Inc. to conduct a desktop Natural Heritage study.

- Reviewed various provincial, municipal, and other online resources and legislations.
- Identified Species at Risk that could be found on or near the site
- Recommended further detailed investigations to support future phases of the EA process.

JLR retained Pinchin Ltd. to conduct a desktop groundwater resource assessment.

- Reviewed existing MECP water well records and pumping test data to determine the site's groundwater capacity
- Recommended further detailed investigations to support future phases of the EA process.

Consulting Quinte Conservation

Quinte Conservation was presented with the alternative design options.

They submitted their comments which addressed these topics.

- Relevant regulations and regulatory bodies
- Feasibility of alternative design options
- Potential source water threats to new groundwater wells from existing land uses
- Proximity to floodplain and future subsurface wastewater disposal systems

Key Actions

- Ensuring potentially proposed groundwater wells and subsurface wastewater treatment systems do not impact existing private groundwater wells in the area.
- Ensuring potentially proposed groundwater wells and subsurface wastewater treatment systems are not impacted by existing land uses in the area.
- Compliance with source water protection regulations.
- Adequately addressing all concerns raised by the public.

Project Schedule Update

- **PIC No. 2: January 2024**
- Planned Master Plan completion: November 2023
- **Expected Master Plan completion: February 2024**
- Reasons for delay:
  - Supporting study delayed over the summer
  - Study delay led to consultation delay
  - Coordination with regulatory agencies delayed over the summer

Minutes of Council
November, 7, 2023

Township of South Frontenac
Council Meeting Minutes

Meeting # 32

Time:7:00 p.m.
Location: Council Chambers / Virtual via Zoom

Present: Charlene Godfrey, Doug Morey (arrived at 8:52 p.m.), Steve Pegrum, Norm Roberts, Ron Sleeth, Scott Trueman, Mayor Ron Vandewal

Staff: Louise Fragnito - Chief Administrative Officer, James Thompson - Clerk, Michelle Hannah - Deputy Clerk, Brad Wright - Director of Development Services, Alex Bennett-Acting Director of Fire and Emergency Services, Kyle Bolton - Director of Public Services, Shelley Stedall - Director of Corporate Services and Treasurer, Troy Dunlop - Manager of Engineering & Capital Projects, Christine Woods - Senior Planner, Brian Kirk - Manager of Operations & Fleet, Jan Minaker - Manager of Human Resources.

1 Call to Order

a) Resolution

Resolution No. 2023:32:01
Moved by Councillor Pegrum
Seconded by Councillor Godfrey
That the Council meeting of November 7, 2023 be called to order at 7:00 p.m.
Carried

2 Declaration of pecuniary interest and the general nature thereof

a) There were none declared.

3 Approval of Agenda

a) Resolution

Resolution No. 2023:32:02
Moved by Councillor Roberts
Seconded by Councillor Pegrum
That the agenda be approved, as presented.
Carried

4 Scheduled Closed Session

a) There was none.

5 Recess

a) There was none.

6 Public Meeting

a) There was none.

7 Delegations

a) Shannon Lem from Frontenac Arch Biosphere Network was present to speak to Council regarding the Frontenac Arch Biosphere Network Budget.

8 Briefings

a) There were none.

9 Approval of Minutes

a) Resolution

Resolution No. 2023:32:03
Moved by Councillor Pegrum
Seconded by Councillor Trueman
That the minutes of the October 13, 2023 Special Council meeting and the minutes of the October 17, 2023 Council meeting be approved.

Carried

10 Reports Requiring Action

a) **Climate Change Action Plan RFP**

Resolution No. 2023:32:04
Moved by Councillor Pegrum
Seconded by Councillor Trueman
That Council support awarding the Climate Change Action Plan consulting services contract in the amount of $97,394.50 including non-rebatable HST to Strategy Corp, and

That the required additional funding for the project be funded from the Climate Change Reserve

Defeated

b) i) **2024 Long Range Financial Plan**

ii) **2024 Budget Direction**

Shelley Stedall, Director of Corporate Services and Treasurer presented to Council regarding the 2024 Long Range Financial Plan.

Resolution No. 2023:32:05
Moved by Councillor Pegrum
Seconded by Deputy Mayor Sleeth
That Council endorse the budget direction recommendations within this report and any further direction received from Council to inform the development of the 2024 Operating and Capital Budgets.

Carried

c) **CAO Performance Appraisal Work Group**

Resolution No. 2023:32:06
Moved by Deputy Mayor Sleeth
Seconded by Councillor Trueman
ThatCouncil appoint Mayor Vandewal, Councillor Roberts and Councillor Pegrum to a CAO Performance Review Work Group for 2023.

Carried

d) **Tandem Plow Truck Replacements**

Resolution No. 2023:32:07
Moved by Councillor Roberts
Seconded by Councillor Godfrey
That Council authorize the Public Services Department to enter into an agreement with Rush Truck Centres for the purchase of a tandem axle plow with an upset limit of $430,000;

That Council authorize the Public Services Department to pre-order two (2) tandem axle plow trucks for the 2024 budget; and

That Council authorize one of the replacements to be converted to a Viking Roller-Pro body equipped with plow, sander, water tank, and float deck with an upset limit of $625,000.

That the above listed purchases be funded from the Public Services Equipment Reserve.

Carried

11 Advisory Committee Reports or Minutes

a)

There were none.

12 Reports Requiring Approval of By-laws

a) **Zoning By-law Amendment Application**
PL-ZBA-2023-0099, Trousdale Enterprises Inc./Boulevard Group, 4231 and 4143 Perth Road

Resolution No. 2023:32:08
Moved by Councillor Pegrum
Seconded by Deputy Mayor Sleeth
ThatBy-law 2023-87 to amend the zoning on lands known as 4231 and 4143 Perth Road, Part 1 Plan 13R7751, Part 1 Plan 13R9573, Part Lots 19 And 20 Concession 3, District of Storrington, Township of South Frontenac be given first and second reading.

Carried

Resolution No. 2023:32:09
Moved by Councillor Pegrum
Seconded by Councillor Godfrey
That By-law 2023-87 be given third reading, signed and sealed.

Carried

b) **Zoning By-law Amendment Application Z-21-21**
2311215 Ontario Limited and 2311217 Ontario Limited, 4153 and 4155 Road 38

Resolution No. 2023:32:10
Moved by Deputy Mayor Sleeth
Seconded by Councillor Roberts
ThatBy-law 2023-88 being a By-law to amend Zoning By-law 2003-75, as amended, to amend the Rural Industrial – Special Provision (RI-1-H and RI-1) zone on lands described as4153 and 4155 Road 38, Parts 1, 2 and 3 on Plan 13R17886, Part of Lot 7, Concession 2, District of Portlandbe given first and second reading.

Carried

Resolution No. 2023:32:11

Moved by Councillor Roberts
Seconded by Councillor Pegrum
ThatBy-law 2023-88 be given third reading, signed and sealed.

Carried

c) **Appointment of Chief Building Official and Deputy Chief Building Official**

Resolution No. 2023:32:12
Moved by Councillor Pegrum
Seconded by Councillor Trueman
That By-law 2023-89 being a By-law to appoint a Chief Building Official be given first and second reading.

Carried

Resolution No. 2023:32:13
Moved by Councillor Trueman
Seconded by Deputy Mayor Sleeth
That By-law 2023-89 be given third reading, signed and sealed.

Carried

Resolution No. 2023:32:14
Moved by Deputy Mayor Sleeth
Seconded by Councillor Godfrey
That By-law 2023-90 being a By-law to appoint a Deputy Chief Building Official be given first and second reading.

Carried

Resolution No. 2023:32:15
Moved by Councillor Godfrey
Seconded by Councillor Roberts
That By-law 2023-90 be given third reading, signed and sealed.

Carried

d) **Delegation of Authority to Staff – Zoning By-law Amendments for Holding Symbols**

Resolution No. 2023:32:16
Moved by Councillor Trueman
Seconded by Councillor Roberts
That By-law 2023-91 delegating authority to staff to approve zoning by-law amendments for the removal of holding symbols and the removal of lots from holding overlays be given first and second reading.

Carried

Resolution No. 2023:32:17
Moved by Councillor Godfrey
Seconded by Deputy Mayor Sleeth
That By-law 2023-91 be given third reading, signed and sealed.

Carried

e) **Update to Council Procedure By-law to add Delegated Authority – Zoning By-law Amendments for Holding Symbols**

Resolution No. 2023:32:18
Moved by Councillor Trueman
Seconded by Deputy Mayor Sleeth

That Council direct staff to hold a public meeting on December 19, 2023 regarding proposed amendments to the Council Procedure By-law in accordance with the Notice Provisions By-Law 2016-73.

Carried

13 Reports for Information

a) Communications Activities and Results Jan 1 – Jun 30, 2023

b) Fire Services – Department Update

14 Committee of the Whole

a)

There was none.

15 Information Items

a) Correspondence from Quinte Conservation RE: Exploring changes to streamline the permit-by-rule framework

16 Notice of Motions

a) Deputy Mayor Sleeth served a notice of motion that the Draft Official Plan be modified to allow irregular shape and size parcels of land within hamlet boundaries, and that these parcels of land be permitted for development provided criteria such as water supply and environmental concerns are met.

17 Rise and Report regarding County Council and External Boards

a) County Council

Mayor Vandewal advised that the County Council budget has been set for 2024. Mayor Vandewal noted that the Municipal Service Corporation was approved to manage Communal Servicing.

Mayor Vandewal stated that the he and the CAO, Frontenac County are scheduled to appear as a delegation at the MPPs breakfast to speak about Communal Servicing and the impact of the funding stream to be separated between rural to urban municipalities.

b) Police Services Board

Councillor Pegrum advised that the next meeting of the Police Services Board has been postponed from November to December, and interviews for a new Detachment Commander are being conducted on November 23, 24 2023.

c) Cataraqui Conservation

Deputy Mayor Sleeth advised that there was a joint meeting held on November 1st regarding source water protection discussions. He stated that the regular board meeting there were discussions about the Strategic Plan for the organization and the move into their new offices at the Frontenac County Administrative Office building.

d) Quinte Conservation

Councillor Roberts advised that Quinte Conservation is currently focused on budget and have issued a survey to the public.

e) Rideau Valley Conservation Authority

Councillor Godfrey advised the board met on November 2, 2023 and discussed a six year natural hazards mapping strategy, fleet emissions reductions guidelines and the proposed preliminary draft budget.

18 Announcements/Statements by Councillors

a) There were none.

19 Closed Session (if requested)

a) Resolution

Resolution No. 2023:32:19
Moved by Councillor Pegrum
Seconded by Councillor Trueman
ThatCouncil resolve itself into the Committee of the Whole "Closed Meeting" to consider the following items:
a) Approval of the October 17, 2023 Committee of the Whole "Closed Meeting" minutes.
b) Personal matters about an identifiable individual, including municipal or local board employees.

Carried

b) Councillor Morey joined the meeting at 8:52 p.m.

Council recessed at 8:52 p.m. to 8:56 p.m.

Note: Council consented to give consideration to an additional closed meeting item regarding - a proposed or pending acquisition or disposition of land by the municipality or local board - village of Sydenham.

c) Resolution

Resolution No. 2023:32:20
Moved by Councillor Trueman
Seconded by Councillor Godfrey
That Council rise from the Committee of the Whole "Closed Meeting" without reporting.

Carried

20 Confirmatory By-law

a) Resolution

Resolution No. 2023:32:21
Moved by Councillor Morey
Seconded by Councillor Trueman
That By-law 2023-93, being a By-law to confirm generally all actions and proceedings of the Council of the Township of South Frontenac, be given first and second reading.

Carried

Resolution No. 2023:32:22
Moved by Councillor Roberts
Seconded by Councillor Trueman
That By-law 2023-93, be given third reading, signed and sealed.

Carried

21 Adjournment

a) Resolution

Resolution No. 2023:32:23
Moved by Deputy Mayor Sleeth
Seconded by Councillor Pegrum
That the Council meeting of November 7, 2023 be adjourned at 9:25 p.m.

Carried

Ron Vandewal, Mayor

James Thompson, Clerk

TOWNSHIP OF SOUTH FRONTENAC
BY-LAW 2023-94

A BY-LAW TO CONFIRM GENERALLY ALL ACTIONS AND PROCEEDINGS OF THE SPECIAL COUNCIL MEETING OF THE CORPORATION OF THE TOWNSHIP OF SOUTH FRONTENAC ON NOVEMBER 14, 2023

Whereas Section 8 of the *Municipal Act*, S.O. 2001 c. 25 and amendments thereto provides that a municipality has the capacity, rights powers and privileges of a natural person for the purpose of exercising its authority under the *Municipal Act* of any other *Act;* and;

Whereas Subsection 2 of Section 11 of the *Municipal Act* S.O. 2001, c. 25 and amendments thereto provides that a lower-tier municipality and an upper-tier municipality may pass by-laws respecting matters within the spheres of the jurisdiction described in the Table to Subsection 2, subject to certain provisions, and;

Whereas Section 5 of the *Municipal Act*, S.O 2001 c. 25 and amendments thereto provides that a municipal power, including a municipality's capacity, rights, powers and privileges under Section 8 shall be exercised by its council and by by-law unless the municipality is specifically authorized to do otherwise, and

Whereas the Council of the Township of South Frontenac deems it expedient to confirm its actions and proceedings;

NOW THEREFORE BE IT RESOLVED THAT THE COUNCIL CORPORATION OF THE TOWNSHIP OF SOUTH FRONTENAC, HEREBY ENACTS AS FOLLOWS:

1. The all actions and proceedings of the Council of the Corporation of the Township of South Frontenac taken at its regular meeting held on November 14, 2023 be confirmed as actions for which the municipality has the capacity, rights, powers and privileges of a natural person.

2. That all actions and proceedings of the Council of the Corporation of the Township of South Frontenac held November 14, 2023 be confirmed as being matters within the spheres of jurisdiction described in Subsection 2 of Section 11 of the *Municipal Act*, S.O. 2001, c.25 and amendments thereto.

3. That all actions and proceedings of the Council of the Corporation of the Township of South Frontenac taken at its regular meeting held on November 14, 2023 except those taken by by-law and those required by bylaw to be done by resolution are hereby sanctioned, ratified and confirmed as though set out within and forming part of this by-law.

4. Execution by the Mayor and the Clerk of all Deeds, Instruments and other Documents necessary to give effect to any such Resolution, Motion or other action and the affixing of the Corporate Seal to any such Deed, Instruments or other Documents is hereby authorized and confirmed.

5. This By-law shall come into force and take effect on the date of its passage.

Read a first and second time this 14 day of November 2023.

Read a third time and finally passed this 14 day of November 2023.

THE CORPORATION OF THE TOWNSHIP OF SOUTH FRONTENAC

_____
Ron Vandewal, Mayor

_____
James Thompson, Clerk