**CORPORATION OF THE TOWNSHIP OF EAST ZORRA-TAVISTOCK COUNCIL**
**2018 - 2022**

# AGENDA

**for the Meeting to be held on Wednesday April 6, 2022 at the**
**Innerkip Community Centre, 695566 17th Line, Innerkip, Ontario, at 9:00 a.m.**

**PLEASE NOTE:** As Social Distancing must be maintained, should you wish to attend the meeting, please contact Clerk Will Jaques via email (wjaques@ezt.ca) or telephone (519-462-2697 ext.7825) in advance to confirm your attendance can be accommodated. Mandatory face coverings shall be in place.

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1. Call to order and opening remarks
2. Approve Agenda
3. Disclosure of Pecuniary Interest and General Nature Thereof
4. General Business:
   a) Confirm March 16, 2022 Council Meeting Minutes
   b) UTRCA – March 2022 FYI
   c) Oxford County – TVDSB Rural Education Task Force Draft Report Resolution
   d) Oxford County – 2021 Annual Waste Management Reports
   e) Oxford County – Transportation Network Service Delivery Review
   f) Oxford County – Water & Wastewater Service Delivery Review
   g) Oxford County – Consent Application B21-109-2 (Nemeth)

5. Delegations & Appointments:
   a) 9:15 a.m. – Court of Revision – Parker Drain 2022
   b) 9:30 a.m. – MVA Application A-2-2022 (Thoms)

6. Reports of Municipal Officers and Committees:
   a) Conferences and Seminars
   b) County Council – Updates & Questions
   c) Staff Reports – Updates & Questions
   d) March 16, 2022 PSB Minutes
   e) March 28, 2022 TDRFB Minutes
   f) Staff Report - #CBO2022 – 05 re: Building, Development & Drainage Reporting
   g) Staff Report - #PW2022 – 05 re: Public Works Reporting
   h) Staff Report - #FC2022 – 04 re: Fire Department Reporting
   i) Staff Report - #BCO2022 – 03 re: By-law Compliance Reporting
   j) Staff Report - #CSM2022 – 04 re: Corporate Services Reporting
   k) Staff Report - #CAO2022 – 03 re: CAO-Treasury Reporting
   l) Staff Report - #CAO2022 – 04 re: Interim Parks & Recreation Service Delivery
   m) Staff Report - #CAO2022 – 05 re: Updated 2022 Proposed Draft Budgets

7. By-laws:
   a) By-law #2022-11 – ZBA Application ZN2-21-09-10 (Lazenby/Shuster)
   b) By-law #2022-07 – Parker Drain 2022 (Provisional By-law)

8. Other and Unfinished Business:
9. Closed to the Public Session *as authorized under s. 239 of the Municipal Act*:
10. Confirming By-law
11. Adjourn

Placeholder Page for Agenda Item 1 –
Call to order and opening remarks

Use this page to note any opening remarks you wish to make.

2.

Placeholder Page for Agenda Item 2 – Approval of the Agenda

Use this page to note items you would like added to the agenda.

3.

Placeholder Page for Agenda Item 3 – Disclosure of Pecuniary Interest

Use this page to note any Pecuniary Interests you wish to declare at the meeting.

The Council of the Township of East Zorra-Tavistock met at the Innerkip Community Centre, Innerkip, Ontario at 7:00 p.m. on Wednesday March 16, 2022.

Members Present: Mayor Don MCKAY, Deputy Mayor Don EDMISTON and Councillors Matthew GILLESPIE, Margaret LUPTON, Phil SCHAEFER and Jeremy SMITH.

Members Absent: Councillor Scott RUDY.

Staff Present: CAO-Treasurer Karen DePrest, Clerk Will Jaques, CBO John Scherer, Public Works Manager Tom Lightfoot, Fire Chief Scott Alexander, Deputy Treasurer Sherry Matheson, Deputy Treasurer Stephanie Mitchell, and Human Resources/ Safety Coordinator Jennifer Albrecht.

Mayor MCKAY welcomed everyone to the meeting. A reminder of the upcoming Innerkip Lions Club Good Friday Fish Fry, to be held April 15, 2022, was provided.

Approve Agenda

1. Moved by: Jeremy SMITH
Seconded by: Margaret LUPTON
Resolved that Council approve the agenda for the March 16, 2022 meeting, as printed and circulated.

*CARRIED.*

PECUNIARY INTERESTS:

- N/A

Confirm Minutes - Council

2. Moved by: Don EDMISTON
Seconded by: Phil SCHAEFER
Resolved that Council confirm the Minutes of the March 2, 2022 Council Meeting, as printed and circulated.

*CARRIED.*

Correspondence & Reports – No Resolutions:

- Oxford County – Proposed Single Use Plastics Prohibitions Regulations
- Oxford County – Water-Wastewater Master Plan Memo & Notice
- Oxford County – Transportation Master Plan Memo & Notice
- ROEDC – 2021 Year in Review
- February 28, 2022 TDRFB Minutes

Correspondence & Reports – Resolutions Following:

Innerkip Easter Egg Hunt 2022

3. Moved by: Matthew GILLESPIE
Seconded by: Jeremy SMITH
Resolved that Council approve the request from the organizers of the Innerkip Community Easter Egg Hunt to have the Township's insurance coverage extended to the volunteers involved in the event, namely:

- Alicia McIntyre
- Paul McIntyre
- Lindsay Batte
- Ryan Batte
- Rachael Murphy
- Evan Murphy
- Jacqueline Singleton
- Mike Singleton

*CARRIED.*

Oxford County-Proposed Single Use Plastics Prohibitions Regulations

Council reviewed the correspondence from the County of Oxford regarding the proposed single use plastics prohibitions regulations.

Oxford County-Water-Wastewater Master Plan Memo & Notice

Council reviewed the correspondence from the County of Oxford regarding the Water-Wastewater Master Plan.

Oxford County–Transportation Master Plan Memo & Notice

Council reviewed the correspondence from the County of Oxford regarding the Transportation Master Plan.

2022 Budget Public Meeting - Open

4. Moved by: Phil SCHAEFER
Seconded by: Matthew GILLESPIE
Resolved that Council does now adjourn to a Public Meeting for consideration of the 2022 Budget, at 7:23 p.m.

*CARRIED.*

CAO Karen DePrest highlighted the proposed 2022 budget. Members of Council items related to the proposed 2022 budget. No members of the public present spoke regarding the proposed 2022 budget.

Adjourn Budget Public Meeting - Council Reconvene

5. Moved by: Don EDMISTON
Seconded by: Jeremy SMITH
Resolved that the Public Meeting does now adjourn and Council reconvenes at 7:39 p.m.

*CARRIED.*

At 7:40 p.m., Don Ford, David Simpson, Paul Eybergen and Tony Lotimer from the County of Oxford made a presentation to Council regarding the new well project, in Tavistock.

ROEDC – 2021 Year in Review

Council reviewed the 2021 Year in Review correspondence from the Rural Oxford Economic Development Corporation (ROEDC).

February 28, 2022 TDRFB Minutes

Council reviewed the February 28, 2022 Tavistock & District Recreation and Facilities Board (TDRFB) Minutes.

Staff Report #HRSC2022 – 02 re: COVID-19 Vaccination Policy

Human Resources/ Safety Coordinator Jennifer Albrecht presented her report regarding rescinding Policy #2.31 COVID-19 Vaccination Policy.

6. Moved by: Matthew GILLESPIE
Seconded by: Don EDMISTON
Resolved that Council rescinds Township Policy #2.31 - COVID-19 Vaccination Policy, effective March 21, 2022.

*CARRIED.*

Staff Report #CBO2022 – 04 re: Revisions to Township Building By-law

CBO John Scherer presented his report to Council regarding various revisions to the Township Building By-law #2012-07.

7. Moved by: Margaret LUPTON
Seconded by: Jeremy SMITH
Resolved that Council approve the proposed revisions to By-law #2012-07, as amended, as contained in Staff Report #CBO2022-04.

*CARRIED.*

Staff Report #PW2022 – 04 re: Zorra Bridge 0280 - Rehab. Tender Results

Public Works Manager Tom Lightfoot presented his report to Council regarding the recent tender results for rehabilitation of Zorra Bridge 0280.

8. Moved by: Matthew GILLESPIE
Seconded by: Phil SCHAEFER
Resolved that Council accept the tender submitted by Theo Vandenberk Construction Inc. in the amount of $225,570.60 including HST for the rehabilitation of Zorra bridge 0280, as described in Zorra tender #2022-05.

*CARRIED.*

By-law:

1st & 2nd Reading

9. Moved by: Jeremy SMITH
Seconded by: Phil SCHAEFER
Resolved that the following by-law be read a first and second time:

- 2022-09 – Development Charges By-law (Amend Schedule "B")

*CARRIED.*

By-law:

3rd & Final Reading

10. Moved by: Don EDMISTON
Seconded by: Matthew GILLESPIE
Resolved that the following by-law be read a third and final time:

- 2022-09 – Development Charges By-law (Amend Schedule "B")

*CARRIED.*

Other and Unfinished Business

Councillor Matthew GILLESPIE reviewed the March 16, 2022, Police Services Board meeting with Council.

Confirming By-law

11. Moved by: Jeremy SMITH
Seconded by: Phil SCHAEFER
Resolved that By-law #2022-10 being a by-law to confirm the proceedings of Council held Wednesday March 16, 2022, be read a first, second and third time this 16th day of March, 2022;

And further that the Mayor and Clerk are hereby authorized to sign the same and affix the corporate seal thereto.

*CARRIED.*

Adjourn

12. Moved by: Margaret LUPTON
Seconded by: Matthew GILLESPIE
Resolved that Council does now adjourn at 8:28 p.m.

*CARRIED.*

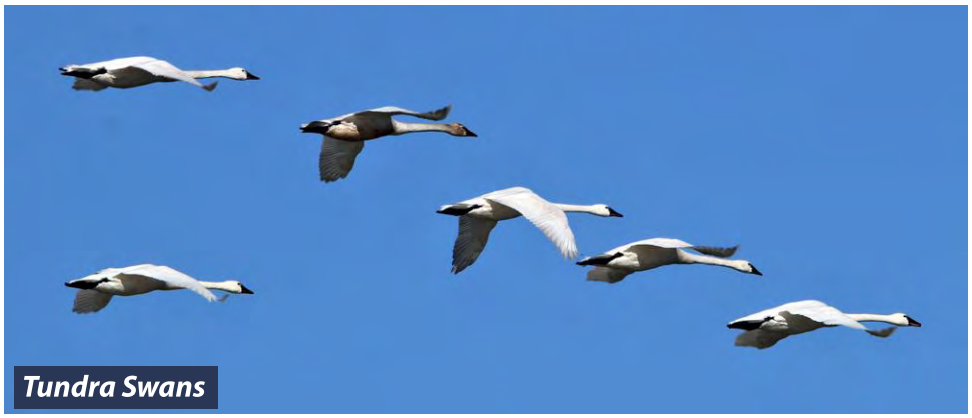
Will Jaques, Clerk

Don McKay, Mayor

UPPER THAMES RIVER CONSERVATION AUTHORITY

fyi

March 2022



Tundra Swans

www.thamesriver.on.ca Twitter @UTRCAmarketing Facebook @UpperThamesRiverConservationAuthority

## ... and then there were four!

The Tree Power Program concept continues to grow. In 2022, the UTRCA will partner on four different Tree Power Programs. Partners and length of participation are as follows: London Hydro (12 years), Festival Hydro (Stratford) (two years), Perth South (two years), and the Town of St. Marys (first year). The two hydro programs will take place this spring and the two municipal programs will be in the fall.


*UTRCA's Karen Pugh and Emily Chandler showcase Festival Hydro Tree Power Trees in 2021*

The Festival Hydro program website opens for orders on March 7, at 10 am. Festival Hydro customers can order a tree by visiting www.festivaltreepower.ca. Eight native species ranging in height from 1.5 to 2.0 metres will be available. There will be a total of 300 potted trees. Trees are priced at $20 or $25 each.

The London Hydro program website opens for orders on March 8, at 10 am. London Hydro customers can order a tree by visiting www.treepowerprogram.ca. Seven native species ranging in height from 1.2 to 2.0 metres in pots, will be available. There will be a total of 600 potted trees. Trees are priced at $20 or $25 each.

It is expected that demand for trees through these programs will be very strong. History has shown that many species will sell out in hours. Purchasers will be able to pick up their trees in early April.

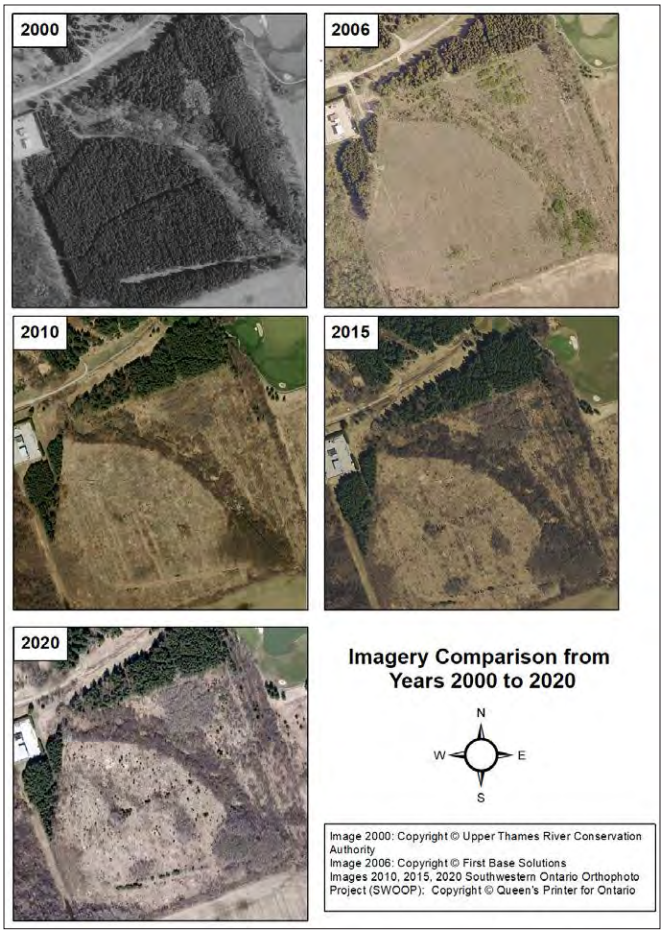
Stayed tuned this fall for further information on the Perth South and Town of St. Marys Tree Power Programs.

**Contact: John Enright, Forester**

## Picture This!

The UTRCA has received 2020 imagery (aerial photography) for the Upper Thames River watershed (see SW Ontario Orthoimagery Project article https://thamesriver.on.ca/wp-content/uploads//Publications/FYI_November-2019.pdf for more information).

Aerial photography has been the core product for viewing the UTRCA watershed landscape since the 1940s. This photography was first digitally produced and shaped to the Earth's surface (ortho-rectified) in the year 2000. This allowed staff to view and measure features on the image on a computer rather than on a printed photo. Since then, digital photography has been collected in 2006, 2010, 2015 and, most recently, 2020.




*Imagery comparison of a former plantation within Fanshawe CA from 2000 to 2020.*

UTRCA staff use the imagery to view what is on the landscape to assist them in reviewing planning and regulations requests, measuring land cover change, planning conservation services projects, and answering many other day to day questions. Other information, referred to as map layers or features, are placed over the imagery to identify:

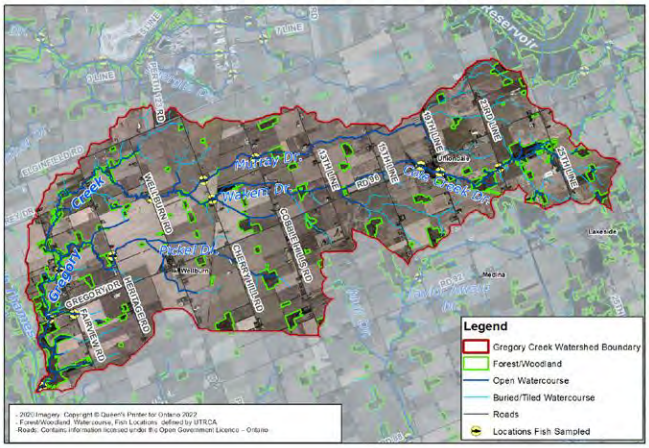
- points (objects or known locations such as hydro poles or sampling locations),
- lines (linear features such as watercourses or roads), and
- polygons (features that have an area such as such as woodlands or UTRCA regulation areas).

The map below shows these layers.

Geographical Information Systems (GIS) staff has the task of updating these mapping layers. Staff visually inspects the imagery and compares it to previously mapped features to:

- check if features still exist,
- define features that have lost or gained area, and
- ensure the location of features has not changed.

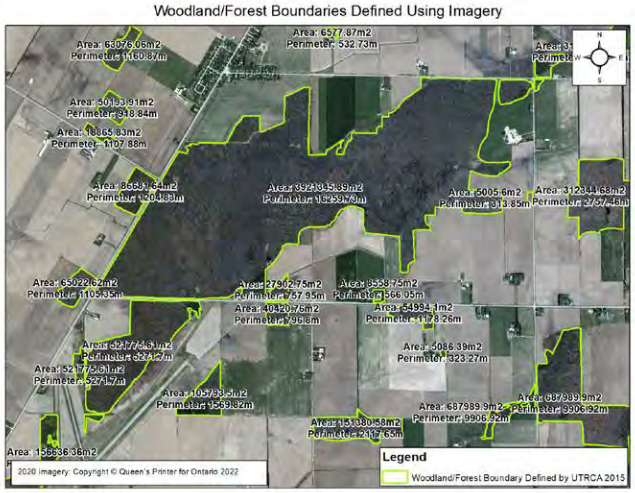
**GIS Layers Over Aerial Photography**




Mapping and updating watercourse locations is a critical task. Watercourse locations change slightly over time due to erosion and natural processes. As well, watercourses (drains) can be newly created, altered, or closed over. The UTRCA develops hazard mapping that identifies the location of hazard areas to support the regulation made under the Conservation Authorities Act Regulation (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses, Ontario Regulation 157/06). This mapping is an important communication tool to illustrate areas affected by flood hazards, erosion hazards, wetlands, and the area of interference surrounding wetlands.

Woodlands (forests), meadows, thickets, wetlands, and water make up the mapped natural heritage features. Changes to these features are recorded, such as new tree planting sites and woodlands that have succeeded from thickets. Fallow fields that have naturally transitioned to meadows are also recorded. These successional changes are very dynamic. Gains in one natural feature are often at the expense of another. Conversion (clearcutting) of natural features to crops or urban land uses is also measured and recorded.

Maintaining the mapped features in a GIS allows information about the feature to be stored by its shape and size. Each feature's area and length are recorded, allowing it to be compared to historical data. Other information about the feature can also be recorded (e.g., name or type of feature).




Mapping these types of changes through aerial photography assists UTRCA staff in measuring and monitoring the health of the subwatersheds and watershed as a whole. The UTRCA Watershed Report Cards (https://thamesriver.on.ca/watershed-health/watershed-report-cards/) report on changes in watershed health indicators every five years. Much of the information in the report cards is based on data derived from the imagery and stored in the GIS. The upcoming 2022 watershed report cards will be based on data from the 2015 imagery.

**Contact: Terry Chapman, GIS Specialist**

## Incorporating Green Infrastructure into Municipal Drainage Systems

UTRCA staff have been working with partners to **incorporate Green Infrastructure into municipal drainage systems**, in a project in the Township of Lucan Biddulph.

The Blake municipal drain was constructed in 1982 and drains approximately 305 hectares (755 acres) of rolling farmland. The drain outlets into Medway Creek near Elginfield, north of London.

Recent upgrades to the drain included the incorporation of erosion control features, with the construction of more than 25 water and sediment control basins along the drain. These structures utilize the natural environment and engineered systems to manage water. The small earthen dams hold water on the land for up to 24 hours, releasing it slowly through surface and blind inlets into the tile drainage system.

The Blake municipal drain project is an example of Green Infrastructure being used in a rural context to address rising concerns about water quantity on farmland. It is also a great example of area landowners taking a proactive, watershed approach and sharing project costs and responsibilities to improve the ecosystem.

The UTRCA's partners on this project include St. Clair Conservation Authority, Dietrich Commodities Ltd, Spriet Associates Engineers and Architects, A.G. Hayter Contracting Ltd, and the Township of Lucan Biddulph.

**Contact: Brad Glasman, Manager, Integrated Watershed Management**

## Shared Waters Approach: Update

***The Thames River (Deshkan Ziibi) Shared Waters Approach to Water Quantity and Quality (December 2019)*** describes the status of issues/state of the environment in the Thames River watershed, with a focus on water quantity and quality. The document outlines a series of recommendations to address information gaps, monitoring needs, opportunities to engage and outreach, and implementation of various solutions for water quality and quantity through best practices, technology solutions, and alternative approaches by the various stakeholders.

The Shared Waters Approach (SWA) was completed by the Thames River Clear Water Revival (TRCWR) in 2019. This long-term, collaborative initiative is committed to a healthy and vital Thames River, which will ultimately benefit Lake St. Clair and Lake Erie. The TRCWR brings together Indigenous peoples, all levels of government, conservation authorities, and the local community to achieve this common goal.

ThamesRiver
CLEAR WATER REVIVAL

The SWA contains significant input from four of the eight distinct First Nations whose traditional territory overlaps the Thames River watershed. The document highlights the positive participation and sharing of traditional ecological knowledge within this framework, and the valued participation of the First Nations in implementation.

The Upper Thames River and Lower Thames Valley Conservation Authorities regard the SWA as the foundation for the watershed management strategy each CA is developing, in accordance with the new Conservation Authorities Act regulations.

With the completion of the SWA, work is now underway to develop an engagement, communication, and implementation strategy for the document's recommendations, as well as to broaden participation in the delivery of the recommendations. Each partner in the TRCWR Steering Committee is responsible for ensuring the strategy includes activities that will achieve their SWA recommendations.

The TRCWR is establishing working groups to focus on recommendations related to municipalities, agriculture, First Nations, and natural heritage. These working groups will contribute to the overall SWA implementation plan by identifying and tracking actions that have already been undertaken to meet each partner's recommendations, as well as identifying what actions still need to be undertaken and developing an implementation plan for these actions. The working groups will also work towards community support for the SWA that will help each partner in the delivery of their actions and recommendations.

**Contact: Tara Tchir, Project Manager, or Eleanor Heagy, Communications Specialist**

## On the Board Agenda

The next Board of Directors meeting will be held virtually on March 22, 2022. The following items are on the draft agenda:

- Species at Risk Stewardship Program Funding Concern Response Letter from Minister, Environment, Conservation and Parks
- By-Law Amendments
- Pesticide Application Policy
- Section 28 Report
- 2021 Health and Safety Summary

Please visit the "Board Agendas & Minutes" page at **www.thamesriver.on.ca** for agendas, reports, audio/video links and recordings, and minutes.

**Contact: Michelle Viglianti, Administrative Assistant**

## Will Jaques

**Subject:** Resolution of Oxford County Council - March 9, 2022

**From:** Chloe Senior <csenior@oxfordcounty.ca>
**Sent:** March 18, 2022 10:49 AM
**To:** kbunting@middlesex.ca; 'kthompson@elgin.ca' <kthompson@elgin.ca>; 'theresa.oleary@tvdsb.ca' <theresa.oleary@tvdsb.ca>; Julie Forth <clerk@swox.org>; 'Karen Martin' <kmartin@zorra.ca>; Kyle Kruger <kkruger@norwich.ca>; Rodger Mordue <rmordue@blandfordblenheim.ca>; Will Jaques <wjaques@ezt.ca>; 'a.morell@tvdsb.ca' <a.morell@tvdsb.ca>; 's.hunt@tvdsb.ca' <s.hunt@tvdsb.ca>; 'm.ruddock@tvdsb.ca' <m.ruddock@tvdsb.ca>; 'acornelissen@middlesex.ca' <acornelissen@middlesex.ca>; 'smartyn@elgin.ca' <smartyn@elgin.ca>; 'bruce.smith@tvdsb.ca' <bruce.smith@tvdsb.ca>
**Cc:** Marcus Ryan <mryan@zorra.ca>; Larry Martin <lmartin@norwich.ca>; Chloe Senior <csenior@oxfordcounty.ca>
**Subject:** Resolution of Oxford County Council - March 9, 2022

Good morning;
Oxford County Council unanimously passed the attached resolution at its meeting held March 9, 2022 regarding the Draft TVDSB Rural Education Task Force's report.

Thank you, do not hesitate to contact me should you have any questions or concerns.

**Chloé Senior** | **Clerk**
(She/Her/Hers)
519.539.9800, ext. 3001 | 1.800.755.0394
www.oxfordcounty.ca

**Municipal Council of the County of Oxford**
**Council Meeting - Oxford County**

**Date:** Wednesday, March 9, 2022

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**Moved By:** David Mayberry
**Seconded By:** Ted Comiskey

Resolved that the Council of the County of Oxford endorses the Draft Thames Valley District School Board's (TVDSB) Rural Education Task Force Report in principle as included on the Open meeting agenda of March 9, 2022;
And further, that the Rural Education Task Force Report be completed and the final report be circulated to the municipal councils represented by the TVDSB;
And further, that this Resolution be circulated to the TVDSB Rural Education Task Force and Board Chair.

Motion Carried Chloe Senior

**Will Jaques**

**Subject:** Oxford County Council: PW 2022-10 - 2021 Annual Waste Management Reports

**From:** Laura Hamulecki <lhamulecki@oxfordcounty.ca>
**Sent:** March 24, 2022 5:29 PM
**To:** ahumphries@cityofwoodstock.ca; Julie Forth <clerk@swox.org>; Kyle Kruger <kkruger@norwich.ca>; danielle.richard@ingersoll.ca; Rodger Mordue <rmordue@blandfordblenheim.ca>; Will Jaques <wjaques@ezt.ca>; Karen Martin <kmartin@zorra.ca>; msmibert@tillsonburg.ca
**Cc:** Frank Gross <fgross@oxfordcounty.ca>; Pamela Antonio <pantonio@oxfordcounty.ca>; David Simpson <dsimpson@oxfordcounty.ca>
**Subject:** Oxford County Council: PW 2022-10 - 2021 Annual Waste Management Reports

Hi There,

Please be advised that Oxford County Council, at its meeting held on March 23, 2022, adopted the following recommendation contained in Council Report No. PW 2022-10, entitled *"2021 Annual Waste Management Reports":*

1. **That County Council receive Report No. PW 2022-10 entitled "2021 Annual Waste Management Reports" as information.**

Please distribute to members of Council and staff as appropriate. Attached is a copy of the report for reference.

Please do not hesitate to contact us should you have any questions or concerns.

Thank You,

**LAURA HAMULECKI (She/Her/Hers)** | **Administrative Assistant, Public Works**
OXFORD COUNTY | 21 Reeve St., PO Box 1614, Woodstock, ON, N4S 7Y3
WWW.OXFORDCOUNTY.CA | T 519.539.9800 / 1-800-755-0394, ext 3110

Report No: PW 2022-10
PUBLIC WORKS
Council Date: March 23, 2022

**To:** **Warden and Members of County Council**

**From:** **Director of Public Works**

# 2021 Annual Waste Management Reports

## RECOMMENDATION

1. **That County Council receive Report No. PW 2022-10 entitled "2021 Annual Waste Management Reports" as information.**

## REPORT HIGHLIGHTS

- This report summarizes the annual performance of Oxford County's waste management facilities and programs in 2021.
- Oxford County's waste management facilities and programs provided effective services in 2021 and operated in general compliance with all applicable legislation.
- Based on the County's current waste diversion activities, the County achieved an overall landfill waste diversion rate (of residential and ICI waste material handled by Oxford County) of approximately 43% in 2021 and has an estimated remaining landfill service life of approximately 29 to 34 years.
- 2021 waste diversion achievements include the collection of 18,800 tonnes of leaf, brush and yard waste material, 8,570 tonnes of residential curbside Blue Box material, 11 tonnes of recycled bulky expanded polystyrene (Styrofoam) material and 5 tonnes of film plastic material. Of note, the County-wide recycling collection tonnage per household (157 kg/hh) increased 7% over 2020 while the amount of waste material landfilled decreased by 19%.
- Curbside garbage audit undertaken in 2021 showed that 60% of residential garbage by weight consists of organic material (avoidable/unavoidable food waste, tissue and paper towels, pet waste, and leaf and yard waste) and 10% by weight consists of recyclable (Blue Box) material.

### Implementation Points

The "2021 Annual Waste Management Reports" will be submitted to the Ministry of Environment, Conservation and Parks (MECP) in accordance with regulatory requirements and also posted on the County's website for public access.

## Financial Impact

There are no financial impacts as a result of this report. Any required actions that will result in expenditures have been accounted for in the 2022 Operating or Capital Budget for Waste Management.

## Communications

The 2021 Waste Management Annual Reports will be available for public viewing on the County's website on March 24, 2022, at www.oxfordcounty.ca/wasteline. This Council report will also be circulated to Area Municipalities and Zero Waste Oxford.

The County communicates the performance of key Public Works systems (Water, Wastewater, and Waste Management) annually to the public through an annual social media campaign after the last performance report has been submitted to Council.

## Strategic Plan (2020-2022)

|  |  |  |  |  |  |
|---|---|---|---|---|---|
| ***WORKS WELL TOGETHER*** | ***WELL CONNECTED*** | ***SHAPES THE FUTURE*** | ***INFORMS & ENGAGES*** | ***PERFORMS & DELIVERS*** | ***POSITIVE IMPACT*** |
| | | 3.iii. | 4.ii. | 5.ii. | |

# DISCUSSION

## Background

In accordance with regulatory requirements, the 2021 Annual Waste Management Reports, prepared for submission to the MECP, provide performance data on Oxford County's waste management facilities, operations, and programs. The regulatory reporting requirements are conditions outlined in the facilities' Environmental Compliance Approvals (ECA), Certificates of Approval (C of A), or as identified by government legislation for the particular waste management programs. The pertinent regulatory requirement is referenced in each Annual Waste Management Report.

The annual reports generally include items such as:

- Received and/or processed material;
- Mapping of waste management facilities;
- Facility equipment and staffing;
- Summary of operational activities and services;
- Operational changes from previous years;
- Compliance issues and corrective actions taken;
- Complaints received and corrective actions taken;
- Monitoring data and analysis; and
- Required actions to ensure environmental compliance.

In addition to regulatory reporting requirements, staff provides County Council with annual Blue Box performance monitoring results for all County-funded Blue Box Programs as per Municipal Datacall Best Practices (BP).

In 2021, a curbside waste (black bag) audit was undertaken to characterize residential waste generated from the County's curbside collection program and disposed as landfill material. The composition of the residential garbage stream is presented in this report and the detailed audit results will be further utilized to inform the organics resource recovery technologies (ORRT) feasibility study identified in the 2022 Business Plan and Budget.

## Comments

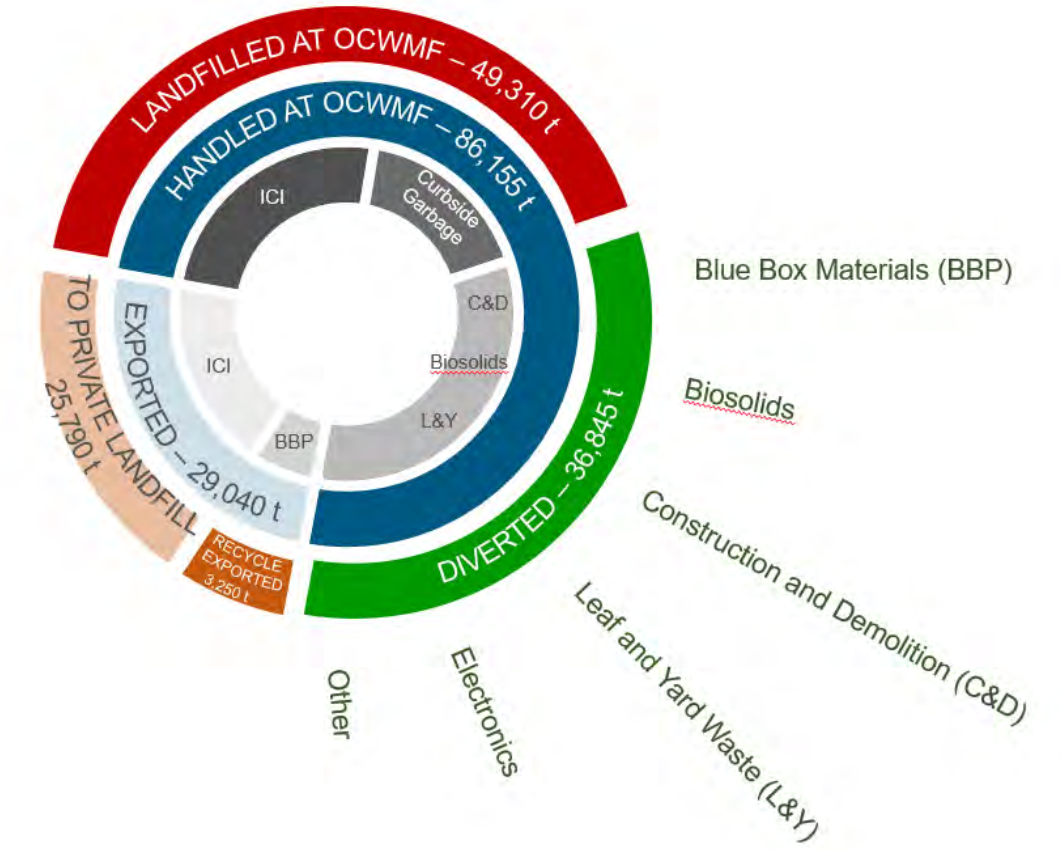
### Summary of County-Wide Waste Generation

Approximately 115,100 tonnes of waste (a decrease of 7,500 tonnes over 2020) was generated in Oxford County in 2021. Of the total amount of waste generated, 86,100 tonnes (a decrease of 10,500 tonnes over 2020) was processed at the Oxford County Waste Management Facility (OCWMF). The decrease in 2021 waste is attributed to 2020 quantities being higher than normal as a result of COVID impacts and special one-time projects (i.e. Tavistock Lagoon biosolids disposal).

About 29,000 tonnes of waste was exported out-of-County (without direct handling at the OCWMF). This includes an estimated 25,800 tonnes of waste from the Industrial, Institutional, and Commercial (IC&I) sector, disposed of by private haulers, and 3,200 tonnes of Blue Box material from the City of Woodstock's curbside collection program exported directly to an out-of-County processing facility.

The waste quantity generated by the IC&I sector and exported out-of-County is calculated based on the results of the County's 2017 curbside waste audit with annual increases applied. Overall, approximately 25% of the total waste generated is being exported out of County.

A summary of County-wide waste generation in 2021 is depicted in Figure 1.




*Note: Diference in tonnage due to rounding*

Figure 1: 2021 County-wide Waste Generation

## 2021 Annual Waste Management Reports

The annual reports are listed and linked below, followed by a summary section for each.

- Oxford County Waste Management Facility, Salford 2021 Operations, and Monitoring Report
- 2021 Annual Report Landfill Gas Collection and Flaring System, Oxford County Waste Management Facility
- Holbrook Landfill 2021 Water Monitoring Report
- Closed Landfill Sites Due Diligence Monitoring Report
- Oxford County Permanent Household Hazardous Waste Depot Annual Report 2021
- Oxford County 2021 Leaf and Yard Waste System Annual Report
- Oxford County 2021 Year-End Blue Box Waste Management System Annual Report

*Oxford County Waste Management Facility, Salford – 2021 Operations and Monitoring Report*

- Approximately 86,100 tonnes of waste was handled at the site with approximately 36,800 tonnes being diverted and recovered as material resources. Overall resource recovery material brought to the OCWMF in 2021 increased by 3% and landfilled material decreased by 19%.
- The total trips by all vehicles using the facility averaged about 3,457 per month in 2021, a decrease of 5% from 2020.
- The film plastic drop-off program generated 5 tonnes of material in 2021 compared to 1 tonne collected in the program's inaugural year (2020). An additional drop off depot was opened in September 2021 by the Township of South-West Oxford at the Beachville Firehall.
- The bulky Expanded Polystyrene (Styrofoam) drop-off program generated 11 tonnes of recycled packaging material for reuse in product manufacturing, representing a 120% increase over 2020 tonnages.
- The remaining landfill site service life in 2021 is calculated to be approximately 29 to 34 years based on the current landfilling rate and waste diversion rate (approximately 43%).
- Two odour complaints were received in 2021 from nearby residents. The first complaint was a result of operational activities and was immediately resolved. The second complaint was determined to be from other sources unrelated to waste management operational activities.
- There were no influences of leachate in the groundwater at the site boundaries.
- In March 2021, leachate impacts were identified in onsite stormwater retention ponds as a result of leachate seepage from the landfill area. The occurrence was immediately reported to the MECP and did not result in any adverse environmental impacts from offsite stormwater discharge. Remedial measures were undertaken to repair the leachate seepage and impacted stormwater was pumped to the leachate collection system.
- Private well monitoring showed no landfill influence.

*2021 Annual Report Landfill Gas Collection and Flaring System (LGCFS), Oxford County Waste Management Facility*

- The LGCFS, located at the OCWMF, operated as intended in 2021 and successfully controlled emissions.
- The flare ran at an average of 120 cubic feet of gas volume per minute in 2021, reflecting no change from 2020.
- The average methane concentration by volume was 42% in 2021, which remained unchanged from 2020.
- Current volumes and concentrations of methane gas continue to remain low.

*Holbrook Landfill (Closed) 2021 Water Monitoring Report*

- The site has been closed since 1986.
- There was no clear indication of leachate influence in the deeper groundwater system at the property boundaries in 2021.
- No methane was detected in 2021.
- Private well monitoring showed no landfill influence.

*Closed Landfill Sites Monitoring Program*

- With the recently completed inventories of Oxford's closed landfill sites, monitoring programs were established at the Lakeside, Embro and Thamesford closed landfill sites in 2021 as per best practices.
- Landfill gas, surface water, groundwater, and private well monitoring results indicated no negative landfill influence at these sites.
- In 2022, similar monitoring programs will be undertaken at the Blandford-Blenheim and Norwich closed landfill sites.

*Oxford County Permanent Household Hazardous Waste (HHW) Depot Annual Report 2021*

- The depot was open 306 days, an increase of 20% from 2020.
- The depot serviced approximately 5,300 vehicles, an 11% decrease over 2020.
- The depot received approximately 148 tonnes of HHW, a decrease of 20% over 2020.
- No operational complaints, concerns, or adverse impacts on the environment were observed.
- The City of Woodstock's Enviro Depot was open 144 days in 2021; the HHW Depot serviced 5,854 vehicles (compared to 2,258 vehicles in 2020) and collected 88 tonnes of HHW (increase of 16% from 2020).

*Oxford County 2021 Brush, Leaf, and Yard Waste System Annual Report*

The Brush, Leaf, and Yard Waste program consists of 11 drop-off depots operated by the Area Municipalities, with contracted services for centralized hauling of the collected material to the County's Compost Facility for processing. These depots are free to County residents and have operating hours that vary from municipality to municipality. The County funded all program costs in 2021 and generated the following results:

- Over 18,800 tonnes of material was received representing a 6% decrease over 2020 and approximately 9,500 tonnes of finished compost was sold to the end market in 2021.
- A total of 462 composters and 318 green cones were sold to residents, an increase of 18% over 2020.
- Home composters and green cones are sold throughout the County at a subsidized rate of $10 and $54 each, respectively.

Oxford County continues to undertake backyard composting program education and outreach to help reduce the number of organics currently black bagged/landfilled.

*Oxford County 2021 Year-End Blue Box Waste Management System Annual Report*

- Oxford County Waste Management provided curbside collection to all eight Area Municipalities in Oxford County. Curbside collection was performed by contracted services for six of the Area Municipalities and by Area Municipal staff in the City of Woodstock and the Township of South-West Oxford under contract with the County.

- Collection of garbage and recycling is offered to all households, including some multi-residential and commercial properties, provided they meet program requirements.
- Collection of Blue Box material is currently single stream weekly in the County collection area and two-stream bi-weekly in the City of Woodstock. The Township of South-West Oxford continues on a six-business day collection of garbage and single-stream recycling. Alternative residential drop-off depot locations for Blue Box material are located at 955 James Street, Woodstock and the OCWMF (384060 Salford Road).
- The residential diversion rate (from curbside, depots, brush, leaf and yard waste depots, Waste Management Facility) is estimated to be 57% and will be confirmed when the 2021 Datacall is verified in November 2022. The residential diversion rate has plateaued in recent years ranging between 57-59%.
- 8,570 tonnes of residential curbside Blue Box material was collected (6% increase from 2020). Following the removal of contaminated material (residual waste) during processing, approximately 7,800 tonnes of processed material was sent to recycling end markets.
- The contamination rate of the 2021 County/SWOX recycling program is estimated at 10% based on an internal audit conducted by the County's recycling processor and is competitive to other comparative municipal single-stream recycling programs. The contamination rate for the two-stream recycling program in Woodstock was estimated at 12% based on tonnage data provided by the City's recycling processing contractor.
- The recycling collection tonnage per household (hh) for 2021 was 157 kg/hh for the entire County, representing a 7% increase over 2020.

## Advancing to Zero Waste

A feasibility study of organics resource recovery technologies (ORRT) is included in the 2022 Oxford County Business Plan and Budget with the objective of identifying a preferred alternative for potential implementation of a County-wide organic waste diversion program. In support of this undertaking, a curbside residential garbage (black bag) audit was completed in 2021 by AET Group Inc.

The black bag audit was completed in Spring 2021, and consisted of 240 single-family households from 24 sampling areas (rural/urban) throughout the County over a two week period. The County-wide residential garbage composition determined through the waste characterization audit is shown in Figure 2 below, and is derived from an estimated quantity of 346 kg/hh/year.

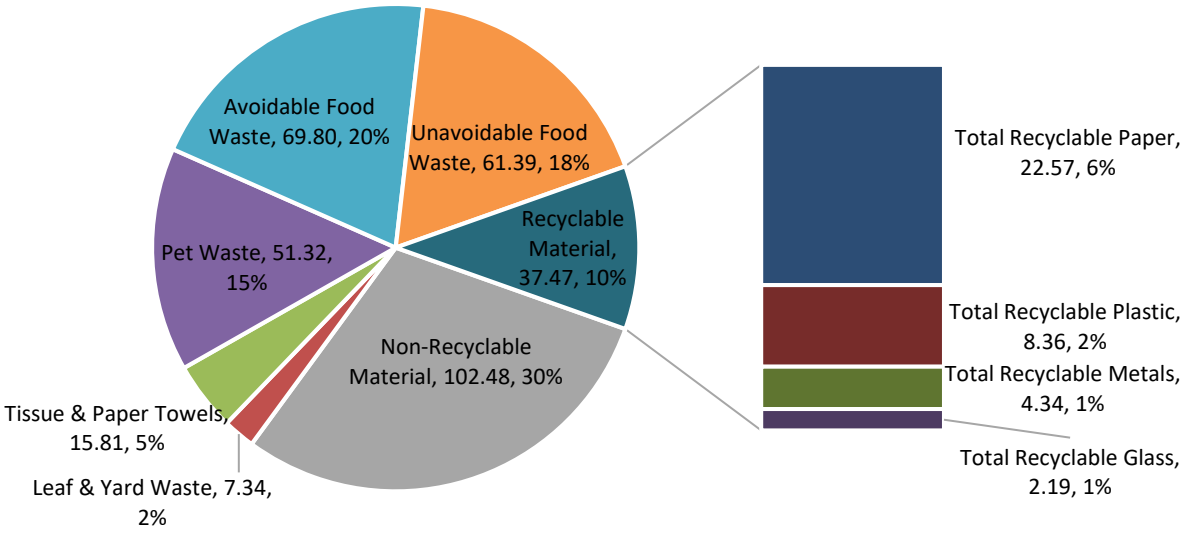



Figure 2: 2021 Garbage Waste Stream Composition

The key findings of the single family residential garbage stream composition include the following:

- Average curbside garbage stream generation (rural/urban combined) is 6.63 kilograms/household/week (kg/hh/wk).
- Average rural curbside garbage stream generation is 3.32 kg/hh/wk.
- Average urban/village curbside garbage stream generation is 7.63 kg/hh/wk.
- Organics makes up almost 60% of the garbage stream by weight consisting of avoidable/unavoidable food waste, tissue and paper towels, pet waste, and leaf and yard waste.
- Recyclables (Blue Box material) makes up 10% of the garbage stream by weight.

The 2021 black bag audit provides a substantial update to the original 2017 baseline audit (Report No. PW 2017-42) that was completed in support of the County's Zero Waste Plan and waste resource recovery activities. The 2021 audit provides a detailed breakdown of specific material types found in residential garbage set outs and will be utilized in the ORRT feasibility study to determine the viability of a potential County-wide organic waste diversion program. The audit results will also be used to enhance public promotion on current waste diversion programs with greater focus on specific materials found in the residential garbage stream.

### Conclusions

The 2021 Annual Waste Management Reports demonstrate that Oxford County's waste management programs and facilities continue to perform well and are in compliance with regulatory requirements.

Implementation of a County-wide organics diversion program will provide an opportunity for resource recovery and would have an immediate impact on reducing waste quantities to further extend the life of the County's landfill area.

## SIGNATURES

### Report Author:

Original signed by

Pamela Antonio, M.P.A, B.E.S
Supervisor of Waste Management

### Departmental Approval:

Original signed by

David Simpson, P.Eng., PMP
Director of Public Works

### Approved for submission:

Original signed by

Gordon Hough on behalf of Michael Duben, B.A., LL.B.
Acting Chief Administrative Officer

## Will Jaques

**Subject:** Oxford County Council: PW 2022-18 - 2018-2020 Transportation Network Service Delivery Review

**From:** Laura Hamulecki <lhamulecki@oxfordcounty.ca>
**Sent:** March 24, 2022 5:40 PM
**To:** ahumphries@cityofwoodstock.ca; Julie Forth <clerk@swox.org>; Kyle Kruger <kkruger@norwich.ca>; danielle.richard@ingersoll.ca; Rodger Mordue <rmordue@blandfordblenheim.ca>; Will Jaques <wjaques@ezt.ca>; Karen Martin <kmartin@zorra.ca>; msmibert@tillsonburg.ca
**Cc:** Frank Gross <fgross@oxfordcounty.ca>; David Simpson <dsimpson@oxfordcounty.ca>
**Subject:** Oxford County Council: PW 2022-18 - 2018-2020 Transportation Network Service Delivery Review

Hi There,

Please be advised that Oxford County Council, at its meeting held on March 23, 2022, adopted the following recommendations contained in Council Report No. PW 2022-18, entitled *"2018-2020 Transportation Network Service Delivery Review - Overview":*

1. **That Oxford County Council receive Report No. PW 2022-18 entitled "2018-2020 Transportation Network Service Delivery Review - Overview";**

2. **And further, that staff report back to County Council, with specific outcomes and recommendations from the independent Service Delivery Review pertaining to alternative organizational approaches which best optimize transportation network (roads and bridges) operational levels of service and cost efficiencies**.

Please distribute to members of Council, as well as any appropriate staff. Attached is a copy of the report and Attachment 1 for reference. The Final Consultant report, Attachment 2, can be found here as file is too large to attach. ****Clerk's Note: Township staff can forward Attachment #2 to anyone who may be interested. Please email wjaques@ezt.ca to request a copy.**
Please do not hesitate to contact us should you have any questions or concerns.

Thank You,

**LAURA HAMULECKI (She/Her/Hers)** | **Administrative Assistant, Public Works**
OXFORD COUNTY | 21 Reeve St., PO Box 1614, Woodstock, ON, N4S 7Y3
WWW.OXFORDCOUNTY.CA | T 519.539.9800 / 1-800-755-0394, ext 3110

Report No: PW 2022-18
PUBLIC WORKS
Council Date: March 23, 2022

**To:** **Warden and Members of County Council**

**From:** **Director of Public Works**

# 2018-2020 Transportation Network Service Delivery Review – Overview

## RECOMMENDATIONS

1. **That Oxford County Council receive Report No. PW 2022-18 entitled "2018-2020 Transportation Network Service Delivery Review - Overview";**

2. **And further, that staff report back to County Council, with specific outcomes and recommendations from the independent Service Delivery Review pertaining to alternative organizational approaches which best optimize transportation network (roads and bridges) operational levels of service and cost efficiencies**.

## REPORT HIGHLIGHTS

- The purpose of this information report is to provide Oxford County Council with a high level overview of the scope and findings of the joint Transportation Network (Roads and Bridges) Operations and Maintenance Service Delivery Review (SDR) project.

- The joint SDR project was one of six initiatives that was approved for provincial funding (June 30, 2021) under the 2021 Review Stream Modernization Project category.

- The joint SDR project was facilitated and completed by an independent study consultant (KPMG LLP) over approximately six months through extended information sharing and collaboration with staff from Oxford County and member municipalities.

- The final SDR report provides a comprehensive review of the 'current state' transportation network service delivery model and a comparative analysis of three alternative service delivery models (centralized, localized, full asset download), together with potential enhancements to the current state service delivery model.

- Council deliberations regarding the preferred service delivery approach are planned for the May 11, 2022 meeting.

## Implementation Points

In accordance with the Municipal Modernization Funding (MMF) Transfer Payment Agreement (TPA) with the Ministry of Municipal Affairs and Housing (MMAH), the final Transportation Network SDR Report (attached to this report) was posted on the County's website for public access on March 18, 2022 (i.e. when Report No. PW 2022-18 was released as part of the March 23, 2022 Oxford County Council meeting agenda). The final SDR report and project abstract will also be submitted to MMAH on March 23, 2022.

Staff will report to County Council on May 11, 2022 in regard to the specific SDR recommendations/outcomes and preferred service delivery approach, at which time it is anticipated that final deliberations will occur regarding the preferred service delivery approach.

## Financial Impact

The joint Transportation Network SDR Stream project was awarded up to $125,000 under a TPA with the MMAH. A competitive Request for Proposal (RFP) process to retain a qualified consultant for the review resulted in an award at a cost of $138,680 (excluding non-refundable HST) with 100% funding from the County's first allocation of the Municipal Modernization Fund.

As the bid award was $16,121 higher than the TPA funding approved (including non-refundable HST), savings from the Waste Management Scale Software modernization project were reallocated to this project to offset the budget shortfall.

Final instalment of the Province's financial commitment was subject to the County submission of the final SDR report, along with supporting invoices, to the Province in March 2022.

## Communications

Throughout the duration of the joint SDR, the independent study consultant (KPMG LLP) actively engaged staff from Oxford County and the member municipalities to review and analyze existing transportation network (roads and bridges) operations and maintenance practices/processes, organizational structures, levels of service/performance outputs, risk, historical financial performance, etc., consistent with the RFP scope (refer to Attachment 1) that was approved by all parties prior to its July, 2021 release to the vendor market.

Through various joint and individual workshops, data and information sharing, staff team interviews and regular staff correspondence (email, phone), a number of comprehensive technical memorandums (TMs) were drafted, reviewed by staff teams and finalized over the course of the joint SDR study between September 2021 and March 2022. The TMs then formed a substantive part of the draft SDR report.

The draft SDR report was presented to all representative Oxford County and Area Municipal staff, including respective CAOs, at a dedicated workshop on March 7, 2022. Any remaining comments and feedback received pertaining to the draft SDR report were considered prior to its finalization on March 17, 2022. As previously noted under the Implementation Section of this report, the final SDR report was made available to the public on March 18, 2022 through the release of this Council report, which was included in the March 23, 2022 Oxford County Council meeting agenda.

During the March 7, 2022 workshop noted above, there was discussion with respect to consultant SDR delegations to Area Municipal Councils. It was agreed that respective CAOs would give this further consideration, and if deemed necessary, request a delegation.

Through Report No. PW 2022-18, the final SDR (refer to Attachment 2) is provided as information to Oxford County Council. Report No. PW 2022-18 will be subsequently circulated to all Area Municipal Councils for information on March 24, 2022.

As a follow-up, KPMG LLP (KPMG) is scheduled to formally present the SDR Report to Oxford County Council at their regular meeting to be held on May 11, 2022. Staff will also provide a report at that meeting seeking Council's endorsement of a preferred transportation network operations and maintenance service delivery approach.

### Strategic Plan (2020-2022)

|  |  |  |  |  |  |
|---|---|---|---|---|---|
| ***WORKS WELL TOGETHER*** | ***WELL CONNECTED*** | ***SHAPES THE FUTURE*** | ***INFORMS & ENGAGES*** | ***PERFORMS & DELIVERS*** | ***POSITIVE IMPACT*** |
| | | 3.iii. | | 5.ii. | |

## DISCUSSION

### Background

In June, 2020, the findings of a Service Delivery Review undertaken by Watson & Associates Economists (Ltd.), Dillon Consulting Ltd., and Monteith Brown Planning Consultants were made available to Oxford County and the member municipalities. One area noted pertained to further review of potential delivery of summer and winter road operations and maintenance services by Area Municipalities on all County roads within their lower tier boundaries. Collective municipal interest was additionally received through the subsequent Joint Service Delivery Review carried out by StrategyCorp. Accordingly, staff pursued funding through the province's MMF to further review service delivery in this area.

As noted in Report No. CS 2021-14 and CS 2022-03, the Provincial Government announced a second intake of the Municipal Modernization Fund to help municipalities modernize service delivery and reduce future costs by investing in projects such as service delivery reviews, development of shared services agreements, and capital. The investment was intended to support small and rural municipalities' efforts to be more efficient and reduce expenditure growth in the long term.

The joint Transportation Network (Roads and Bridges) Operations and Maintenance SDR Project was one of six initiatives that was approved for provincial funding (June 30, 2021) under the 2021 Review Stream Modernization Project category. In this regard, Oxford County collaborated with the member municipalities to undertake and participate in a joint service delivery review.

The scope of the RFP assignment (refer to Attachment 1) was collectively reviewed prior to release to the vendor market on July 22, 2021. Unfortunately, only one submission was formally received from the vendor market (8 plan takers), largely due to reported inability to deliver the proposed SDR RFP scope within the short project timelines as prescribed by the province (project completion by November 30, 2021). Given the single submission was deemed to be a compliant bid, which exceeded the minimum threshold for RFP technical proposal requirements, staff consulted with all Area Municipal CAOs to gauge support to proceed with the award based on the single bid. All respective CAO's indicated support for this approach and staff proceeded to award the RFP assignment to KPMG on September 8, 2021.

In parallel, staff liaised with MMAH to seek a longer project timeline and received provincial notification (August 24, 2021) that the provincial project completion deadline was revised to January 31, 2022. A second extension of the project completion deadline to March 23, 2022 was also later provided by MMAH.

## Comments

Under the *Municipal Act, 2001*, the County of Oxford holds non-exclusive municipal authority over "Highways, including parking and traffic on highways" where both upper and lower tier municipalities have the power to pass by-laws under this sphere. Accordingly, the *Municipal Act* also affords the County with the ability to delegate its powers and duties pertaining to the same through agreements with Area Municipalities on behalf of the County.

### Current State Transportation Network Operations and Maintenance Service Delivery Model

In the current state service delivery model, Oxford County (road authority) owns all of the transportation network assets within its regional (arterial) road right-of-ways. Oxford County also operates and maintains all of these same system assets, with the exception of regional roads and bridge assets that are located within the urban limits of Woodstock, Ingersoll and Tillsonburg. As such, there are four road operators of the regional (arterial) road network.

In these cases, Woodstock, Ingersoll and Tillsonburg operate and maintain the arterial transportation network (roads and bridges) on behalf of Oxford County, under urban road maintenance service contract agreements that were established in approximately 1999, when many of the provincial highways were downloaded to regional municipalities, including Oxford.

The most recent service contract agreements were last updated in 2010 (City of Woodstock) and 2008 (Town of Ingersoll, Town of Tillsonburg) for the provision of winter control, pavement marking, road signage and bridge/culvert, roadside and asphalt/shoulder maintenance activities. Though technically expired, these agreements have continued to remain in effect given neither party has terminated their respective agreement.

## Transportation Network Operations and Maintenance SDR Overview

As noted in Attachment 1, the recent SDR RFP assignment completed by KPMG served to comprehensively undertake a critical review of service delivery for transportation network services performed by the County and its contracted service providers (Woodstock, Ingersoll, Tillsonburg) between 2018 and 2020, by examining the effectiveness of existing service delivery models in terms of level of service and financial performance, governance, risk/compliance, sustainability, etc. and to identify alternative organizational approaches to optimize levels of service and cost savings.

The current state service delivery model was comparatively assessed with three alternative models as follows:

- ***Model A:*** **Centralized Service Model** where Oxford County (road authority and single operator) owns, operates and maintains all of its transportation network system assets;

- ***Model B:*** **Localized Service Model** where all eight Area Municipalities operate and maintain the arterial transportation network (roads and bridges) within their jurisdictions, under service contract to Oxford County. In this scenario, the County would remain as the road authority and continue to perform all transportation system planning and management functions (excluding operations and maintenance); and

- ***Model C:*** **Full Asset Download Service Model** where all eight Area Municipalities own, operate and maintain the arterial transportation network (roads and bridges) within their jurisdictions (8 municipal arterial road authorities, 8 municipal arterial road operators). This model involves transfer of the road authority responsibilities and sale of County roads, bridges and stormwater assets to each of the respective Area Municipalities.

As well, **enhancements to the current state service delivery model** were also assessed and quantified to the degree possible. Enhancements to the current state service delivery model include, but are not limited to, potential updates to the County's current urban road maintenance service contract funding arrangements with Woodstock, Ingersoll and Tillsonburg, where cost efficiency considerations employ a fixed price cost model for potential contracted summer maintenance activities (based on a lane km basis) and allocation of contracted winter maintenance costs between Area Municipal and County roads based on a lane km that incorporates weight to reflect effort required for road classification and associated regulatory requirements (Minimum Maintenance Standards).

In addition to the above alternative considerations, some of the respective urban Area Municipalities expressed an interest in a hybrid version of *Model C* where the County downloads its arterial transportation network to the three urban Area Municipalities (only). However, this request was not supported by the majority of the eight Area Municipalities and was not carried forward or modelled.

The findings and outcomes of the final Transportation Network SDR report will be further discussed during upcoming delegate presentations by KPMG to Oxford County Council (May 11, 2022). Staff will also provide a report at that meeting seeking County Council's endorsement of a preferred transportation network operations and maintenance service delivery approach.

### Conclusions

The joint County of Oxford and member municipal SDR project was made possible through the Province's Municipal Modernization Fund.

The final report delivered to MMAH, Oxford County Council and the member municipalities is in-keeping with the Provincial Government's intent to assist municipalities in reviewing service delivery with a view to finding means to enhance services and reduce future costs for tax payers. In its current form, the independent final SDR report as attached offers several implementation opportunities for Council consideration which can achieve this objective.

## SIGNATURES

### Report Author:

Original signed by

Frank Gross, C. Tech
Manager of Transportation and Waste Management Services

### Departmental Approval:

Original signed by

David Simpson, P.Eng., PMP
Director of Public Works

### Approved for submission:

Original signed by

Gordon Hough on behalf of Michael Duben, B.A., LL.B.
Acting Chief Administrative Officer

## ATTACHMENTS

Attachment 1: Transportation Network SDR RFP
Attachment 2: Final Transportation Network SDR Report (KPMG)

# REQUEST FOR PROPOSAL

Report No. PW 2022-18
Attachment 1

**Transportation Network (Roads & Bridges)**
**Operations & Maintenance Service Delivery Review**

## Introduction

### 1. Purpose

The County of Oxford (County) is seeking proposal submissions for the provision of consulting engineering services to conduct a review of regional transportation network (roads & bridges) operations & maintenance service delivery in the County (including contracted services), as described in this Request for Proposal (RFP). The service delivery review and associated evaluation process is intended to systematically determine the most appropriate and cost effective way to operate and maintain the County's regional transportation network (roads & bridges), while maintaining or improving service levels.

### 2. Background

Located in the heart of south-western Ontario, Oxford County has a population of approximately 119,000 residents. Oxford is "growing stronger together" through demonstrated partnerships with residents, businesses, and the eight area municipalities, comprising Blandford-Blenheim, East Zorra-Tavistock, Ingersoll, Norwich, South-West Oxford, Tillsonburg, Woodstock, and Zorra. One of Ontario's foremost farming communities, Oxford's location at the crossroads of Highways 401 and 403 has contributed to the development of a significant commercial and industrial sector.

The County owns a transportation network, which includes, but is not limited to, approximately 1288 lane kilometres of paved roads, 94 bridges (> 3m span), 60 culverts (> 3m span), 5562 regulatory and warning signs, 39 signalized intersections, 7 controlled pedestrian crossings (excludes signalized intersections), 54 illuminated rural intersections (excludes signalized intersections), 11 electronic speed feedback signs, 2 roundabouts, on-road bike lanes, off-road multi-use trails, etc. The County road network also encompasses 26 grade level railway crossings (approaches) and storm water infrastructure (ditches, culverts, sewers, municipal drains) within the municipal right-of-way.

Under the Municipal Act, 2001, the County of Oxford holds non-exclusive municipal authority over "Highways, including parking and traffic on highways" where both upper and lower tier municipalities have the power to pass by-laws under this sphere. Accordingly, the Municipal Act also affords the County with the ability to delegate its powers and duties pertaining to the same through agreements with Area Municipalities on behalf of the County.

Currently, the County operates and maintains all aspects of the regional transportation network with the exception of urban arterial road operation and maintenance services (i.e. road patrol, winter control, pavement marking, road signage and bridge/culvert, roadside & asphalt/shoulder maintenance activities) which are being performed by Woodstock, Ingersoll and Tillsonburg (within their urban centres) through service contracts on behalf of Oxford County.

In response to the 2019 Regional Government Review, municipalities were recommended to carry out local service reviews to identify and implement opportunities to modernize service delivery in a more efficient and cost effective manner. Accordingly, a high level joint service delivery review was undertaken for Oxford County and its eight Area Municipalities in 2019 by Watson & Associates Economists, Dillon Consulting Ltd. and Monteith Brown Planning Consultants to seek potential efficiencies and modernization opportunities. The findings of this review were further assessed by all respective Chief Administrative Officers in early 2021 through a facilitated workshop led by John Matheson / Michael Fenn and associated recommendations and highlights were publicly presented by the same at Oxford County Council on February 10, 2021.

Some findings were positioned from the 2019 review and the subsequent facilitated workshop. One notable area pertained to further review of potential delivery of summer and winter road operations and maintenance services by Area Municipalities on all County roads within their lower tier boundaries.

Accordingly, the County sought to undertake further review and has received funding from the second intake of the provincial MMAH Municipal Modernization Program to carry out additional review of road operations and maintenance service delivery as per the detailed scope provided within this RFP. In this regard, different transportation network management and operating models are available for municipal comparison.

The following background reports will be made available to aid proponents in the preparation of their proposal:

- Oxford Joint Service Delivery Review – CAO Update (May 25, 2020) and Service Delivery Review – Oxford County Municipalities (April 30, 2020);
- Joint Service Delivery Review Workshop Report (February 10, 2021); and
- Report No. CS 2021-14 - Municipal Modernization Program Funding Proposals – Intake 2 (March 14, 2021).

## Scope of Work

The successful Consultant will undertake the project as set out in this RFP in order to examine the effectiveness of existing transportation network system (roads and bridges) operation and maintenance service delivery models (in-house, service contracts, etc.) in terms of level of service and financial performance (including full lifecycle cost benefit analysis) and identify potential alternative organizational approaches to derive cost savings and maintain/improve levels of service.

The scope of work shall encompass, but not be limited to, the following tasks:

**TASK 1: CURRENT SERVICE DELIVERY OVERVIEW**

**1.1** Overview of existing transportation network assets, operational facilities, fleet & equipment, work order management systems, service offerings, etc.

**1.2** Document applicable required levels of service metrics and best management practices (i.e. Minimum Maintenance Standards (MMS) for Municipal Highways, Highway Traffic

Act, Ontario Traffic Manual, Transportation Association of Canada Guidelines, etc.) for the operations and maintenance of the County's transportation network (roads & bridges);

**1.3** Review of current state organizational structure and staffing/certifications (County & respective contracted service providers) which provides for summer and winter maintenance and operations (including road patrol) of the County transportation network (roads and bridges); and

**1.4** Document and consider current/future issues and trends that will affect transportation network system operational resourcing (i.e. growth, asset management; operator training, regulatory compliance, etc.).

**TASK 2: COMPARATIVE SERVICE DELIVERY ANALYSIS ***

**2.1** Derive comparative alternative organizational structure models (up to 3 options) to deliver summer and winter operation and maintenance services that could be utilized to maintain County owned road and bridge assets in a state of good repair, along with accommodation requirements/options to each proposed structure;

**2.2** Develop comparative efficiency metrics (County & respective contracted service providers and other representative municipal benchmarking), including, but not limited to staffing relative to system size/road class, financial performance (i.e. total operating cost per lane km, winter operating cost per lane km; bridge/culvert operating cost per m² of surface area, etc.), and annual service outputs (i.e. preventative maintenance, reactive maintenance, system asset condition assessment and monitoring, percentage of winter events where the response met or exceeded locally determined municipal service levels for road maintenance; etc.);

**2.3** Provide full lifecycle cost benefit analysis of existing and comparative alternative organizational approaches (up to 3 options), which considers organizational structure staffing levels, fleet/facility/equipment/property asset requirements, stranded assets, financial performance (direct, indirect, tangible costs), etc.;

**2.4** Amongst the various service delivery models, assess any additional opportunities/efficiencies for 3rd party contracted services for specific work tasks, including, but not limited to, line painting, asphalt patching/padding, road shouldering, ditch cleaning, tree trimming/brush removal, traffic signal/street light maintenance, etc. and/or potential system-wide service bundling (in-house and/or contracted service provider) of the same where such activities continue to be undertaken individually by the County or Area municipality service providers; and

**2.5** Confirm County and Area Municipality service providers participation in / utilization of the joint purchasing group made available through Elgin, Middlesex, Oxford (including its Area Municipalities) and Perth Counties (EMOP) for common procurement items like culverts, road salt, fuel, line paint/glass beads, fleet rentals, etc. and summarize/quantify cost efficiency opportunities in cases where individual municipalities may not always participate in joint EMOP procurement.

Further, identify/quantify cost efficiency opportunities related to joint tenders including, but not limited to, gravel, road signs, sand, chemicals (i.e. brine, anti-icing), tree maintenance,

storm sewer CCTV, etc., in cases where individual municipalities may not always participate in joint tendering of the same.

*** NOTE:** Financial performance for the years *2018 to 2020* are to be assessed by the successful Consultant through detailed review of municipal Financial Information Reporting, annual operating budgets, financial analyst interviews, etc.

Annual service level outputs for the years *2018 to 2020* are to be assessed.

**TASK 3: REVIEW OF SERVICE CONTRACT FUNDING MODEL**

**3.1** Undertake an independent critical review of current service contract funding arrangement (County and contracted Area Municipality service providers in urban centres) and assess cost efficiency considerations including, but not limited to, the employment of a fixed price cost model for potential contracted summer maintenance activities (based on a lane/km basis) and allocation of contracted winter maintenance costs between Area Municipality and County roads based on a lane km that incorporates weighting to reflect effort required for road functional service (i.e. arterial vs. collector vs. local roads) and classification as defined by MMS.

The requirements outlined within this RFP represent a minimum expectation for the deliverables of this project. However, it remains the responsibility of the Proponent to propose and undertake a work plan that includes all necessary tasks and level of effort to deliver the technical and project management services. Should additional services be proposed, the County reserves the right to assign value or not to those additional services in the evaluation of submitted Proposals.

## Deliverables

**Project Team Meetings / Video-Conferencing (8)**

**Area Municipality Meetings / Video-Conferencing (10) – Ingersoll, Tillsonburg, Woodstock**

**Earned Value Reporting Summaries (Monthly)**

**Technical Memorandum No. 1** (November, 2021)
– Overview of existing transportation network system assets (roads, bridges), documentation of system technical levels of service, current state organizational structure and staffing/certifications, current service offerings and current/future issues and trends impacting system operations.

**Technical Memorandum No. 2** (December, 2021)
– Identify alternative service delivery models (up to 3 options) to existing organizational structure, develop comparative efficiency metrics, undertake comparative analysis of existing and alternative organizational service delivery models including full lifecycle costing (assets, staffing) and assess any additional opportunities/efficiencies for joint tendering, joint procurement, 3rd party contracted services/bundling, etc.

**Technical Memorandum No. 3** (January, 2022)
– Critical review of existing service contract funding model (County roads in urban centres) and assessment of cost efficiency considerations using alternative cost funding models.

**Draft Service Delivery Review Report** (January, 2022)
– Draft Executive Summary, draft comparative service delivery recommendations, draft implementation scatterplot (ease of implementation and expected benefits), and draft compilation of Technical Memorandums No. 1-3, including appendices.

**Final Service Delivery Review Report** (January, 2022)
– Executive Summary, comparative service delivery recommendations, implementation scatterplot (ease of implementation and expected benefits), compilation of Technical Memorandums No. 1-3, including appendices.

**Council Presentations (up to 5)** (February, 2022)

## Reporting and Communication

The successful Consultant will report to the County's Project Manager and any other representatives as assigned by Oxford County.

Written approval will be required from the Project Manager prior to the successful Consultant altering any tasks or deliverables. The County Project Manager will be responsible for overseeing the day to day operations of the project on behalf of the County. The County Project Manager will work with the successful Consultant to ensure that all requirements and deadlines are met.

## Proposal Requirements at Submission

The submitted proposal should include the items listed below. It is critical to note that if any of the following items cannot be provided in the proposal package, the Proponent (Bidder) shall inform the County Project Manager in writing and obtain advance approval for omission prior to submission, otherwise the submission will be considered incomplete, and may be disqualified.

The Proponent (Bidder) submission on the Electronic Bidding System shall require the upload of a ***technical proposal*** in ".pdf format". The following information is required in the proponent's ***technical proposal*** submission:

- Identification of all project team members by area of expertise responsibility and role in the project including a brief relevant biography for each;
- Identification of any sub-Consultants who would be included on the Project Team, their roles, and experience relevant to this assignment;
- A detailed description of the Proponent's work plan approach to meeting the scope of the work, including a proposed schedule for carrying out each component (Gantt Chart Schedule). Specific tasks should be clearly identified;
- A detailed description of the Quality Assurance (QA)/ Quality Control (QC) mechanism in place exhibiting the Proponent commitments to quality including QA/QC procedures used in the preparation of all deliverables submitted to the County for data analyses, comparator metrics, technical memoranda, reports, etc. The QA/QC system in place will be an important consideration in the selection process;

- A description of the Proponent invoicing policies and procedures, for example monthly billing, staff hours, project expenses, and cost break-down by task including total budget, current invoice amount, previous invoiced amount, total invoiced to date, remaining budget, percent spent, and percent complete; and
- A work breakdown structure and work plan in the ***technical proposal*** detailing staff man-hours spent per task (excluding fees).

**The *technical proposal* should not exceed 10 single sided pages in length**, excluding curriculum vitae, project references, work breakdown structure and Gantt chart schedule.

The Electronic Bidding System (under Schedule of Prices) shall also require that the Proponent (Bidder) input the Subtotal amount (***financial proposal***) for each of the subtasks identified in the Scope of Work sections 1 - 3. The following information is required in the proponent's ***financial proposal*** submission:

- A detailed cost estimate for each component of the project, including the number of hours required to complete each of the tasks and subtasks by each member of the consulting team and the hourly rates; and
- Total Task Costs shall be detailed in a spreadsheet similar to the work breakdown structure used in the technical proposal.

There is no guarantee to the quantity of work and extra work rates identified in the work breakdown structure and Gantt chart schedule that will be undertaken at hourly rates. Oxford County reserves the right to reduce the scope of work without penalty. Oxford County will be responsible for managing the scope of the project throughout the undertaking. Any out of scope work will need to be approved by the County's Project Manager.

## RFP Evaluation Criteria

### 1. Evaluation Process

Each proposal will be evaluated by the County on the basis of the information provided by the Proponent in its proposal. Each proposal will be reviewed to assess compliance with the requirements set out in this RFP. Evaluation results will be the property of the County.

The County may request clarification to ascertain a Proponent's understanding of the proposal for the purpose of the evaluation process. The County may adjust the evaluation score or ranking of proposals as an outcome of the clarifications. The County reserves the right to limit clarification to any number of Proponents as determined by the County regardless of the number of the Proponents the submitted proposals.

Each submission will be evaluated in two stages. 'Stage One' will consist of evaluating the ***technical proposal***. Technical proposals will need to achieve the minimum score of 70 to advance to 'Stage Two'. Technical proposals which do not meet the minimum score required will be deemed non-compliant and will not be given any further consideration and the Schedule of Prices will remain unopened on the Electronic Bidding System.

In 'Stage Two', the Consulting fees (***financial proposal***) for the Proponent(s) will be opened (for only those which achieved the minimum technical score threshold from 'Stage One') and reviewed on the Electronic Bidding System in accordance with the process indicated the following section – Submission Weighting.

Upon completion of review of both the technical and financial proposals, Oxford County will select the successful Consultant based on the highest total scoring (best overall value to the County).

## 2. Submission Weighting

Proposal submissions will be assessed, scored and awarded, based on the evaluation criteria, but not limited to, the following:

| Category | Available Points |
|---|---|
| **Technical Proposal – Stage One Evaluation Criteria** | |
| 1. Project Manager qualifications and Corporate experience on directly related projects. | 15 |
| 2. Experience and qualifications of key team members, technical and support staff on directly related projects. | 10 |
| 3. Understanding of project goals, implementation strategy, methodology and approach. | 25 |
| 4. Proposed Work Plan, Schedule and Level of Effort | 20 |
| 5. Valued Added Services | 10 |
| **Financial Proposal – Stage Two Evaluation Criteria** | |
| 1. Cost Effectiveness | 20 |
| **TOTAL AVAILABLE POINTS** | **100** |

## Technical Proposal – Stage One

### 1. Project Manager Qualifications and Corporate Experience on directly related projects (15 Points)

Provide the qualifications and experience of the Project Manager and outline your relevant corporate experience.

Detail three (3) projects completed by your firm (preferably over the past five years) of comparable and relevant scope and complexity.

For each project description, provide the name of the client, contact information, name of the project, date and duration, methodology employed, similarities to the scope of this project, and dollar value of the contract. Also, identify whether or not projects were completed on time and within budget, and if not, provide an explanation.

The County will only consider three (3) project examples. If more than three project examples are provided, only the first three will be considered.

| | |
|---|---|
| Project Manager Experience | 9 Points |
| Project No. 1 | 2 Points |
| Project No. 2 | 2 Points |
| Project No. 3 | 2 Points |

References may be contacted at the discretion of the County.

### 2. Experience and Qualifications of the Key Team Members (10 Points)

Provide the qualifications and experience of the Key Team Members, Sub-Consultants and other staff. Key Team members should provide recent experience with projects of similar scope.

List all team members by proposed role or responsibility and the name of staff, years of experience, and list of relevant projects in a table format. Ensure all relevant disciplines are documented.

| | |
|---|---|
| Key Team Members | 5 Points |
| Sub-Consultants | 5 Points * |

* If no Sub-Consultants listed, Key Team Members will be allocated up to 10 Points.

### 3. Understanding of Project Goals, Implementation Strategy, Methodology, and approach (25 Points)

Describe your understanding of the assignment, including overall scope and objectives, noting any specific issues that may require extraordinary attention.

Describe the approach and methodology to be followed in completing all aspects of the assignment in order to achieve the stated project objectives. The Approach section of the technical proposal shall outline the Proponent's strategies, assumptions, and ideas for completing this assignment and obtaining the necessary approvals as well as, details on how your corporate Quality Assurance and Quality Control will be implemented specifically for this project to ensure that Schedule, Cost and Quality objectives of the assignment are met.

The Proponent should also identify key success/risk factors for the projects and how they will be managed.

4. Proposed Work Plan, Schedule, and Level of Effort (20 Points)

Provide a work plan and schedule, including a work breakdown structure and Gantt schedule of the major tasks, specific milestones and the level of effort of the individual team members to allow for a complete understanding as to how and by whom the work is to be carried out in order to successfully deliver the project. The level of effort presented in the technical proposal must be expressed in man-hours.

| | |
|---|---|
| Work Plan/Breakdown Structure and Gantt Schedule | 10 Points |
| Level of Effort is Appropriate | 10 Points |

Although the 'person day allocations' are often included within the sealed financial proposal, the County requires that a copy, **without financial details** such as per hour rates, be included in your technical proposal, so that the level of effort can be clearly determined and may be evaluated at this stage.

5. Value Added Services (10 Points)

Describe your organizational ability to provide innovative and efficient value-added services in your work plan to deliver the base requirements of the RFP. The Proponent should explain the respective value of such strategic services and the expected results of their application.

### Financial Proposal – Stage Two

The Proposal with the lowest price will be given 20 points. The points assigned for the price component of the other proposals will be calculated using the following formula: Lowest price ÷ submitted price x 20 points.

## Agreement

The successful Consultant will be required to enter into a formal Agreement with Oxford County for the project (M.E.A./C.E.O. Client/Consultant Agreement for Municipal Works). Upon award, the successful Consultant will submit a draft of the current version of MEA/CEO agreement for the County's review. The County reserves the right to negotiate the terms and conditions of the Agreement.

### a) Basis of Payment

Agreement should reflect "Upset Cost Limit".

### b) Insurance

Refer to Section 17.1 of the County's Purchasing Policy for general liability, auto, and professional liability and errors & omissions insurance requirements - to be complied with by the successful Consultant.

## Proponent Enquiries during the RFP Submission Period

If a Proponent (Bidder) needs to address any discrepancies, errors and/or omissions in the Bid Document, or if they are in doubt as to any part thereof they shall submit questions in writing through [**oxfordcounty.bidsandtenders.ca**] using the "Submit Question" feature associated with the Bid Opportunity.

Questions are to be submitted online and not through e-mail. Questions will be accepted up to and until closing of the bid. However; questions asked within seventy-two (72) hours of bid closing may go unanswered. If a question asked within seventy-two (72) hours of bid closing will have major ramifications on all bidders, at the discretion of Oxford County, an addendum may be issued to clarify which could result in changes to the bid; including changes to the closing date up to cancellation of the bid opportunity.

## Submission Date

Oxford County shall **only** accept and receive Electronic submissions through the [**oxfordcounty.bidsandtenders.ca**], hereafter called the **"BIDDING SYSTEM".**

HARD-COPY SUBMISSIONS SHALL **NOT** BE ACCEPTED.

Submissions shall be received by the Bidding System, until **2:00 p.m. (local time), on Wednesday August 18, 2021.** Late Bids shall **NOT** be accepted by the Bidding System.

All Proponents (Bidders) shall have a Bidding System Vendor account and be registered as a Plan Taker for this Bid opportunity, which will enable the Bidder to download the Bid Call Document, to receive Addenda/Addendum e-mail notifications, download Addendums and to submit their bid electronically through the Bidding System.

Bidders are cautioned that the timing of their Submission is based on when the Bid is **RECEIVED** by the Bidding System, **not** when a Bid is submitted by a Bidder, as Bid transmission can be delayed due to file transfer size, transmission speed, etc.

For the above reasons, Oxford County recommends that Bidders allow sufficient time to upload their Bid Submission and attachment(s) (if applicable) and to resolve any issues that may arise. The closing time and date shall be determined by the Bidding System's web clock.

***The consulting assignment awarded is anticipated by August 25, 2021 with project commencement shortly thereafter.***

## Will Jaques

**Subject:** Oxford County Council: PW 2022-19 - 2018-2020 Water Distribution and Wastewater Collection Service Delivery Review

**From:** Laura Hamulecki <lhamulecki@oxfordcounty.ca>
**Sent:** March 28, 2022 11:35 AM
**To:** ahumphries@cityofwoodstock.ca; Julie Forth <clerk@swox.org>; Kyle Kruger <kkruger@norwich.ca>; danielle.richard@ingersoll.ca; Rodger Mordue <rmordue@blandfordblenheim.ca>; Will Jaques <wjaques@ezt.ca>; Karen Martin <kmartin@zorra.ca>; msmibert@tillsonburg.ca
**Cc:** Don Ford <dford@oxfordcounty.ca>; David Simpson <dsimpson@oxfordcounty.ca>
**Subject:** Oxford County Council: PW 2022-19 - 2018-2020 Water Distribution and Wastewater Collection Service Delivery Review

Hi There,

Please be advised that Oxford County Council, at its meeting held on March 23, 2022, adopted the following recommendations, **as amended**, contained in Council Report No. PW 2022-19, entitled *"2018-2020 Water Distribution and Wastewater Collection Service Delivery Review - Overview":*

1. **That Oxford County Council receive Report No. PW 2022-19 entitled "2018-2020 Water Distribution and Wastewater Collection Service Delivery Review";**

2. ****And further, that staff report back to Council, with specific outcomes and recommendations from the independent Service Delivery Review pertaining to alternative organizational approaches which best manage water and wastewater system operational levels of service, cost and risk**.

****Above recommendation amended to provide lower tier municipalities until the end of May 2022 to review and respond, prior to Oxford County reporting back to County Council.**

Please distribute to members of Council, as well as any appropriate staff. Attached is a copy of the report and the amended resolution for reference. Please do not hesitate to contact us should you have any questions or concerns.

Thank You,

**LAURA HAMULECKI (She/Her/Hers)** | **Administrative Assistant, Public Works**
OXFORD COUNTY | 21 Reeve St., PO Box 1614, Woodstock, ON, N4S 7Y3
WWW.OXFORDCOUNTY.CA | T 519.539.9800 / 1-800-755-0394, ext 3110

**Municipal Council of the County of Oxford**
**Council Meeting - Oxford County**

**Date:** Wednesday, March 23, 2022

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**Moved By:** Stephen Molnar
**Seconded By:** David Mayberry

Resolved that the recommendations contained in Report No. PW 2022-19, titled “2018-2020 Water Distribution and Wastewater Collection Service Delivery Review – Overview”, be adopted;

And further that any subsequent staff report is presented to County Council once the lower tier municipalities have had the opportunity to review and respond by the end of May 2022.

Motion Carried

Report No: PW 2022-19
PUBLIC WORKS
Council Date: March 23, 2022

**To:** Warden and Members of County Council

**From:** Director of Public Works

**Adopted as per Amended Resolution (Resolution No. 20)**

# 2018-2020 Water Distribution and Wastewater Collection Service Delivery Review – Overview

## RECOMMENDATIONS

1. **That Oxford County Council receive Report No. PW 2022-19 entitled "2018-2020 Water Distribution and Wastewater Collection Service Delivery Review";**

2. **And further, that staff report back to Council, with specific outcomes and recommendations from the independent Service Delivery Review pertaining to alternative organizational approaches which best manage water and wastewater system operational levels of service, cost and risk**.

## REPORT HIGHLIGHTS

- The purpose of this information report is to provide Oxford County Council with a high level overview of the scope and findings of the joint Water Distribution and Wastewater Collection Operations and Maintenance Service Delivery Review (SDR) project.

- The joint SDR project was one of six initiatives that was approved for provincial funding (June 30, 2021) under the 2021 Review Stream Modernization Project category.

- The joint SDR project was facilitated and completed by an independent study consultant (GM BluePlan Engineering Ltd.) over approximately six months through extended information sharing and collaboration with staff from Oxford County, Town of Tillsonburg and City of Woodstock.

- The final SDR report provides a comprehensive review of the 'current state' water distribution and wastewater collection service delivery model and a comparative analysis of three alternative service delivery models (centralized, localized, external contract), along with potential enhancements to the current state service delivery model (status quo+).

- County Council deliberations regarding the preferred service delivery approach are planned for the April 27, 2022 meeting.

## Implementation Points

In accordance with the Municipal Modernization Funding (MMF) Transfer Payment Agreement (TPA) with the Ministry of Municipal Affairs and Housing (MMAH), the final Water Distribution and Wastewater Collection SDR Report (attached to this report) was posted on the County's website for the public's access on March 18, 2022 (coinciding with the release of this Council report, which is included in the March 23, 2022 Oxford County Council meeting agenda). The final SDR report and project abstract will also be submitted to MMAH on March 23, 2022.

Staff will report to County Council on April 27, 2022 in regard to the specific SDR recommendations/outcomes and preferred service delivery approach, at which time it is anticipated that final deliberations will occur regarding the preferred service delivery approach.

## Financial Impact

The joint Water and Wastewater SDR Stream project was awarded up to $100,000 under a TPA with MMAH. A competitive Request for Proposal (RFP) process to retain a qualified consultant for the review resulted in an award at a cost of $99,960 (excluding non-refundable HST).

Final instalment of the Province's financial commitment was subject to the County submission of the final SDR report, along with supporting invoices, to the Province in March, 2022.

## Communications

Throughout the duration of the joint SDR, the independent study consultant (GM BluePlan Ltd.) actively engaged staff from Oxford County, the Town of Tillsonburg and the City of Woodstock to review and analyze existing water distribution and wastewater collection system operations and maintenance practices/processes, organizational structures, levels of service/annual outputs, risk, historical financial performance, etc., consistent with the RFP scope (refer to Attachment 1) that was approved by all three parties prior to its September 2021 release to the vendor market.

Through various joint and individual workshops, data and information sharing, staff team interviews and regular staff correspondence (email, phone), a number of comprehensive technical memorandums (TMs) were drafted, reviewed by staff teams and finalized over the course of the joint SDR study between October, 2021 and March 2022. The TMs were shared with all staff and served to substantively inform the draft SDR report.

The draft SDR report was presented to all representative Oxford County, Tillsonburg and Woodstock staff, including respective CAOs, at a dedicated workshop on March 7, 2022. Any remaining comments and feedback received pertaining to the draft SDR report were considered prior to its finalization on March 17, 2022. As previously noted under the Implementation Section of this report, the final SDR report became available to the public on March 18, 2022 through the release of Oxford County Council Agenda bundle for the March 23, 2022 meeting.

Through Report No. PW 2022-19, the final SDR (refer to Attachment 2) is provided as information for Oxford County Council on March 23, 2022. Report No. PW 2022-19 will be subsequently circulated to Tillsonburg and Woodstock Council Clerks as correspondence information on March 24, 2022.

GM BluePlan Ltd. is scheduled to formally present the SDR Report to Tillsonburg Council on March 28, 2022, Woodstock Council on April 7, 2022 and Oxford County Council on April 27, 2022. Staff will also provide a report at the April 27, 2022 meeting seeking Council's endorsement of a preferred water distribution and wastewater collection system operations and maintenance service delivery approach.

### Strategic Plan (2020-2022)

|  |  |  |  |  |  |
|---|---|---|---|---|---|
| ***WORKS WELL TOGETHER*** | ***WELL CONNECTED*** | ***SHAPES THE FUTURE*** | ***INFORMS & ENGAGES*** | ***PERFORMS & DELIVERS*** | ***POSITIVE IMPACT*** |
| | | 3.iii. | | 5.ii. | |

## DISCUSSION

### Background

As noted in Report No. CS 2021-14 and CS 2022-03, the Provincial Government announced a second intake of the Municipal Modernization Fund to help municipalities modernize service delivery and reduce future costs by investing in projects such as service delivery reviews, development of shared services agreements, and capital. The investment was intended to support small and rural municipalities' efforts to be more efficient and reduce expenditure growth in the long term.

The joint Water Distribution and Wastewater Collection SDR Project was one of six initiatives that was approved for provincial funding (June 30, 2021) under the 2021 Review Stream Modernization Project category. In this regard, Oxford County collaborated with the Town of Tillsonburg and City of Woodstock to undertake and participate in a joint service delivery review.

The scope of the RFP assignment (refer to Attachment 1) was collectively reviewed by staff from the County, City of Woodstock and Town of Tillsonburg prior to release to the vendor market on July 15, 2021. Unfortunately, no submissions were received from the vendor market (13 plan takers) largely due to reported inability to deliver the proposed SDR RFP scope within the short project timelines as prescribed by the province (project completion by November 30, 2021).

Staff subsequently liaised with MMAH to seek a longer project timeline and received provincial notification (August 24, 2021) that the provincial project completion deadline was revised to January 31, 2022. Staff re-released the SDR RFP on September 1, 2021 from which five plan takers reviewed the assignment. Two formal vendor bids were received on September 28, 2021. Following joint evaluation of the two bids by the participating municipalities, the SDR project was awarded to GM BluePlan Ltd. (September 30, 2021) as they were collectively determined to have the necessary skills and expertise to fully deliver the expected scope of the assignment. A second extension of the project completion deadline to March 23, 2022 was also later provided by MMAH.

## Comments

Under the *Municipal Act, 2001*, the County of Oxford holds exclusive municipal authority and responsibility for all water and wastewater services, including water distribution and wastewater collection as per Section 11(11). Previously, under the County of Oxford Act, all powers of Area Municipalities to exercise any authority for the water distribution or wastewater collection were also removed; however, the County was entitled under the *Municipal Act* to consider entering into agreements with any person, area municipality or local board for such services.

### Current State Water and Wastewater Operations and Maintenance Service Delivery Model

In the current state service delivery model, Oxford County owns all of the water distribution and wastewater collection system assets. Oxford County also operates and maintains all of these same system assets, with the exception of most of its water distribution and wastewater collection system assets that are located within the urban limits of Woodstock and Tillsonburg. In these cases, Woodstock and Tillsonburg operate and maintain the water distribution and wastewater collection systems on behalf of Oxford County, under service contract agreements that were established in approximately 1999 and have been historically renewed over time.

The most recent service contract agreements were updated in 2006 (City of Woodstock) and 2012 (Town of Tillsonburg). Though technically expired and outdated, these agreements have continued to remain in effect given neither party has terminated their respective agreement. The effectiveness of service delivery under these agreements has not been historically reviewed in any meaningful level of detail or alternative approaches for the same. As well, operational responsibilities for water and wastewater systems have evolved considerably since 1999, along with ongoing changes in provincial regulatory compliance and asset management legislation.

### Water and Wastewater Operations and Maintenance SDR Overview

As noted in Attachment 1, the recent SDR RFP assignment completed by GM BluePlan Ltd. served to comprehensively undertake a critical review of service delivery for **water distribution and wastewater collection services** performed by the County and its contracted service providers (Woodstock, Tillsonburg) between 2018 and 2020, examine the effectiveness of existing service delivery models in terms of level of service and financial performance, governance, compliance, sustainability, etc. and to identify alternative organizational approaches to optimize levels of service, risk and cost savings. A financial model was developed by GM BluePlan Ltd. and utilized as part of this overall analysis.

The current state service delivery model was comparatively assessed with three alternative models as follows:

- ***Model A:*** **Centralized Service Model** where Oxford County owns, operates and maintains all of its water distribution and wastewater collection system assets;

- ***Model B:*** **Localized Service Model** where Tillsonburg and Woodstock owns, operates and maintains most of the water distribution and wastewater collection system assets within its urban limits. Involves transfer and sale of County water and wastewater system assets (excluding water and wastewater treatment plant, water supply and water pumping/storage assets) to Tillsonburg and Woodstock; and

- ***Model C:*** **Contract Service Model** where Oxford County contracts out the operation and maintenance of the water distribution and wastewater collection system assets that it owns (excluding water and wastewater treatment plant, water supply and water pumping/storage assets) to an external operating agency/contractor.

As well, **enhancements to the current state service delivery model** were also assessed and quantified to the extent possible.

In addition to the above alternative considerations, one of the respective Area Municipalities expressed an interest in acquiring treatment assets in addition to the *Model B* distribution and collection assets; however, this request was not received from both Area Municipalities. Given the many key challenges and public health risks associated with a decentralized treatment model as noted in the final SDR report, it was concluded that decentralizing treatment into individually owned or operated systems would be a complex process of disentanglement that may not offer tangible benefits that outweigh the risks. As such, the transfer of water and wastewater treatment assets and responsibilities to the Area Municipalities was not carried forward or modelled.

The findings and outcomes of the final water and wastewater SDR report will be further discussed during upcoming delegate presentations by GM BluePlan Ltd. to Tillsonburg Council on March 28, 2022, Woodstock Council on April 7, 2022 and Oxford County Council on April 27, 2022. Staff will also provide a report at the April 27, 2022 meeting seeking County Council's endorsement of a preferred water distribution and wastewater collection system operations and maintenance service delivery approach.

### Conclusions

The joint County of Oxford, Town of Tillsonburg and City of Woodstock Water and Wastewater SDR project was made possible through the Province's Municipal Modernization Fund.

The final report delivered to MMAH, Oxford County Council and the above noted Area Municipalities is in-keeping with the Provincial Government's intent to assist municipalities in reviewing service delivery with a view to finding a means to enhance services and reduce future costs for rate payers. In its current form, the independent final SDR report, as attached, offers several implementation opportunities for Council's consideration.

## SIGNATURES

### Report Author:

Original signed by

Don Ford, BA, CMM III, C.Tech.
Manager of Water and Wastewater Services

### Departmental Approval:

Original signed by

David Simpson, P.Eng., PMP
Director of Public Works

### Approved for submission:

Original signed by

Gordon Hough on behalf of Michael Duben, B.A., LL.B.
Acting Chief Administrative Officer

## ATTACHMENTS

Attachment 1: Water and Wastewater SDR RFP
Attachment 2: Final SDR Report (GM BluePlan Ltd.)

# REQUEST FOR PROPOSAL

**Water and Wastewater Service Delivery Review**

Report No. PW 2022-19
Attachment No. 1

## Introduction

### 1. Purpose

The County of Oxford (County) is seeking proposal submissions for the provision of consulting engineering services to conduct a review of water and wastewater service delivery in the County (including contracted services), as described in this Request for Proposal (RFP). The service delivery review and associated evaluation process is intended to systematically determine the most appropriate and cost effective way to provide municipal water distribution and wastewater collection services, while maintaining or improving service levels.

### 2. Background

Located in the heart of south-western Ontario, Oxford County has a population of approximately 119,000 residents. Oxford is "growing stronger together" through demonstrated partnerships with residents, businesses, and the eight area municipalities, comprising Blandford-Blenheim, East Zorra-Tavistock, Ingersoll, Norwich, South-West Oxford, Tillsonburg, Woodstock, and Zorra. One of Ontario's foremost farming communities, Oxford's location at the crossroads of Highways 401 and 403 has contributed to the development of a significant commercial and industrial sector.

The County owns 17 municipal drinking water systems and 11 municipal wastewater systems which includes, but is not limited to, approximately 735 km of distribution watermains, 17 water treatment plants, 42 water reservoirs/storage towers, 6 water booster stations, 61 active groundwater wells, 600 km of sewers & forcemains, 36 sewage pumping stations; 9 wastewater treatment plants, SCADA systems, biosolids management facility, etc.

The County holds exclusive municipal authority and responsibility for all water and wastewater system services, including water distribution and wastewater collection, as per Section 11(11) of the *Municipal Act, 2001.* Currently, the County operates and maintains all aspects of their municipal water and wastewater systems with the exception of water distribution and wastewater collection services in Woodstock and Tillsonburg which are being performed by their respective operating authorities (within their urban centres) through service contracts on behalf of Oxford County.

In response to the 2019 Regional Government Review, municipalities were recommended to carry out local service reviews to identify and implement opportunities to modernize service delivery in a more efficient and cost effective manner. Accordingly, a high level joint service delivery review was undertaken for Oxford County and its eight Area Municipalities in 2019 by Watson & Associates Economists, Dillon Consulting Ltd. and Monteith Brown Planning Consultants to seek potential efficiencies and modernization opportunities. The findings of this review were further assessed by all respective Chief Administrative Officers in early 2020 through a facilitated workshop led by John Matheson / Michael Fenn and associated

recommendations and highlights were publicly presented by the same at Oxford County Council on February 10, 2021.

While some findings were positioned from the 2019 review and the subsequent facilitated workshop; limited detail was provided within the review of water and wastewater service delivery and associated recommendations were somewhat limited.

Accordingly, the County sought to undertake further review and has received funding from the second intake of the provincial MMAH Municipal Modernization Program to carry out additional review of water and wastewater service delivery as per the detailed scope provided within this RFP. In this regard, many different water and wastewater system management and operating models are available for municipal comparison.

The following background reports will be made available to aid proponents in the preparation of their proposal:

- Oxford Joint Service Delivery Review – CAO Update (May 25, 2020) and Service Delivery Review – Oxford County Municipalities (April 30, 2020);
- Joint Service Delivery Review Workshop Report (February 10, 2021); and
- Report No. CS 2021-14 - Municipal Modernization Program Funding Proposals – Intake 2 (March 14, 2021).

## Scope of Work

The successful Consultant will undertake the project as set out in this RFP in order to examine the effectiveness of existing water distribution and wastewater collection service delivery models (in-house, existing service contracts, other 3rd party service providers etc.) in terms of level of service and financial performance (including full lifecycle cost benefit analysis) and identify potential alternative organizational approaches to derive cost savings and maintain/improve levels of service.

The scope of work shall encompass, but not be limited to, the following tasks:

**TASK 1: CURRENT SERVICE DELIVERY OVERVIEW**

**1.1** Overview of existing water distribution and wastewater collection system assets, operational facilities, fleet & equipment, work order management systems, service offerings, etc.

**1.2** Document applicable required levels of service metrics and best management practices (i.e. critical valve turning, non-critical valve turning, hydrant flushing, hydrant testing, sewer CCTV, sewer flushing, manhole inspections, etc.) etc.) for the operations and maintenance of the County's water distribution system and wastewater collection system;

**1.3** Review of current state organizational structure and staffing/certifications (County & respective contracted service providers) which provides for water distribution and wastewater collection services; and

**1.4** Document and consider current/future issues and trends that will affect water distribution and wastewater collection systems operational resourcing (i.e. growth, asset management; operator training, regulatory compliance, etc.).

**TASK 2: COMPARATIVE SERVICE DELIVERY ANALYSIS ***

**2.1** Derive comparative alternative organizational structure models (up to 3 options) to deliver water distribution and wastewater collection services that could be utilized to maintain County owned watermain and sewer assets in a state of good repair, along with accommodation requirements/options to each proposed structure;

**2.2** Develop comparative efficiency metrics (County & respective contracted service providers and other representative municipal benchmarking), including but not limited to staffing relative to system sizes (i.e. # operators per 100 km of watermain; # operators per 100 km of sewer), financial performance (i.e. operating cost per km of watermain, operating cost per km of sewer; etc.), and annual service outputs (i.e. preventative maintenance, reactive maintenance, system asset condition assessment and monitoring, etc.);

**2.3** Provide full lifecycle cost benefit analysis of existing and comparative alternative organizational approaches (up to 3 options), which considers organizational structure staffing levels, fleet/facility/equipment/property asset requirements, stranded assets, financial performance (direct, indirect, tangible costs), etc., and

**2.4** Amongst the various service delivery models, assess any additional opportunities/efficiencies for 3rd party contracted services for specific work tasks, including, but not limited to, system flushing, CCTV, locates, backflow preventer inspections, etc. and/or potential system-wide service bundling (in-house and/or contracted service provider) of the same.

*** NOTE:** Financial performance for the years *2018 to 2020* are to be assessed by the successful Consultant through detailed review of municipal Financial Information Reporting, annual operating budgets, financial analyst interviews, etc.

Annual service level outputs for the years *2018 to 2020* are to be assessed.

The requirements outlined within this RFP represent a minimum expectation for the deliverables of this project. However, it remains the responsibility of the Proponent to propose and undertake a work plan that includes all necessary tasks and level of effort to deliver the technical and project management services. Should additional services be proposed, the County reserves the right to assign value or not to those additional services in the evaluation of submitted Proposals.

## Deliverables

**Project Team Meetings / Video-Conferencing (8)**

**Area Municipality Meetings / Video-Conferencing (6) – Tillsonburg and Woodstock**

**Earned Value Reporting Summaries (Monthly)**

**Technical Memorandum No. 1** (September, 2021)
– Overview of existing water distribution and wastewater collection system assets, documentation of system technical levels of service, current state organizational structure and staffing /licensing including overall responsible operator and operator in charge emergency on-call structure, current service offerings and current/future issues and trends impacting system operations.

**Technical Memorandum No. 2** (October, 2021)
– Identify alternative service delivery models (up to 3 options) to existing organizational structure consistent with regulatory requirements for water and wastewater operations, develop comparative efficiency metrics, undertake comparative analysis of existing and alternative organizational service delivery models including full lifecycle costing (assets, staffing) and assess any additional opportunities/efficiencies for 3rd party contracted services/bundling.

**Draft Service Delivery Review Report** (October, 2021)
**–** Draft Executive Summary, draft comparative service delivery recommendations, draft implementation scatterplot (ease of implementation and expected benefits), and draft compilation of Technical Memorandums No. 1-2, including appendices.

**Final Service Delivery Review Report** (October, 2021)
**–** Executive Summary, comparative service delivery recommendations, implementation scatterplot (ease of implementation and expected benefits), compilation of Technical Memorandums No. 1-2, including appendices

**Council Presentations (up to 4)** (October, 2021)

## Reporting and Communication

The successful Consultant will report to the County's Project Manager and any other representatives as assigned by Oxford County.

Written approval will be required from the Project Manager prior to the successful Consultant altering any tasks or deliverables. The County Project Manager will be responsible for overseeing the day to day operations of the project on behalf of the County. The County Project Manager will work with the successful Consultant to ensure that all requirements and deadlines are met.

## Proposal Requirements at Submission

The submitted proposal should include the items listed below. It is critical to note that if any of the following items cannot be provided in the proposal package, the Proponent (Bidder) shall inform the County Project Manager in writing and obtain advance approval for omission prior to submission, otherwise the submission will be considered incomplete, and may be disqualified.

The Proponent (Bidder) submission on the Electronic Bidding System shall require the upload of a ***technical proposal*** in ".pdf format". The following information is required in the proponent's ***technical proposal*** submission:

- Identification of all project team members by area of expertise responsibility and role in the project including a brief relevant biography for each;
- Identification of any sub-Consultants who would be included on the Project Team, their roles, and experience relevant to this assignment;
- A detailed description of the Proponent's work plan approach to meeting the scope of the work, including a proposed schedule for carrying out each component (Gantt Chart Schedule). Specific tasks should be clearly identified;
- A detailed description of the Quality Assurance (QA)/ Quality Control (QC) mechanism in place exhibiting the Proponent commitments to quality including QA/QC procedures used in the preparation of all deliverables submitted to the County for data analyses, comparator metrics, technical memoranda, reports, etc. The QA/QC system in place will be an important consideration in the selection process;
- A description of the Proponent invoicing policies and procedures, for example monthly billing, staff hours, project expenses, and cost break-down by task including total budget, current invoice amount, previous invoiced amount, total invoiced to date, remaining budget, percent spent, and percent complete; and.
- A work breakdown structure and work plan in the ***technical proposal*** detailing staff man-hours spent per task (excluding fees); and

**The *technical proposal* should not exceed 10 single sided pages in length**, excluding curriculum vitae, project references, work breakdown structure and Gantt chart schedule.

The Electronic Bidding System (under Schedule of Prices) shall also require that the Proponent (Bidder) input the Subtotal amount (***financial proposal***) for each of the subtasks identified in the Scope of Work sections 1 - 2. The following information is required in the proponent's ***financial proposal*** submission:

- A detailed cost estimate for each component of the project, including the number of hours required to complete each of the tasks and subtasks by each member of the consulting team and the hourly rates; and
- Total Task Costs shall be detailed in a spreadsheet similar to the work breakdown structure used in the technical proposal.

There is no guarantee to the quantity of work and extra work rates identified in the work breakdown structure and Gantt chart schedule that will be undertaken at hourly rates. Oxford County reserves the right to reduce the scope of work without penalty. Oxford County will be responsible for managing the scope of the project throughout the undertaking. Any out of scope work will need to be approved by the County's Project Manager.

## RFP Evaluation Criteria

### 1. Evaluation Process

Each proposal will be evaluated by the County on the basis of the information provided by the Proponent in its proposal. Each proposal will be reviewed to assess compliance with the requirements set out in this RFP. Evaluation results will be the property of the County.

The County may request clarification to ascertain a Proponent's understanding of the proposal for the purpose of the evaluation process. The County may adjust the evaluation score or ranking of proposals as an outcome of the clarifications. The County reserves the right to limit clarification to any number of Proponents as determined by the County regardless of the number of the Proponents the submitted proposals.

Each submission will be evaluated in two stages. 'Stage One' will consist of evaluating the ***technical proposal***. Technical proposals will need to achieve the minimum score of 70 to advance to 'Stage Two'. Technical proposals which do not meet the minimum score required will be deemed non-compliant and will not be given any further consideration and the Schedule of Prices will remain unopened on the Electronic Bidding System.

In 'Stage Two', the Consulting fees (***financial proposal***) for the Proponent(s) will be opened (for only those which achieved the minimum technical score threshold from 'Stage One') and reviewed on the Electronic Bidding System in accordance with the process indicated the following section – Submission Weighting.

Upon completion of review of both the technical and financial proposals, Oxford County will select the successful Consultant based on the highest total scoring (best overall value to the County).

### 2. Submission Weighting

Proposal submissions will be assessed, scored and awarded, based on the evaluation criteria, but not limited to, the following:

| Category | Available Points |
|---|---|
| **Technical Proposal – Stage One Evaluation Criteria** | |
| 1. Project Manager qualifications and Corporate experience on directly related projects. | 15 |
| 2. Experience and qualifications of key team members, technical and support staff on directly related projects. | 10 |
| 3. Understanding of project goals, implementation strategy, methodology and approach. | 25 |
| 4. Proposed Work Plan, Schedule and Level of Effort | 20 |
| 5. Valued Added Services | 10 |
| **Financial Proposal – Stage Two Evaluation Criteria** | |
| 1. Cost Effectiveness | 20 |
| **TOTAL AVAILABLE POINTS** | **100** |

## Technical Proposal – Stage One

### 1. Project Manager Qualifications and Corporate Experience on directly related projects (15 Points)

Provide the qualifications and experience of the Project Manager and outline your relevant corporate experience.

Detail three projects completed by your firm (preferably over the past five years) of comparable and relevant scope and complexity.

For each project description provide the name of the client, contact information, name of the project, date and duration, methodology employed, similarities to the scope of this project, and dollar value of the contract. Also, identify whether or not projects were completed on time and within budget, and if not, provide an explanation.

The County will only consider three project examples. If more than three project examples are provided, only the first three will be considered.

| | |
|---|---|
| Project Manager Experience | 9 Points |
| Project No. 1 | 2 Points |
| Project No. 2 | 2 Points |
| Project No. 3 | 2 Points |

References may be contacted at the discretion of the County.

### 2. Experience and Qualifications of the Key Team Members (10 Points)

Provide the qualifications and experience of the Key Team Members, Sub-Consultants and other staff. Key Team members should provide recent experience with projects of similar scope.

List all team members by proposed role or responsibility and the name of staff, years of experience, and list of relevant projects in a table format. Ensure all relevant disciplines are documented.

| | |
|---|---|
| Key Team Members | 5 Points |
| Sub-Consultants | 5 Points * |

* If no Sub-Consultants listed, Key Team Members will be allocated up to 10 Points.

### 3. Understanding of Project Goals, Implementation Strategy, Methodology, and approach (25 Points)

Describe your understanding of the assignment, including overall scope and objectives, noting any specific issues that may require extraordinary attention.

Describe the approach and methodology to be followed in completing all aspects of the assignment in order to achieve the stated project objectives. The Approach section of the technical proposal shall outline the Proponent's strategies, assumptions, and ideas for completing this assignment and obtaining the necessary approvals as well as, details on how your corporate Quality Assurance and Quality Control will be implemented specifically for this project to ensure that Schedule, Cost and Quality objectives of the assignment are met.

The Proponent should also identify key success/risk factors for the projects and how they will be managed.

### 4. Proposed Work Plan, Schedule, and Level of Effort (20 Points)

Provide a work plan and schedule, including a work breakdown structure and Gantt schedule of the major tasks, specific milestones and the level of effort of the individual team members to allow for a complete understanding as to how and by whom the work is to be carried out in order to successfully deliver the project. The level of effort presented in the technical proposal must be expressed in man-hours.

| | |
|---|---|
| Work Plan/Breakdown Structure and Gantt Schedule | 10 Points |
| Level of Effort is Appropriate | 10 Points |

Although the 'person day allocations' are often included within the sealed financial proposal, the County requires that a copy, **without financial details** such as per hour rates, be included in your technical proposal, so that the level of effort can be clearly determined and may be evaluated at this stage.

5. Value Added Services (10 Points)

   Describe your organizational ability to provide innovative and efficient value-added services in your work plan to deliver the base requirements of the RFP. The Proponent should explain the respective value of such strategic services and the expected results of their application.

**Financial Proposal – Stage Two**

The Proposal with the lowest price will be given 20 points. The points assigned for the price component of the other proposals will be calculated using the following formula: Lowest price ÷ submitted price x 20 points.

## Agreement

The successful Consultant will be required to enter into a formal Agreement with Oxford County for the project (M.E.A./C.E.O. Client/Consultant Agreement for Municipal Works). Upon award, the successful Consultant will submit a draft of the current version of MEA/CEO agreement for the County's review. The County reserves the right to negotiate the terms and conditions of the Agreement.

**a) Basis of Payment**

Agreement should reflect "Upset Cost Limit"

**b) Insurance**

Refer to Section 17.1 of the County's Purchasing Policy (Appendix A) for general liability, auto, and professional liability and errors & omissions insurance requirements - to be complied with by the successful Consultant.

## Proponent Enquiries during the RFP Submission Period

If a Proponent (Bidder) needs to address any discrepancies, errors and/or omissions in the Bid Document, or if they are in doubt as to any part thereof they shall submit questions in writing through [**oxfordcounty.bidsandtenders.ca**] using the "Submit Question" feature associated with the Bid Opportunity.

Questions are to be submitted online and not through e-mail. Questions will be accepted up to and until closing of the bid. However; questions asked within seventy-two (72) hours of bid closing may go unanswered. If a question asked within seventy-two (72) hours of bid closing will have major ramifications on all bidders, at the discretion of Oxford County, an addendum may be issued to clarify which could result in changes to the bid; including changes to the closing date up to cancellation of the bid opportunity.

## Submission Date

Oxford County shall **only** accept and receive Electronic submissions through the [**oxfordcounty.bidsandtenders.ca**], hereafter called the **"BIDDING SYSTEM".**

HARD-COPY SUBMISSIONS SHALL **NOT** BE ACCEPTED.

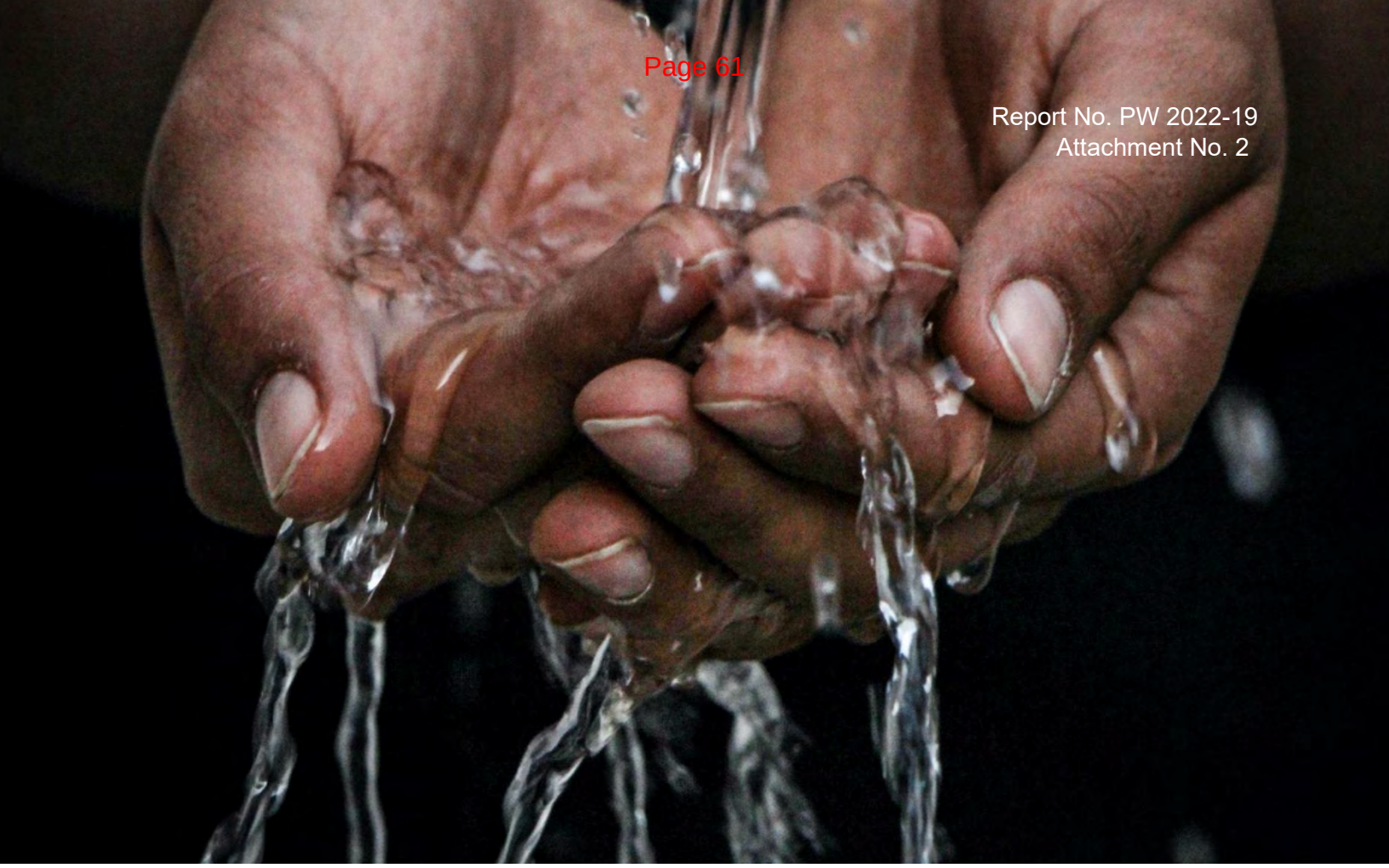
Submissions shall be received by the Bidding System, until **2:00 p.m. (local time), on Wednesday, August 18, 2021.** Late Bids shall **NOT** be accepted by the Bidding System.

All Proponents (Bidders) shall have a Bidding System Vendor account and be registered as a Plan Taker for this Bid opportunity, which will enable the Bidder to download the Bid Call Document, to receive Addenda/Addendum e-mail notifications, download Addendums and to submit their bid electronically through the Bidding System.

Bidders are cautioned that the timing of their Submission is based on when the Bid is **RECEIVED** by the Bidding System, **not** when a Bid is submitted by a Bidder, as Bid transmission can be delayed due to file transfer size, transmission speed, etc.

For the above reasons, Oxford County recommends that Bidders allow sufficient time to upload their Bid Submission and attachment(s) (if applicable) and to resolve any issues that may arise. The closing time and date shall be determined by the Bidding System's web clock.

***The consulting assignment awarded is anticipated by August 25, 2021 with project commencement shortly thereafter.***



Oxford County
Growing stronger together

City of Woodstock

Tillsonburg
CONNECTED. ENRICHED. INSPIRED.

# Joint Water and Wastewater Service Delivery Review Report

March 16 2022

**GM BluePlan Engineering Limited**
Stoney Creek, Ontario gmblueplan.ca

GM BluePlan ENGINEERING

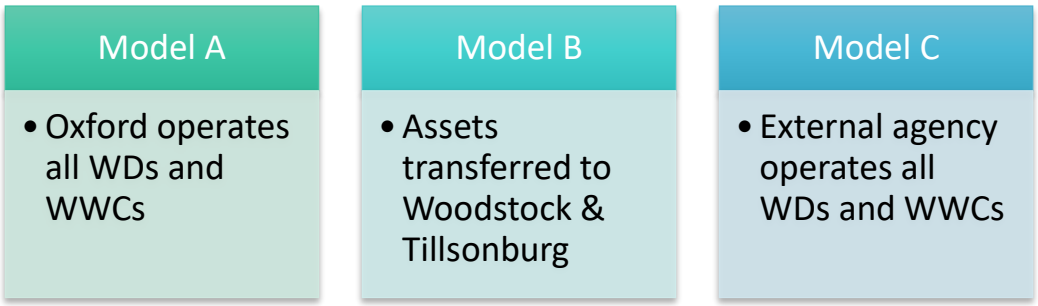
MVU MUNICIPAL VU CONSULTING

## Table of Contents

# 1. Executive Summary

The County of Oxford operates all of the municipal water distribution (WD) and wastewater collection (WWC) systems within the eight Area Municipalities, except for two systems where the City of Woodstock and the Town of Tillsonburg perform these services under contract to Oxford County and are engaged as Operating Authorities. The County, City of Woodstock and Town of Tillsonburg engaged GM BluePlan to conduct a joint Service Delivery Review to examine the viabilities and effectiveness of water distribution and wastewater collection service delivery models.

Current state was assessed, to fully understand a baseline and explore challenges, costs and benefits experienced with the current service delivery mode. Several alternate models were considered (shown below), and these models were explored and compared based on a variety of criteria. This process was carried out in consultation with staff from Oxford, Tillsonburg and Woodstock, and through analysis of data from 2018-2020.




Model A involves the County of Oxford assuming full Operating Authority responsibility for the WDs and WWCs in Tillsonburg and Woodstock and continuing as WD and WWC Operating Authority for all of the other Area Municipalities. Model A offers the most advantages and least number of disadvantages and risks to the County and its citizens. It is recommended that Model A be further pursued as the preferred model to deliver water distribution and wastewater collection services in Oxford County. Model A is identified as the option with the greatest ease of implementation and benefits, and the lowest overall risk related to legislative requirements, operations, and other considerations.

Model A is the only model that offered annual savings, rather than estimated increases in costs, and also is estimated to require relatively minor one-time capital costs. Beyond financial benefits, other considerations for Model A contribute to this recommendation, including consistent customer experience, service levels across the Area Municipalities. Established and proven systems and resources can be utilized, and as Owner and Operating Authority for other WDs and WWCs, Oxford is already carrying out the core responsibilities required with the transition. This allows for benefits from economies of scale and substantive annual operating savings.

Model B (transitioning ownership and operation of WD and WWC assets to Tillsonburg and Woodstock) and Model C (operation by external agency/contractor) have specific strengths and benefits which are discussed in this document. However, the increased costs, administrative challenges, and operational learning curves outweigh these benefits.

Regardless of which model is chosen, the best practices included in this report, identified as Status Quo Plus, should be explored in the next steps of implementation.

**Under Model A as recommended, the service delivery expenditures reviewed that are identified as potential cost savings is $1,035,976 (or 18.25% of the total current service delivery expenditures).**

# 2. Background

The County of Oxford (the County), City of Woodstock and Town of Tillsonburg engaged GM BluePlan to conduct a joint Service Delivery Review (the Review) that examines the viabilities and effectiveness of water distribution (WD) and wastewater collection (WWC) service delivery models.

All of the municipal water and wastewater treatment assets within the eight Area Municipalities are both owned and operated by the County. The water distribution and wastewater collection systems are also owned by the County, and the County operates all of the WDs and WWCs[1] except for those in Woodstock and Tillsonburg. The City of Woodstock and the Town of Tillsonburg perform these services under contract to the County and are engaged as Operating Authorities for the respective Woodstock and Tillsonburg WDs and WWCs; the local municipalities perform operational responsibilities on these systems under the authority of the *Safe Drinking Water Act (2002)*, similar to a contractor to the County. The most recent Operating Authority service contract agreements between the County and Woodstock/Tillsonburg were last updated in 2006 (City of Woodstock) and 2012 (Town of Tillsonburg). Though technically expired and outdated, these agreements have continued to remain in effect given neither party has terminated their respective agreement.

The purpose of this assignment was to review this current operational model in more detail, assessing the people, processes, technology, and expenditures involved in service delivery, to identify potential opportunities for improvement that would optimize the service delivery model and modernize operations. The provision of water and wastewater services is viewed in most jurisdictions as a service that is fundamentally tied to the life and future well being of the community and is seen quite differently than other utilities such as power, gas and telecommunications. Hence, special considerations of a range of criteria are included in this fulsome evaluation.

Service Areas being reviewed include WD and WWC performed by three Operating Authorities: the County, the Town of Tillsonburg (Tillsonburg), and the City of Woodstock (Woodstock). The key categories of service tasks for both water and wastewater include:

- Billing,
- Customer service,
- Engineering,
- Operation, maintenance and monitoring,
- Planning,
- Policy/legal, and

[1] WD systems: Beachville, Bright, Brownsville , Dereham, Drumbo-Princeton, Embro, Hickson, Ingersoll, Innerkip, Lakeside, Mt. Elgin, Oxford South, Plattsville , Tavistock, and Thamesford

WWC systems: Drumbo, Embro, Ingersoll, Innerkip, Mount Elgin, Norwich, Plattsville, Tavistock, Thamesford

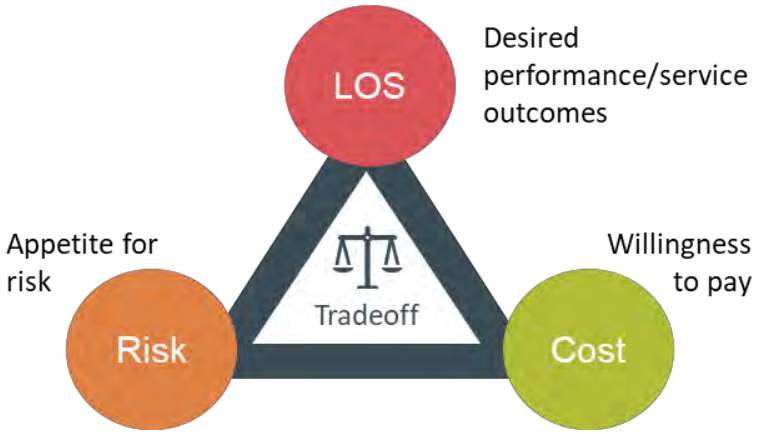
- General compliance/conformance tasks such as budgeting, drinking water Quality Management System (QMS), and backflow enforcement.

## 2.1 Cost, Level of Service and Risk

Ontario municipalities delivering water and wastewater services are challenged by complex legislation and fiscal constraints, increasing customers/expectations, and aging infrastructure. To address these challenges while maintaining service levels and financial targets, owners and operating authorities strive to balance three intrinsically connected elements: service levels, cost and risk.

The tension between these elements typically results in impacts and trade-offs. For example, by allowing one element to decline or conversely by enhancing another, an organization can be pushed off balance and away from the optimum center point. A municipality may elevate its levels of service beyond what the organization can afford - the cost of service provision may be reaching beyond what the community is willing to pay. When the tension between level of service and cost is not balanced, it exposes the organization to sustainability risks.

*Figure 1 Balance of Risk - Level of Service - Cost*




The County is seeking to establish this balance between service levels, cost and risk by defining current state, exploring alternate models for water and wastewater service delivery, and identifying efficiencies that may work towards an optimum balance.

## 2.2 Objective

The overall purpose of assignment is to systematically determine the most appropriate and cost effective way to provide municipal water distribution and wastewater collection services, while optimizing service levels. Optimizing service levels, cost and risk while maintaining safe, reliable and sustainable services are the common goals of all of the municipalities involved.

## 2.3 Methodology

To begin, a stakeholder group was established to collect data, consult on current practices and communicate model options. These stakeholders included representation from the Town of Tillsonburg, City of Woodstock and County of Oxford.

A common industry framework[2], illustrated in the diagram below, was used to view water and wastewater service provision. The framework is designed to help water and wastewater utility managers make informed decisions and practical, systematic changes to achieve excellence in utility performance in the face of everyday challenges and long-term needs of the utility and the community it serves.

The following are the core elements of the Effective Utility Management Model:

- Product Quality
- Customer Satisfaction
- Employee and Leadership Development
- Operational Optimization
- Financial Viability
- Infrastructure Strategy and Performance
- Enterprise Resiliency
- Community Sustainability
- Water Resource Sustainability
- Stakeholder Understanding and Support

*Figure 2 Effective Utility Management Model*


The GM BluePlan team carried out the following steps to complete this assignment:

- Consultation / Data Review & Analysis (2018-2020) / Interviews / Workshops phase;
- Current state review;
- Models definition and evaluations – introduction of status quo plus;
- Financial modelling;
- Implementation scatterplot; and
- Final recommendation.

[2] https://www.nacwa.org/docs/default-source/resources---public/eum-primer-final-1-24-17.pdf?sfvrsn=6

The model evaluations involved a fulsome review of:

- Legislation;
- Service levels;
- Governance and organizational structure;
- Planning and sustainability;
- Customer relations;
- Pros and cons;
- Risks; and
- Financials – including revenues, expenditures, reserves and capital forecasts, and cost of service comparisons.

**Models**

Three comparator model options were agreed upon by stakeholders for evaluation. Oxford currently operates and maintains all water and wastewater treatment service, and treatment assets and responsibilities are not included in this evaluation.


One of the local municipalities expressed an interest in also acquiring treatment assets along with distribution and collection, however the County identified some key challenges with this suggestion. Several key challenges with a decentralized treatment model exist, and continued minimization of public health risks is paramount. The County has found efficiencies and has reduced public health risk by providing heavily regulated water treatment and wastewater treatment operations through a centralized model. It was concluded that decentralizing treatment into individually owned or operated systems would be a complex process of disentanglement that would most likely not offer tangible benefits that outweigh the risks.

## *Model A – Oxford Operating Authority of All WD and WWC Systems*

In this model, Oxford assumes Operating Authority full responsibility as the Operating Authority for the operation and management of its WD and WWC systems in Tillsonburg and Woodstock. The County continues to own all of its assets in this regard.

- Contractual agreements with the Town Tillsonburg and City of Woodstock are not renewed.
- All water & wastewater responsibilities are assumed by Oxford.
- Oxford would continue to bill customers.

## *Model B - Local Ownership & Operation of WD and WWC Systems*

In this model, the Town and City assume ownership of respective WD and WWC assets, and full Owner and Operating Authority responsibilities for the WD and WWC services. The transferred assets are shown in Table 1.

*Table 1 Model B - Assets to Transfer in Ownership and Responsibility*

| | Asset Type | Quantity | Units |
|---|---|---|---|
| **Woodstock** | **Water Distribution** | | |
| | *Local watermains and transmission main, all diameters* | 275 | km |
| | **Wastewater Collection** | | |
| | *Gravity Sewers including trunk sewers* | 242.6 | km |
| | Forcemains | 3.4 | km |
| | Sewage Pumping Station | 4 | # |
| | Grinder pumps | 18 | # |
| | Embro SPS | 1 | # |
| | Innerkip SPS | 1 | # |
| | Embro Forcemain | 14774 | m |
| | Innerkip Forcemain | 7658 | m |
| | Odour Control Facilities | 2 | # |
| **Tillsonburg** | **Water Distribution** | | |
| | *Local watermains and transmission main, all diameters* | 155 | km |
| | **Wastewater Collection** | | |
| | *Gravity Sewers including trunk sewers* | 115.7 | km |
| | Forcemains | 2.3 | km |
| | Sewage Pumping Stations | 3 | # |

*Assets currently operated by the Town or City are noted in italics.*

- Contractual agreements between County and the Town Tillsonburg and City of Woodstock are not renewed.
- Legal transition of assets and related permits/licenses from Oxford to respective municipalities.
- Transition of all ownership and operating authority responsibilities occurs.
- The Town and City distribute water via County treatment and transmission mains to homes and businesses, collect wastewater and return it to Oxford via trunk mains for treatment.
- Drinking water and wastewater treatment services are purchased at a wholesale rate from Oxford.
- Oxford continues to operate water trunk feedermains, water booster pumping stations and water storage/tower facilities, managed through SCADA. Sewage forcemains, odour control facilities, sewage pumping stations, etc., become operational responsibility of the Town and City.
- Oxford revenues for the Town and City's portion of treatment and reserves are supplied through the wholesale rate.
- Water billing and revenue are managed solely by the Town and City.
- Water and Wastewater Treatment continues to be provided by Oxford staff.

The process for transferring the assets and related legal implications was not within the scope of this project. A detailed assessment of the larger financial and legal implications such as asset valuation, reserve transfers and the cost of borrowing, would be required for further evaluation or implementation of this model.

***Model C – Contract WD and WWC of All Systems to External Operating Agency***

Oxford to contract out all WD & WWC service management, excluding water treatment and wastewater treatment and operations to an external operating agency or contractor. Within the model, the scope of the assets to be operated by an external agency would include all distribution and collection linear and vertical assets for all local municipalities.

- Contractual agreements with the Town Tillsonburg and City of Woodstock are ceased.
- An RFP or Tendering process is developed.
- Operating authority responsibilities of all of the municipal water distribution and wastewater collection systems is transferred to the external agency/contractor under an operating agreement (required under the *Safe Drinking Water Act*).
- Water and Wastewater Treatment continues to be provided by Oxford staff.
- Feedermains and water/wastewater treatment facilities would not be included.
- All assets continue to be owned by Oxford.

## 2.4 General Assumptions

The success and effectiveness of any of the service delivery models is subject to several external uncertainties. These uncertainties are realistic and pose pressures on assets, operations and personnel coverage, but since they are applicable across all models, have not been factored into the evaluations.

- New and changing legislation, such as changing requirements for water distribution, wastewater collection, quality management, or asset management;
- Climate change impacts (e.g. flooding, infrastructure condition and demand);
- Hyper-inflation affecting purchased goods, services, fuel and energy costs;
- Impacts of pandemic; and
- Shortage in qualified / licensed staff.

In the financial considerations for Model B, it should be noted that an extensive evaluation process will be required to set the valuation of assets that are to be transferred from Oxford to Woodstock and Tillsonburg, and to define the methodology and cost of that asset transfer. Under the PSAB Tangible Capital Assets, these assets are identified within Oxford's ownership and a methodology will need to be agreed upon for how these assets are transferred. This could be a considerable financial issue for all parties.

# 3. Current State

Legislated requirements in municipal water and wastewater services is complex and extensive. As such, the model evaluations had to take into consideration the risks, efficiencies and complexities that are involved with each model, and the potential effects on maintaining compliance. Legislative considerations included the *Municipal Act (2001)*, *Safe Drinking Water Act (2002),* and its numerous regulations, with particular focus on the Municipal Drinking Water Licensing Program, the *Drinking Water Quality Management Standard (2017, v.2.0),* the *Ontario Water Resources Act (1990)*, and the *Infrastructure for Jobs and Prosperity Act (2015)*, amongst others. Current municipal by-laws, policies and contracts were also reviewed and considered, including agreements with neighbouring municipalities, by-laws, collective agreements, Asset Management Policy, QMS Policies and Strategic Plans, amongst others.

## 3.1 Responsibilities

Under the Safe Drinking Water Act, Owners and Operating Authorities both are prescribed duties to:

- Maintain compliance
- Maintain assets in a fit state of repair, and
- Operate systems with trained persons. The County of Oxford has Owner and Operating Authority responsibilities for water distribution and wastewater collection in Beachville, Bright, Brownsville , Dereham, Drumbo-Princeton, Embro, Hickson, Ingersoll, Innerkip, Lakeside, Mt. Elgin, Oxford South, Plattsville , Tavistock, and Thamesford.
- In Tillsonburg and Woodstock WDs and WWCs, operating responsibilities are shared between Oxford, the Town of Tillsonburg and the City of Woodstock.

The general list of key responsibilities is provided.

The core water distribution and wastewater collection responsibilities include:

**General**
- By-law Enforcement
- Capital & Operating Budget
- Climate Change Adaptation
- Drinking Water Quality Management
- Emergency Management
- Energy Demand Management
- Health & Safety Management
- New Service Inspections
- Source Water Protection
- Water Backflow Enforcement
- Water Efficiency and Conservation Program
- WW Biosolids Land Application

**Engineering**
- Capital Delivery Support
- Cast Iron Water Main Replacement Program
- Development Application Review
- GIS Maintenance
- Hydraulic Modelling
- System Optimization & Process Engineering
- W/WW Hydraulic Modelling
- WW Inflow & Infiltration Studies

**Planning**
- Asset Management
- Business Continuity Planning
- Condition Assessments
- Long-term Budget Forecasting
- Master Planning & Class EAs
- Rate Studies
- Secondary Plan / Functional Servicing Reporting
- Water Financial Plan

**Customer Communications**
- Customer Outreach & Communication
- Customer Service

**Operation, Maintenance & Monitoring**
- Break Response & Repair
- Hydrant Flow Test
- Hydrant Flushing & Inspection
- Locates
- Maintenance of Drain Valves/Air Release Valves/Pressure Reducing Valves
- Meter Installation/Repair/Maintenance
- O&M of Water Local Main
- O&M of Water Transmission Main
- O&M of WW Forcemain (including swabbing)
- O&M of WW Local & Trunk Sewer
- O&M of WW SPSs, Odour Control Facilities
- Quality Sampling & Testing
- SCADA
- Sewer Flow Monitoring
- Sewer Flushing & CCTV
- Water Backflow Testing
- Water Valve Cycling
- WW Effluent Quality Management
- WW Grinder Pump Inspection & Maintenance
- WW Maintenance Hole Inspection
- WW Septic Tank Inspection

**Policy & Legal**
- ICI Abatement agreements
- Policy and By-law Setting
- Water Agreements – Norfolk
- WW Agreement - East Zorra-Tavistock

**Billing**
- Billing and Payments
- Billing Inquiries
- Billing Provider Contract Management
- Meter Reads
- Water Shutoffs

## 3.2 Levels of Service

Overall, the level of service aim for Oxford and the local municipalities is to provide **safe, reliable** and **sustainable** drinking water & wastewater services to consumers within Oxford County. The levels of service are parameters that describe the extent and quality of services that the municipality provides to its citizens.

It is challenging to align service level objectives between multiple municipalities, as methodologies, data collection methods and data interpretation varies. Each municipality is currently providing water and wastewater distribution and collection services at different service levels.

*Table 2 Levels of Service[3], Targets and Comparison, 2020*

| Commitment | Target Indicator (annual) | Current Performance (2020) | | |
|---|---|---|---|---|
| | | Oxford | Tillsonburg | Woodstock |
| Safe | Zero Ministry non-compliances, orders | | | |
| | Zero DWQMS external non-conformances | | | |
| | Zero precautionary boil water advisories | | | |
| | Zero adverse water quality incidents | | | |
| Reliable | 100% of critical valves cycled | | | |
| | 25% of non-critical valves cycled | | | Plus |
| | Hydrants regularly flushed (number of flushes) | | | |
| | 20% of all hydrants flow tested[4] | Plus | | |
| | 7% of sewers inspected with CCTV | | | |
| | 20% of sewers flushed (not including flushing for CCTV) | | Plus | |
| | 20% of maintenance holes inspected | Plus | | Plus |
| Sustainable | Financial metrics – to be discussed in Section 3.3 | - | - | - |

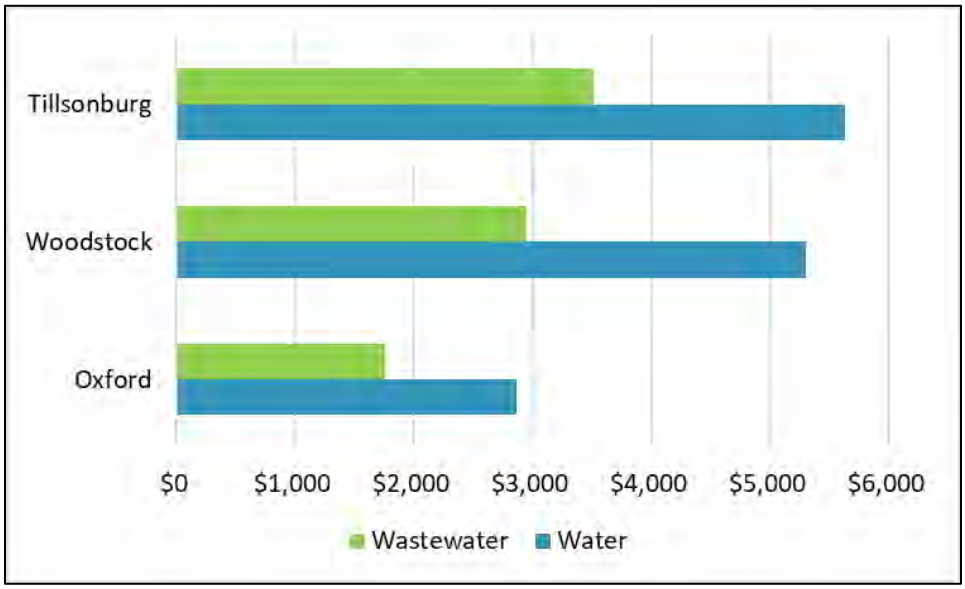
- [3] Green indicates current performance meets the target level. These target levels are considered to optimize and balance operational awareness, asset life, reliability and operational cost.
- Orange indicates current performance is 50-100% of the target, or at least one advisory/adverse occurred. Deviations from these targets may reduce operational awareness, asset life, or reliability, or increase public health risk.
- Red indicates less than 50% of the target is met. Operating at this level may significantly affect operational awareness, asset life, or reliability.
- 'Plus' indicates operational activities exceeded the target. Operating above targets may provide increased asset benefit, but also result in increased operational costs to complete.

- [4] Based on data and staff feedback

## 3.3 Metrics and Costs

As part of the current state analysis, GM BluePlan looked at some comparators metrics which are often used in benchmarking exercises to assess effectiveness and/or efficiency of operations. The comparison of actual operating costs/km of water distribution and wastewater collection main is shown below.

*Figure 3 Water & Wastewater Operating Cost / km, 2020 (actuals)*



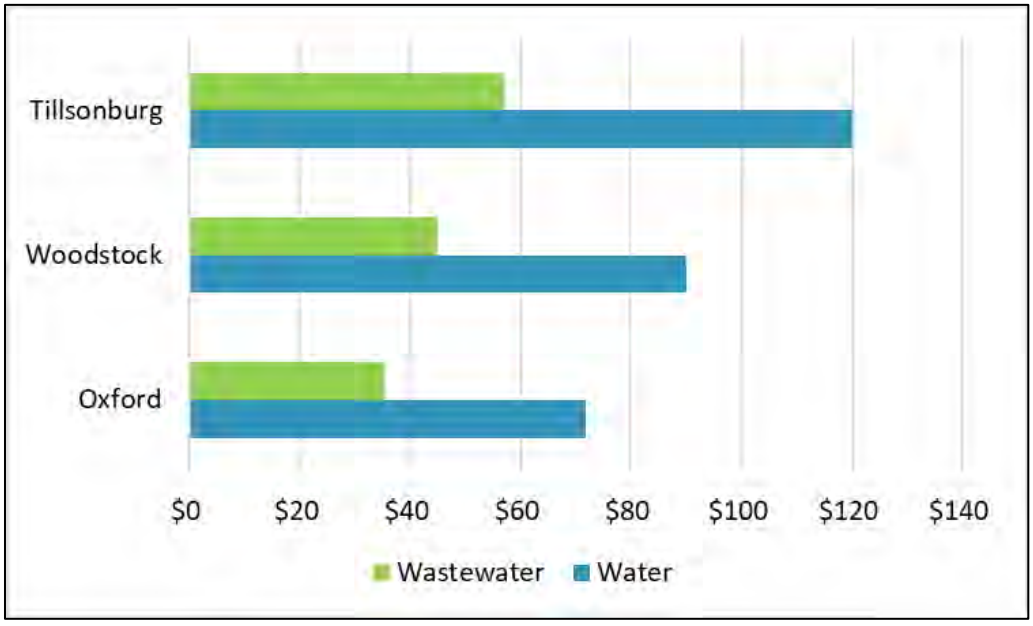

The following table describes the number of operators and the costs per km of watermain and wastewater main by municipality. There are a total of 24.5 operators currently operating all of the distribution and collection systems. Oxford has a lower cost per km of main than Woodstock and Tillsonburg.

*Table 3 Operators and Cost per km of Watermain and Wastewater Main Combined, 2020*

| Water Distribution & Wastewater Collection Combined | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Total km | # Operators | km / Operator | Actuals $ | Budget $ | **Actuals $/KM** | **Budget $/KM** |
| Oxford | 549 | 9 | 61.00 | $1,301,842 | $1,564,031 | **$2,371** | **$2,849** |
| Woodstock | 521 | 11.5 | 45.30 | $2,182,819 | $2,518,175 | **$4,190** | **$4,833** |
| Tillsonburg | 273 | 4 | 68.25 | $1,286,953 | $1,313,100 | **$4,714** | **$4,810** |
| **Total** | **1343** | **24.5** | **54.82** | **$4,771,614** | **$5,395,306** | $3,553 | $4,017 |

The figure below shows the cost of water and wastewater operations and maintenance indexed to the number of customer accounts (indicated by number of metered water services).

*Figure 4 Water & Wastewater Operating Cost per Customer Account (Metered Water Services), 2020*



The table below shows the combined cost of water and wastewater indexed to the total number of customer accounts (metered water services). Similar to the cost per km above, Oxford exhibits the lowest cost per customer account.

*Table 4 Water and Wastewater Combined Operating Cost Per Customer Account, 2020*

| Water Distribution & Wastewater Collection | | | |
|---|---|---|---|
| Total Water Services | | **2020 Actuals $/service** | **2020 Budget $/service** |
| Oxford | 12159 | $107 | $129 |
| Woodstock | 16192 | $135 | $156 |
| Tillsonburg | 7261 | $177 | $181 |

# 4. Comparison of Models

With current state established, GMBP proceeded to evaluate three alternate service delivery models to deliver water distribution and wastewater collection services for the County of Oxford. The three most viable models were discussed and selected in consultation with the stakeholder group. The models, related assets, responsibilities and current service levels are provided in this report.

Through consultation workshops, data review and analysis, and comparative municipal benchmarking, each model was evaluated, in comparison to current state or 'status quo'.

- Levels of service were defined and compared.
- Strengths, weaknesses, external opportunities and external threats were discussed and defined.
- Organizational Considerations, Financial Considerations were evaluated in detail.
- Risks were explored in the categories of operational, staffing, compliance, environmental, technological, financial, reputational / customer and Infrastructure risks.

Using the analysis listed above, a qualitative summary of pros and cons was developed and the highlights of that analysis are summarized in the following sections.

## 4.1 Model A – Oxford Model

This model is estimated to demonstrate a wide range of benefits to Oxford and the citizens of the County. The model allows for the alignment of accountability and responsibility and the control of treatment, distribution and collection services within one singular entity; customer service, billing, operations, planning, engineering and policy-setting are managed solely from one organization across the County, which allows for better coordination amongst the divisions within the County. This singular operational hub and drinking water quality management system as owner and operating authority allows for processes currently performed in triplicate to reduce to one, and allows for consistent levels of service and efficiencies to be found in economies of scale.

These benefits extend to staffing in terms of work process efficiency, coverage of duties in case of absence, OIC and ORO coverage. The span of control for the supervisory and management staff are more in line with comparator municipalities. Staff in Oxford already have experience operating water distribution and wastewater collection systems and these new assumed responsibilities align with those skillsets, thus reducing the need for additional training or licensing.

Drinking Water Quality Management is a rigorous system requiring staff resources to administer and maintain its conformance to the legislated standard. Oxford currently administers the drinking water QMS requirements on behalf of the operating authorities, such as preparation and updates of the Operational Plan and procedures. As stated above, this is currently being carried out in triplicate and can be much more efficient and effective as one owner and one operator.

Oxford has well established processes for operations, maintenance, planning, billing, engineering, budgeting, climate change adaptation and mitigation, water conservation and energy demand management would all apply directly to the additional assets being operated.

Existing County systems and technology well equip the County to take on the additional Operating Authority responsibilities, while increasing seamless access to data.

The transition, however, would not be without some challenges. Oxford staff are less familiar with the Tillsonburg and Woodstock underground linear infrastructure and customers than the current operating authorities, which would require time to learn the details of the systems. In addition:

- The additional geographical scope of coverage lengthens travel/response time for current Oxford operators (assuming an alternative geographical staff reallocation is not afforded).
- Coordination of capital WD and WWC projects within local municipal roads will still require coordination and communication, as is the current practice.
- A detailed transition plan for successful transfer of Operating Authority duties and data will be required.
- Minor administrative licensing change would be required as Oxford would become Operating Authority for the two systems.

## 4.2 Model B – Local Municipalities Model

This two-tier model is in place in other Ontario municipalities such as Region of Niagara and Region of Waterloo. The main strength of the model stems from the local municipality owning and operating the local infrastructure at service levels and rates based on direct and local community preferences. Existing local municipal staff know their citizens and community.

Certain processes such as billing, budgeting, asset management, and capital delivery may be further streamlined with one owner and operating authority. However, work will still require coordination with the County, such as development review and planning, water and wastewater SCADA systems, capital planning (linear infrastructure within County Roads), and some bylaws.

With this model, the local municipalities will have the authority to set and manage the billing rates for customers directly based on budgeting and capital forecasting within their full authorities. However, the water distribution and wastewater collection costs make up a small portion of the overall costs and they would be required to purchase wholesale water and wastewater treatment services from the County and given the differences in operating costs at each municipality, it is likely that Woodstock and Tillsonburg would have different rates set to meet their needs. If costs rise, the local municipalities will need to raise rates or take on additional debt. This is currently the responsibility of the County as the owner.

Numerous other challenges arise from this model, not due to the service model itself, but the cost and risks of transitioning into this model and taking on new ownership responsibilities.

The most one-time 'administrative' challenges exist with this model. The one-time administration tasks due to the transfer of assets, such as asset valuation, legal agreements, provincial licensing and permits will require staff, legal and consulting resources. The transition to a two-tier model, and resulting contractual agreements, will require the County to conduct a rate study to establish wholesale water and wastewater rates for the local municipalities, accounting for treatment costs and reserves.

New or expanded technology may be required for the new responsibilities for billing, document management and system optimization. This would require one-time purchasing costs, training, and staffing resources.

One-time capital costs for transition are estimated at $575,000 to $825,000, and may include the following initiatives:

- $100,000 -$150,000 - Transition Implementation Plan
- $200,000-$300,000 – Asset Transfer Study - Asset Valuation / Reserve / Debt Considerations for Transfer
- $100,000 - $200,000 Legal Costs
- $100,000 - Initial Wholesale / Retail Rate Study
- $75,000 – Revised Asset Management Plan
- Meter Reading Software (Itron Temetra)
- SCADA

As stated above, the cost of transferred assets and associated cost of borrowing to cover one-time capital or to cover transferred assets is not included and depending on the methodology agreed to by the parties, could potentially be a significant impact.

Operating the WDs and WWCs is currently a familiar responsibility of both Tillsonburg and Woodstock, however this model requires operation of forcemains, transmission watermains, sewage pumping stations and odour control facilities, all of which would be new to Tillsonburg and Woodstock.

There is a need to increase staff capacity and skillsets within both Tillsonburg and Woodstock, to absorb the new responsibilities related to now owning and operating licensed systems, including new vertical assets not operated before by staff. This transition requires additional skilled staff, training, and additional demand on current staff. The additional roles and skillsets are, in a sense, triplicated with this model, although it is acknowledged that the authority and control over budgets will allow for resources to align with rates.

Economies of scale and consistent service levels can be experienced when one group or role manages the same tasks for multiple municipalities, and inversely, some redundancies or loss of efficiencies arise when several smaller groups are carrying out the same tasks in smaller areas. There was some expectation that the additional duties, other than water/wastewater operators, could be partially absorbed by current staff, however, they may not possess the necessary skillsets and expertise to absorb new and additional program responsibilities, such as drinking water QMS, billing administration, hydraulic modelling, SCADA systems, backflow prevention, inflow/infiltration studies,

etc. in addition, it was noted at several workshop discussions that Woodstock and Tillsonburg staff are operating at full capacity.

## 4.3 Model C – External Agency/Contractor Model

The strength of this model is the ability to harness the experience, expertise and breadth of a larger agency or contractor to carry out operating authority responsibilities that are its core business all day every day. Contracting to an external agency allows for both the County and the local municipalities to transfer some of the risk and responsibility of operating water and wastewater distribution and collection to a third party, while tightly managing and controlling the work done and service levels achieved.

There are several weaknesses with this model. The first being the contractor's staff will be completely unfamiliar with the Tillsonburg, Woodstock and Oxford underground linear infrastructure and customers than the current operating authorities are dealing with, which would require time to learn the details of the systems.

There will need to be a comprehensive operating contract developed and an elaborate RFP or tendering process. Once that is completed there will need to be an extensive transition plan developed, which would be the most complex of all of the models. This entire process is expected to take 18 to 24 months, at a minimum, to accomplish and through the financial modelling there does not seem to be the financial incentive that corresponds with the level of effort.

Most contracting entities are profit motivated and decision on the wellbeing of the assets could be affected due to the divergence of interests. As well, any changes in legislation will allow the contractor to claim extras and there are numerous pieces of legislation that are rumoured to be coming on the wastewater side of the business.

Lastly, this model will be the most disruptive to existing staff in the County and Area Municipalities. Once the contractor has been hired, most frontline staff experience and knowledge will be lost and this creates a situation where the municipality could be married to the contract model in perpetuity with no ability to regain the staff or knowledge in the future, should they want to someday revert back to an in-house model.

## 4.4 Financial Comparisons

In addition to the qualitative analysis above, a financial model was developed for each scenario to come up with an estimated operating cost of operations and maintenance. This was then used as a comparator to the status quo.

Throughout the consultation and data review (2018-2020), it became evident that a financial estimate for a fourth service model should be considered, Status Quo Plus. Based on scope restrictions, this model was not evaluated through earlier sections of this report, but financial comparisons have been included. The model involves no changes to the current service delivery method but assumes some

efficiency improvements are implemented based on service levels and desired synergies as well as the addition of new staff that have been requested by Tillsonburg and Oxford.

The results of the financial modelling are listed below.

*Table 5 Summary of Overall Annual WD and WWC Opex for Each Model*

| | | |
|---|---|---|
| Status Quo (baseline) | $ | 5,673,185 |
| Model A | $ | 4,666,059 |
| Model B | $ | 6,161,004 |
| Model C | $ | 6,524,163 |
| Status Quo - Plus | $ | 5,702,035 |

Compared to Status Quo, Model A equates to an estimated **annual savings of $1,007,126, or 18% reduction in the operating cost**. Operational surplus could be applied to reserves to assist with the impending infrastructure deficits. Based on County municipal staffing projections only (not including GM BluePlan staffing recommendations), the resulting overall Model A cost would be $4,396,059.

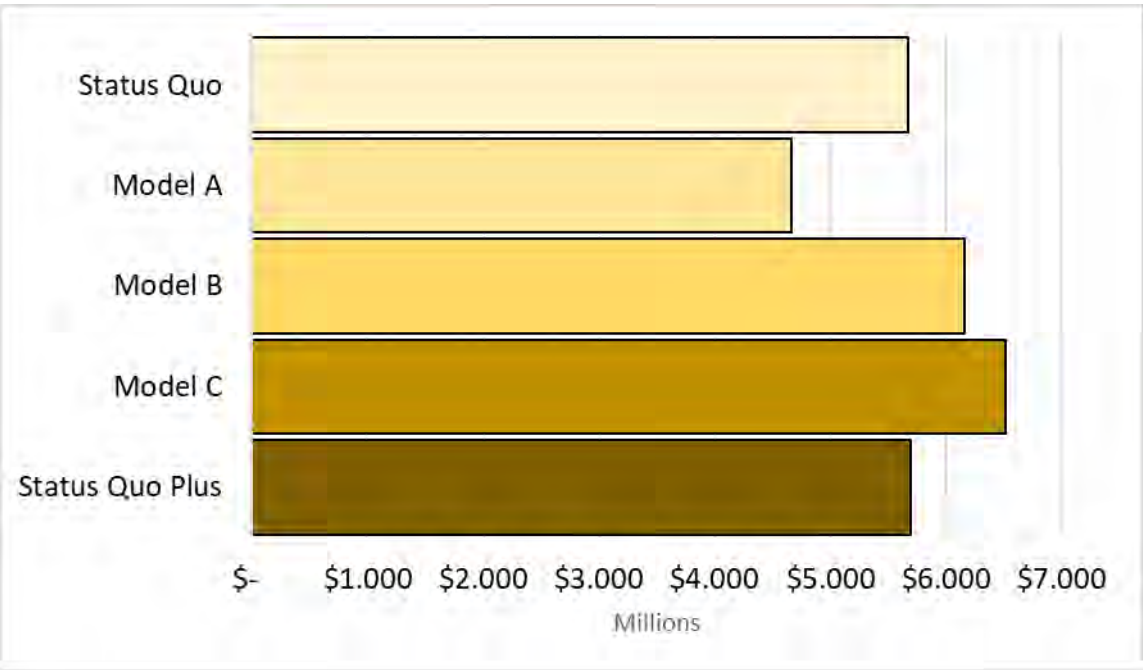
Compared to Status Quo, Model B equates to an estimated **annual increase of $487,819 This increase equates to an approximate 9%** increase in total operating costs. The increases are generally related to increased staffing required for ownership and operation of the linear and vertical infrastructure. Based on local municipal staffing projections only, (not including GM BluePlan staffing recommendations), the resulting overall Model B cost would be $5,611,004.

Compared to Status Quo, Model C equates to an estimated **annual increase of $850,978. This increase equates to an approximate 10%** increase in total operating costs, which has the potential to result in increased customer water rates. The increases are generally related to the change inherent to service delivery by an external contractor.

Compared to Status Quo, the Status Quo Plus Model equates to an estimated that savings of approximately $326,847 may be realized from bundling of goods/contracted services, reallocation of operational labour hours to align with industry standards, regular application of the County's fees and charges by-law, and administering a user-pay backflow prevention program. This is offset by an additional staffing cost of $355,698 to address new service levels standards. In total, **the estimated net annual increase is $28,850**.

These totals are also shown on the following chart. It should be noted that the models were developed using 2020 budgeted values and have not been inflated to current dollars but are relative.

*Figure 5 Comparisons of Overall Annual WD & WWC Operating Expenditures*




Further breakdown of the expenditures by cost category and municipality, for each model, is provided in Appendix A and Appendix B.

Financial estimates of the three original service delivery models indicate that Model A is estimated to have lower overall operating costs to operate and maintain all of the WDs and WWCs within the County, including vertical and linear distribution and collection infrastructure. This could result in an increase contribution to reserves of approximately $1 million, without increasing water and wastewater rates.

# 5. Industry Best Practices

One of the deliverables for this assignment was to analyze the current state and identify any best practices that could be implemented regardless of the decision on which model was selected.

The following is a high-level summary of the identified initiatives. It should be noted that these best practices would most likely require further work by the parties to explore their viability and identify a path towards implementation.

## 5.1 Backflow as a User Fee

Backflow of water from industrial users' systems into the drinking water system is a real and serious threat to the safety of the drinking water. The County has identified this as a priority in its annual Management Reviews as part of its drinking water QMS. The County is in the process of developing a Backflow Prevention By-law to address the risk.

Currently, Woodstock has a process in place where backflow devices have been installed, maintained and inspected within the industrial sector within its borders. The City has approximately one dedicated FTE and approximately $100 K budgeted for this activity. Authority for this activity is lacking as Oxford has not yet passed a by-law laying out the responsibilities and costs for this program. Tillsonburg and the rest of the communities in Oxford do not have a formal program yet for backflow prevention devices.

The best practices throughout almost all municipalities across Ontario, is to have a by-law passed that passes the responsibility for installation, maintenance and annual inspection of these device to the industrial sector customer (user pay model). This removes the cost burden of this activity from the residential homeowner who is not posing a threat to the drinking water and places that onus, cost and responsibility to the industrial customer that is connected to the system and is the entity that has introduced the threat to the system.

GMBP recommends that the County finalize its Backflow Prevention By-law and introduce a user pay system that is self funding to address the issue of possible cross contamination from industrial and commercial customers.

## 5.2 Standard Service Levels

As stated above, Woodstock and Tillsonburg are acting as the Operating Authority for the WD and WWC systems for Oxford, who owns the assets. Woodstock and Tillsonburg are both performing this service under contracts with the County, which have not been updated in the last decade and are technically expired. Each entity is providing different standard levels of service with respect to operations and maintenance of the assets.

Over the recent years and prior to this assignment, the parties were meeting to discuss updating those contracts and in those discussion the concept of standardized operating parameters was brought

forward. Although those discussion were halted during this exercise a table of service standards was brought forward.

GMBP has reviewed the table of service industry standards and agrees that these are best practices as identified by AWWA and WEF and we recommend that which ever model is pursued that these service levels should be adopted throughout all of Oxford County. This would create consistency across the County and the resources that are currently being used exceeding those standards could be shifted to areas of the system where those standards are not being met.

## 5.3 Joint Procurement

Throughout the course of the year there are inherent peaks and valleys that arise with respect to the operations and maintenance of the water distribution and wastewater collection systems. Most municipalities, including Woodstock, Tillsonburg and Oxford set their staffing levels to meet the base amount of work and they utilize contracted service to supplement either a skill set that they do not currently employ or to address the peak workload that is occurring at a given time.

In addition to contracted services, each municipality individually purchases materials that are required to operate and maintain the systems, with the exception of fuel procurement (EMOP). Over all three municipalities, there is approximately $1.7 million budgeted for contracted services and materials and supplies. That is almost 30% of the total cost to operate and maintain all of the systems in Oxford.

GMBP recommends that a procurement group or committee be established amongst all three municipalities that consists of purchasing professionals, management staff and operations staff to look for ways to jointly procure additional services and materials. It is estimated that 5 to 10% of this cost could be avoided through economies of scale as well as a reduction in administrative time to tender and manage these contracts.

The total value of purchased goods and services in Status Quo is $1,575,594, which can lend to significant opportunity for savings. The following table summarizes some goods that are currently jointly procured or bundled, which may relate to water and wastewater activities. The three municipalities perform standalone procurement for goods and services that are common across water and wastewater, where potential for joint procurement savings exist. Some adhoc informal sharing of purchased items currently occurs between the groups as needed.

*Table 6 Joint Procurement and Bundling Status for Oxford/Tillsonburg/Woodstock*

| Service | Currently Jointly Procured or Bundled Tenders? | Opportunity for Potential Savings? | Comments |
|---|---|---|---|
| **W & WW Goods** | | | |
| Fuel | Yes | | EMOP joint purchasing group |
| Fleet/Equipment rentals | | Yes | All individual procurement currently. Mini-excavator, welding equipment & light duty fleet rentals |
| Water meters | Yes | | Iconix Waterworks (County pricing), includes Tillsonburg and Woodstock |
| Meter transmitter | Yes | | Itron transmitters are supplied by Wolesley Canada (County pricing) |
| Meter software (Oxford only) | | | Itron Temetra – water reading software package, including handheld radios and equipment for contracted meter reading |
| Piping, valving & appurtenances | | Yes | All individual procurement currently |
| Gravel / Stone | | Yes | All individual procurement currently |
| Asphalt | | | All individual procurement currently |
| **W & WW Services** | | | |
| Watermain Break | | Yes | |
| Watermain Swabbing | | Yes | |
| Locates | | Yes | If external provision is considered |
| Fleet Maintenance | | Yes | Small repairs in house |
| Hydrant Flow Testing | | Yes | |
| Meter Installations | | Yes | |
| CCTV | | Yes | |
| Sewer Flushing | | Yes | Main sewer lines |
| MH Inspections/ Repairs | | Yes | Small repairs in house |
| Sewer/ Forcemain Repair | | Yes | Excavation/trucking on larger excavations and lining/sport repairs contracted out |

## 5.4 Collapsing Water and Wastewater Reserves

Oxford currently has numerous reserves set up to address future capital expenditures. There are currently 11 reserves set up for wastewater (one for each local municipality) and 4 reserves set up for water (one each for Tillsonburg, Woodstock and Ingersoll and a fourth for the remainder of the local systems).

Transfers in or out of each of these reserves originates from the surplus/deficit between the revenues and expenditures of a particular municipality. The issue that is arising is the fact that many of these reserves are experiencing peaks and valleys at different times throughout the 10-year horizon and creating pressures on the reserve itself.

GMBP recommends that the County consider collapsing these reserves into one water reserve and one wastewater reserve which would offer more flexibility to the County to allocate funds to the required capital project and smoothing out the peaks and valleys somewhat. There would also be a reduced effort in accounting to manage these 15 reserves. It is understood that this is a much more complex decision that has been identified here and that it would require Finance to explore further.

## 5.5 Capital Coordination in the ROW

Regardless of the model that is chosen, there will be assets in the ROW that will require replacement and rehabilitation and coordination of these capital works is critical to ensure that each municipality understands what the priorities are of their partner municipalities. Depending on the model decided upon, there will be situations where the local municipality will be doing work on a County Road, or the County will be doing work on the local road.

GMBP recommends that a formal coordination committee be set up that includes, finance staff, management staff, engineering staff and planning staff to review the annual capital requirements and look for opportunities to better coordinate the work within the ROW. The group would also look for opportunities to shift projects into the future or backwards to gain alignment with their municipal partners and future growth projects.

## 5.6 Inflow and Infiltration

Like many municipalities across province, Oxford experiences substantive costs related to wastewater pumping and treatment of extraneous flows which are present due to high I&I into the WWC systems. Although certain rates of I&I are expected and incorporated in the design of all municipal wastewater infrastructure, industry best practice is to focus on reducing or minimizing I&I into the WWC systems to reduce the cost of pumping and treating extraneous flows and to increase existing capacities. Types of I&I reduction projects include removing cross-connections from storm sewers and catchbasins, sewer lining or replacement, maintenance hole lining and disconnection of downspouts and weeping tile drains, for example.

## 5.7 Cost Recovery

Costs related to specific services and growth can often be incurred without corresponding revenues (through fees and charges) to offset. Initiatives should be considered to ensure services not offered to the general public are covered through a suitable user fee, specifically items around growth. It is important that all municipalities apply the County's Fees and Charges By-law consistently to ensure that growth pays for growth and that these costs are not indirectly passed on to the rate payer.

An example of a cost recovery initiative that may be further considered is below.

### Non-Revenue and Unaccounted Water Usage

Water that is treated and distributed but not billed is considered non-revenue water and can contribute to financial losses when not offset by rate revenues. Also, water usage that is unaccounted for, such as meter error, leaks or theft, can relate to significant financial costs. Several recovery considerations are discussed below related to non-revenue and unaccounted water.

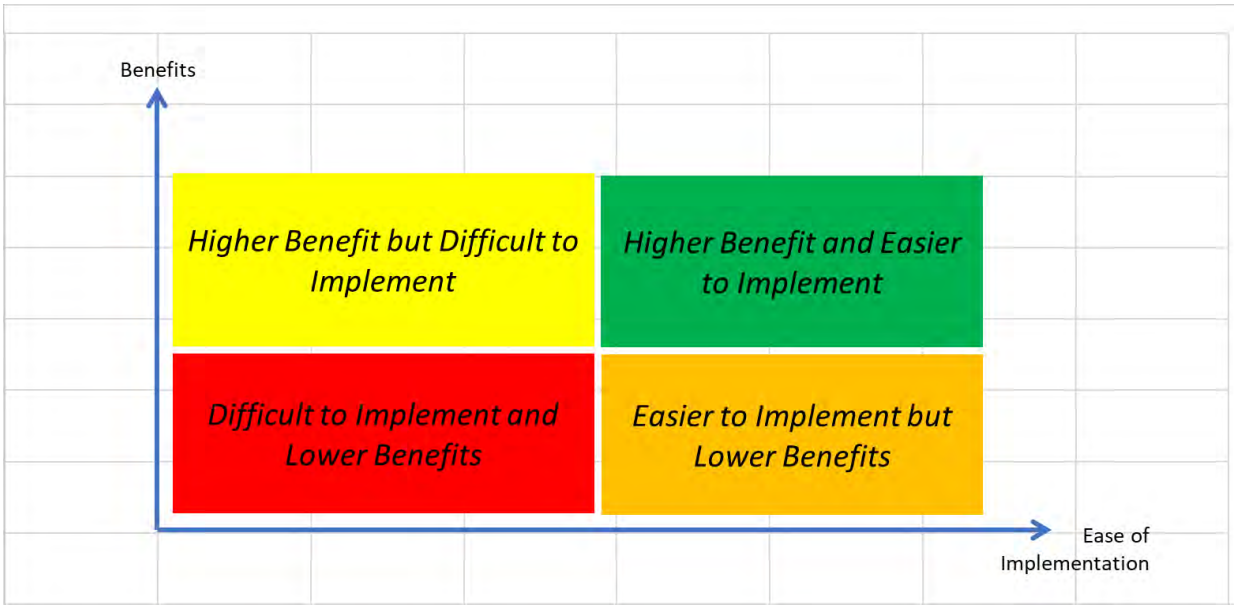
- There may be opportunity to increase accountability for non-revenue water use within the County. Internal services use water for municipal processes, which may be unaccounted for in billing. Water is often used through hydrants for fire services training exercises, flushing irrigation lines, hydrant/main flushing, and this usage may not be fully be captured though accounting processes.
- Capital construction (municipal) and watermain commissioning also require water which may not be consistently metered.
- Accounting for water use for through metered hydrant connections or flow estimations allows for improved internal cost recovery.
- With a quantified assessment of non-revenue water, unaccounted water can be further explored. Unaccounted water may arise through meter error or bypasses, unaccounted usage, or theft, for example. Estimates of losses from watermain breaks or known leaks should also be tracked and included. A study on the amount of unaccounted water and its costs will further indicate the most suited recovery initiatives.

# 6. Ease of Implementation

As requested in the RFP, an implementation scatterplot was prepared, showing the proposed ease of implementation and benefits for each model. The scatterplot visually plots the comparatives for each model, based on the information from consultation, data review, and technical memos.

The purpose of plotting the ease of implementation and benefits for each model is to show the most viable options compared to those with less benefits or implementation ease. The figure below shows how this placement is portrayed, with models in the top right quadrant likely to demonstrate the easiest transition with the most benefits.

*Figure 6 Example Plot Showing Preference of Quadrants*




- Those models that land in the green area show high benefit and are expected to be easier to implement. These are high priority 'quick wins' and are recommended.
- Models with scores in the yellow area offer high benefits but are challenging to implement, which can be considered from recommendation, but would require a robust implementation strategy.
- Models with scores in the orange area offer easy implementation but fewer benefits, and are generally lower priority or not recommended.
- Finally, models with scores in the red area offer lower benefits and are difficult to implement, and are generally not recommended.

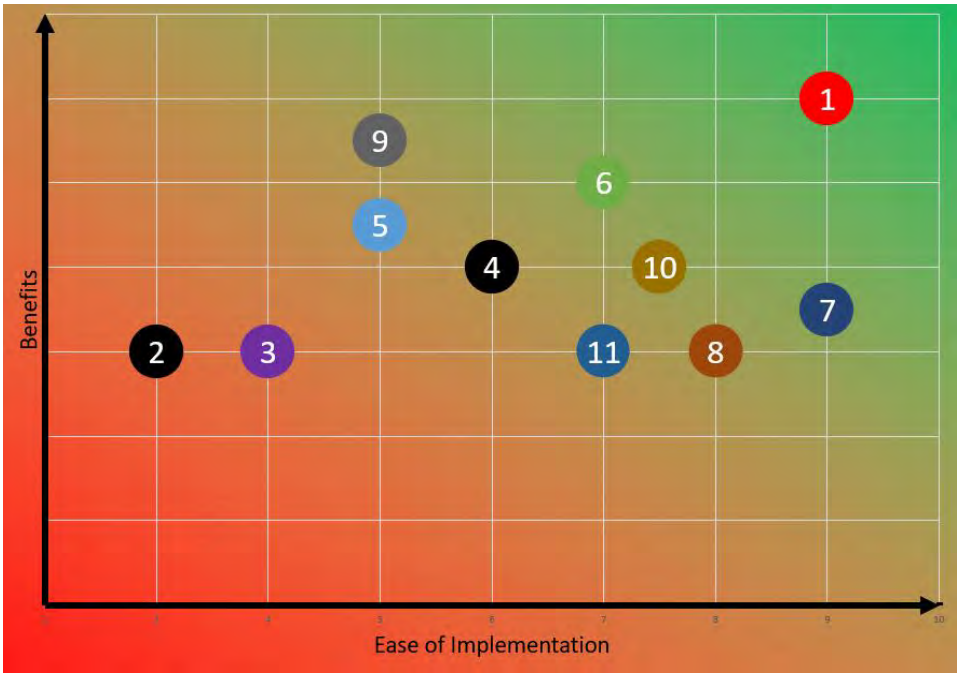
To plot the scores for each model, the ease of implementation and expected benefits were quantified using the table below, based on ease and benefits to the County of Oxford and its citizens. Higher scores indicate the more favourable options based on the noted criteria.

*Table 7 Ease of Implementation and Benefits Scoring*

| Score | Highly Positive / Advantageous | Moderately Positive | Somewhat Positive/ Neutral |
|---|---|---|---|
| | 3 | 2 | 1 |
| **Ease of Implementation** | | | |
| Ease of implementation / change | Relatively simple, smaller process or procedural changes, less formalities or legal requirements | Moderate changes, changes require consultation with some stakeholders | Difficult, changes required across the organization, formal planning required, require consultation with many stakeholders |
| Time to implement | Prompt, swift change within one to two quarters | Moderate timing, within one year | Extended timing, at least one or more years |
| Costs to implement | Low operating and/or capital costs to implement, no debt incurred | Moderate costs to implement, some debt incurred | Higher costs to implement, likely that significant debt may be incurred or long-term costs |
| **Benefits** | | | |
| Cost Savings | Substantial, repeatable cost savings expected | Moderate cost savings expected | Minor/No cost savings expected |
| Customer Experience | Customers will experience enhanced service or improved value for money | Customers may experience service improvements or more value for money | Customers likely will not experience improvements |
| Service Levels | Service levels will be improved and aligned across all municipalities | Service levels may be improved in some municipalities | No service levels improvements are expected |

Based on the analysis and consultation, each model was evaluated and scored using the above framework, resulting in the plot shown below.

*Figure 7 Ease of Implementation and Benefits for Various Models and Best Practices*




| | |
|---|---|
| 1 | Model A |
| 2 | Model B |
| 3 | Model C |
| 4 | Status Quo Plus |
| 5 | User Pay Backflow |
| 6 | Standard Service Levels |
| 7 | Joint Procurement |
| 8 | Collapsing W and WW Reserves |
| 9 | Capital Coordination in the ROW |
| 10 | Inflow & Infiltration Studies |
| 11 | Cost Recovery |

The chart above shows the implementation of Model A (item 1) as the highest scoring initiative, demonstrating substantial benefits and relatively simple, timely and low cost implementation. Model B (item 2) and Model C (item 3) both demonstrate fewer benefits with more difficulty to implement and higher costs.

Items 5 to 11 are the Best Practices identified in section 5 of this report and fall in various areas of benefit and ease of implementation. These items are all considered of reasonable effort, defined benefits and recommended to be initiated regardless of which model is chosen. The Status Quo Plus (item 4) is essentially the compilation of items 5 to 11 and hence its scoring and placement on the graph is more difficult to implement but offering substantial benefits.

Scoring is provided in Appendix C.

# 7. Recommendation

In our opinion, **Model A** offers the most advantages and least number of disadvantages and risks to the County and its citizens. It is recommended that Model A be further pursued as the preferred model to deliver water distribution and wastewater collection services in Oxford County.

Model A involves the County of Oxford assuming full Operating Authority responsibility for the WDs and WWCs in Tillsonburg and Woodstock, and continuing as WD and WWC Operating Authority for all of the other Area Municipalities. The County continues to own all of its assets in this regard and contractual agreements with the Town of Tillsonburg and City of Woodstock would not be renewed.

Model A is the only model that offered annual savings, rather than estimated increases in costs.

- In Model A, the annual operational savings for overall WD and WWC are estimated at approximately $1 million, in comparison to the current expenditures in status quo.
- The one-time capital costs to implement Model A, estimated at $50,000, is significantly lower than Model B, estimated at $575,000 to $825,000. Minor one-time capital costs to implement Model C and the Status Quo Plus are likely, but these were not calculated as part of this assignment.

Beyond financial benefits, other considerations for Model A contribute to this recommendation.

- In terms of the customer experience, Model A offers similar customer service as the other models, and would streamline customer service approach, documentation and response across all of the Area Municipalities.
- Model A allows for service levels to be optimized, consistent across all Area Municipalities, and based on the best practice standard operating parameters and processes.
- Established and proven systems and resources can be utilized, including the Oxford Customer Relationship Management (CRM) System, Work Order Management System (WMS), GIS system, and staffing.
- As Owner, Oxford is already carrying out the planning, billing and engineering responsibilities, including such processes as Hydraulic Modelling. Master Planning, Billing, Policy and By-law Enforcement, Source Water Protection, and SCADA. Oxford is also managing the drinking water QMSs within the WDs and WWCs, including some DWQMS operating authority responsibilities within Tillsonburg and Woodstock. Oxford also has an established Asset Management Plan in place for all of the assets.
- Under Model B, these activities would require a triplication of many of these efforts, would require additional resources, and would eliminate the economies of scale that will be found in Model A.

In 2021 budget deliberations, Oxford Council has given staff direction to freeze fixed water/wastewater rates (Woodstock) and freeze wastewater fixed rates (Townships) at 2020 levels for the period between 2021 to 2024. This direction has resulted in the use of water and wastewater rate reserves to offset cost increases, which already have numerous large draws to deal with the required water/wastewater infrastructure investments identified in the 2017 Asset Management Plan (AMP) as well as servicing of new employment lands (not covered through development charges). Oxford is in the process of

finalizing an update to the 2017 AMP, and this is expected to add further pressure on rate reserves as overall increase to the water/wastewater infrastructure replacement costs are anticipated. Adopting Model A will allow Oxford to reduce operating expenditures by approximately $1 Million annually, which could be directed to these reserves without raising rates for customers.

Finally, as identified in the scatterplot graph in Section 6, Model A is identified as the option with the greatest ease of implementation and benefits, with substantive annual operational cost savings. It is estimated that this model could be implemented in as little as 3 to 6 months.

Regardless of which model is chosen, all of the best practices listed should be implemented. These initiatives are outlined in Section 5.

## 7.1 Future Organizational Structure

The structure for Model A below is proposed as a sustainable approach to delivering the expanded operation and maintenance services. Based on the County's current level of operators per km of pipe, it is estimated 23 operators in total would be required for all systems - 17 WD operators and 6 WWC operators.

- Of the 17 WD operators, it is estimated that 10 would be allocated to the north and 7 allocated to the south.
- For the WWC operators, 3.5 operators would be attributed to the north and 2.5 to the south.
- Dedication of 2.0 Utility Locate Technicians for County-wide coverage.

# 8. Next Steps

Should Model A be approved by County Council for implementation, the following steps are suggested for planning and consideration.

1. *Set up a transition team*. This transition team should include staff from the following areas in Oxford:
   - Senior Management
   - Operational management staff
   - Human resources staff
   - Finance staff
   - Legal staff or consultation
   - Drinking water QMS staff
   - Communications staff

   Representation from Woodstock and Tillsonburg, including Senior Management and support staff as needed from Operations, Corporate Services, Legal, Finance and Human resources.

   Clearly define the key stakeholders, responsibilities, authorities and staffing complements.

2. *Develop a Project Charter* that includes the values that are to be followed and the overall objectives and responsibilities of the parties.

3. *Develop a Communications Strategy* that clearly identifies the key stakeholders and the messaging to each group. This should go down to the tactical level and identify who will be discussing what. Stakeholder should include Council, CAOs, unions, staff, the Public, the MECP, etc.

4. *Develop a Change Management Plan* to ensure that the objectives and values set up front are being adhered to and accomplished while minimizing disruption. A change management plan helps manage the change process, and also ensures control in budget, schedule, scope, communication, and resources. The change management plan will minimize the impact a change can have on the organizations involved, employees, customers, and other important stakeholders.

5. *Explore asset considerations* including fleet, facilities, and equipment that will be required, and any stranded assets in Woodstock and Tillsonburg that may be transferred or purchased by Oxford.

6. *Review the Collective Agreements* to ensure commitments are met and issues such as potential successor rights are explored and resolved.

7. *Identify and address other legal and administrative issues* such as Operating Authority administrative changes under the Municipal Drinking Water License, new staff reporting relationships and organization changes, and so on.

# Appendix A

**Financial Breakdown of Each Model by Cost Category**

| | Status Quo | Model A | Model B | Model C | Status Quo Plus |
|---|---|---|---|---|---|
| Salaries & Benefits | $2,687,245 | $2,788,927 | $3,452,943 | $3,090,332 | $2,839,687 |
| Materials & Supplies | $926,550 | $880,223 | $962,900 | $1,065,533 | $880,223 |
| Purchased Service | $772,635 | $734,003 | $736,285 | $888,530 | $695,371 |
| Overhead, Internal Charges & Other | $1,286,754 | $262,906 | $1,008,876 | $1,479,768 | $1,286,754 |
| **Total** | **$5,673,184** | **$4,666,059** | **$6,161,004** | **$6,524,162** | **$5,702,035** |
| Notes | Other includes overhead for corporate & engineering, and Oxford work in Tillsonburg and Woodstock. | Other includes overhead for equipment and general. | Other includes overhead for corporate, engineering and WWW general. | Other includes overhead for corporate & engineering and Oxford work in Tillsonburg and Woodstock., | Other includes overhead for corporate & engineering and Oxford work in Tillsonburg and Woodstock. |

# Appendix B

**Financial Breakdown of Model A, Model B and Status Quo Plus by Cost Category**

| Woodstock Water | Status Quo | Model A | Model B | Status Quo Plus |
|---|---|---|---|---|
| Salaries & Benefits | $1,060,530 | $0 | $1,432,972 | $908,088 |
| Materials & Supplies | $195,200 | $185,440 | $195,200 | $185,440 |
| Purchased Service | $61,800 | $58,710 | $61,800 | $55,620 |
| Internal Charges & Insurance | $286,260 | $0 | $172,390 | $286,260 |
| Other | $76,800 | $0 | $190,670 | $76,800 |
| **Total** | **$1,680,590** | **$244,150** | **$2,053,032** | **$1,512,208** |
| **Woodstock Wastewater** | **Status Quo** | **Model A** | **Model B** | **Status Quo Plus** |
| Salaries & Benefits | $229,590 | $0 | $229,590 | $331,218 |
| Materials & Supplies | $48,650 | $46,218 | $85,000 | $46,218 |
| Purchased Service | $322,735 | $306,598 | $286,385 | $290,461 |
| Internal Charges & Insurance | $171,310 | $0 | $135,030 | $171,310 |
| Other | $65,300 | $0 | $101,580 | $65,300 |
| **Total** | **$837,585** | **$352,816** | **$837,585** | **$904,507** |
| **Tillsonburg Water** | **Status Quo** | **Model A** | **Model B** | **Status Quo Plus** |
| Salaries & Benefits | $463,100 | $0 | $886,356 | $463,100 |
| Materials & Supplies | $199,400 | $189,430 | $199,400 | $189,430 |
| Purchased Service | $76,500 | $72,675 | $76,500 | $68,850 |
| Internal Charges & Insurance | $134,200 | $0 | $134,200 | $134,200 |
| Other | $16,800 | $0 | $16,800 | $16,800 |
| **Total** | **$890,000** | **$262,105** | **$1,313,256** | **$872,380** |
| **Tillsonburg Wastewater** | **Status Quo** | **Model A** | **Model B** | **Status Quo Plus** |
| Salaries & Benefits | $144,000 | $0 | $144,000 | $347,256 |
| Materials & Supplies | $63,700 | $60,515 | $63,700 | $60,515 |
| Purchased Service | $75,000 | $71,250 | $75,000 | $67,500 |
| Internal Charges & Insurance | $137,800 | $0 | $137,800 | $137,800 |
| Other | $2,600 | $0 | $2,600 | $2,600 |
| **Total** | **$423,100** | **$131,765** | **$423,100** | **$615,671** |

| Oxford Water | Status Quo | Model A | Model B | Status Quo Plus |
|---|---|---|---|---|
| Salaries & Benefits | $556,247 | $2,788,927 | $556,247 | $556,247 |
| Materials & Supplies | $388,300 | $368,885 | $388,300 | $368,885 |
| Purchased Service | $17,200 | $16,340 | $17,200 | $15,480 |
| Internal Charges & Insurance | $77,087 | $77,087 | $77,087 | $77,087 |
| Other | $153,265 | $145,100 | $0 | $153,265 |
| **Total** | **$1,192,099** | **$3,396,339.00** | **$1,038,834.00** | **$1,170,964.00** |
| **Oxford Wastewater** | **Status Quo** | **Model A** | **Model B** | **Status Quo Plus** |
| Salaries & Benefits | $233,778 | $0 | $123,778 | $233,778 |
| Materials & Supplies | $31,300 | $29,735 | $31,300 | $29,735 |
| Purchased Service | $219,400 | $208,430 | $219,400 | $197,460 |
| Internal Charges & Insurance | $40,720 | $40,720 | $40,720 | $40,720 |
| Other | $124,613 | $0 | $0 | $124,613 |
| **Total** | **$649,811** | **$278,885.00** | **$415,198.00** | **$626,306.00** |

# Appendix C – Scatterplot Scores

| | Model A | Model B | Model C | Status Quo Plus | User Pay Backflow | Standard Service Levels | Joint Procurement | Collapsing W and WW Reserves | Capital Coordination in the ROW | Inflow & Infiltration Studies | Cost Recovery |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Plot Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Ease of implementation/ change | 3 | 1 | 1 | 2 | 1 | 3 | 3 | 2 | 0 | 3 | 2 |
| Time to implement | 3 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 |
| Costs to implement | 3 | 1 | 2 | 2 | 2 | 1 | 3 | 3 | 3 | 2.5 | 3 |
| Total - Ease of implementation | 9 | 3 | 4 | 6 | 5 | 7 | 9 | 8 | 5 | 7.5 | 7 |
| Cost Savings | 3 | 1 | 1 | 1 | 2.5 | 2 | 2.5 | 1 | 2.5 | 3 | 2 |
| Customer Experience | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 1 | 1 |
| Service Levels | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 |
| Total - Benefits | 8 | 5 | 5 | 6 | 6.5 | 7 | 5.5 | 5 | 7.5 | 6 | 5 |

Report No: CP 2022-126
COMMUNITY PLANNING
Land Division Committee: April 7, 2022

**To:** **Chair and Members of Oxford County Land Division Committee**

**From:** **Dustin Robson, Development Planner, Community Planning**

# Application for Consent
# B21-109-2 – Joseph Nemeth

## REPORT HIGHLIGHTS

- The purpose of the Application for Consent is to facilitate the creation of one (1) residential infill lot that will accommodate a single detached dwelling while the lot to be retained will continue to contain a single detached dwelling and associated accessory building.

- Planning staff are recommending that the subject application be approved as it is consistent with the Provincial Policy Statement and generally maintains the intent and purpose of the Official Plan respecting infill development within designated settlements.

## DISCUSSION

### Background

OWNER: Joseph Nemeth
177 Coleman Street, Innerkip, ON N0J 1M0

APPLICANT: Tina Nemeth
177 Coleman Street, Innerkip, ON N0J 1M0

LOCATION:

The subject lands are described as Lot 26 & Pt Lot 27, Plan 35, Township of East-Zorra Tavistock. The lands are located on the east side of the Coleman Street, between Stratford Street and Balsam Street, and are municipally known as 177 Coleman Street in Innerkip.

OFFICIAL PLAN:

| | | |
|---|---|---|
| Schedule “C-3” | County of Oxford Settlement Strategy Plan | Serviced Village |
| Schedule “E-1” | Township of East Zorra-Tavistock Land Use Plan | Settlement |
| Schedule “E-3” | Village of Innerkip Land Use Plan | Low Density Residential |

TOWNSHIP OF EAST ZORRA-TAVISTOCK BY-LAW NO. 2003-18:

Existing Zoning: 'Residential Type 1 Zone (R1)'

SERVICES:

Lot to be Severed – Municipal water and sanitary sewer
Lot to be Retained – Municipal water and sanitary sewer

ROAD ACCESS:

Lot to be Severed – paved, Township Road (Coleman Street)
Lot to be Retained – paved, Township Road (Coleman Street)

PROPOSAL:

| | Lot to be Severed | Lot to be Retained |
|---|---|---|
| Area | 843 $m^2$ (9,075 $ft^2$) | 919.7 $m^2$ (9,900 $ft^2$) |
| Frontage | 16.7 m (55 ft) | 18.2 m (60 ft) |
| Depth | 50.2 m (165 ft) | 50.2 m (165 ft) |

The purpose of the Application for Consent is to create one (1) residential infill lot with frontage on Coleman Street. The proposed lot to be severed will be approximately 843 $m^2$ (9,075.7$ft^2$), while the lot to be retained would be approximately 919.7 $m^2$ (9,900 $ft^2$) in area. The lot to be severed would have a frontage of 16.7 m (55 ft) and currently contains a garage attached to existing single detached dwelling. The attached garage will be demolished. The lot to be retained would have a frontage of 18.2 m (60 ft) and currently contains a single detached dwelling and an accessory building (shed). Both the single detached dwelling and the accessory building will remain on the lot to be retained.

Lands to the north, south, and west of the subject lands consist of predominantly single detached dwellings. Innerkip Central School is located to the west of the lands.

Plate 1, Existing Zoning & Location Map, indicates the location of the severed and retained lands as well as the existing zoning in the immediate vicinity.

Plate 2, Existing Zoning & Aerial Map, provides an aerial view of the subject lands.

Plate 3, Applicant's Sketch, provides the configuration and dimensions of the proposed severed lot and retained lot in greater detail.

## Application Review

2020 Provincial Policy Statement (PPS)

The PPS recognizes that the vitality of settlement areas is critical to the long-term economic prosperity of our communities and that development pressures and land use change will vary across Ontario. It is in the interest of all communities to use land and resources wisely, to promote

efficient development patterns, protect resources, promote green spaces, ensure effective use of infrastructure and public service facilities and minimize unnecessary public expenditures.

Section 1.1.3.3 of the PPS directs that planning authorities shall identify appropriate locations and promote opportunities for intensification and redevelopment where this can be accommodated taking into account existing building stock or areas, including brownfield sites, and the availability of suitable existing or planned infrastructure and public service facilities required to accommodate projected needs.

Further, Section 1.4.3 of the PPS directs that planning authorities shall provide for an appropriate mix of housing types and densities to meet projected requirements of current and future residents of the regional market area by:

- Establishing and implementing minimum targets for the provision of housing which is affordable to low and moderate income households;
- Permitting and facilitating all forms of residential intensification and redevelopment and all forms of housing required to meet the social, health and well-being requirements of current and future residents, including special needs requirements;
- Directing the development of new housing towards locations where appropriate levels of infrastructure and public service facilities are or will be available to support current and projected needs;
- Promoting densities for new housing which efficiently uses land, resources, infrastructure and public service facilities, and support the use of active transportation and transit areas where it exists or is to be developed; and
- Establishing development standards for residential intensification, redevelopment and new residential development which minimize the cost of housing and facilitate compact form while maintaining appropriate levels of public health and safety.

Official Plan

The subject lands are located within the 'Low Density Residential' designation as shown on Schedule ‘E-3’ - Village of Innerkip Land Use Plan in the County Official Plan. Low density residential areas include those lands that are primarily developed or planned for a variety of low rise, low density housing forms including single-detached dwellings, semi-detached dwellings, duplex, converted dwellings, townhouses and low-density cluster development.

The policies of Section 6.2.2.1 (Infill Housing) also apply to this proposal. Infill housing is defined as the placement of new residential development into established built-up areas on vacant or underutilized sites. In order to efficiently utilize the land supply designated residential and municipal servicing infrastructure, infill housing will be supported in Low Density Residential Areas.

The introduction of new residential housing into an established streetscape pattern will only be permitted if the proposal is consistent with the characteristics of existing development in the immediate area. In order that the street oriented infill projects are sensitive to the continuity of the existing residential streetscape, the County Land Division Committee will ensure that the proposal is consistent with street frontage, lot area, setbacks and spacing of existing development within the immediate residential area.

In addition to the specific infill policies identified, all infill proposals will be considered with a view to the availability of municipal water, wastewater and stormwater services and public facilities, off-street parking and amenity areas, traffic impacts and the ability of the development to maintain desirable vegetation.

Zoning By-law

The subject lands are zoned 'Residential Type 1 Zone (R1)' in the Township of East Zorra-Tavistock Zoning By-Law. The R1 zone permits a limited range of uses including a single detached dwelling, converted dwelling, and home occupation.

The R1 zone requires a minimum lot area of 420 $m^2$ (4,521 $ft^2$) and a minimum frontage of 14 m (45.9 ft) where the lots are serviced by both municipal water and sanitary sewer services. The R1 zone also requires a minimum lot depth of 30 m (98.4 ft).

Agency Comments

The Township's Public Works Manager has indicated that changes to driveway entrances must be approved by Public Works and meet all Township standards. All costs of entrance changes will be the responsibility of the applicant for the retained lot and/or the new owner for the newly created lot.

The Township's Chief Building Official has indicated the following:

1.) A Surveyor's Real Property Report is required after demolition showing the location of the building to the property line.
2.) Severance Agreement will be required for newly created parcel.
3.) Cash-in-lieu of parkland – Fee in effect at the time the consent is finalized will be payable to the Township.
4.) Cost of Water/Wastewater service connections for newly created lot – Fee in effect from County of Oxford at the time the consent is finalized.
5.) Drainage Assessment Reapportionment is required.
6.) A demolition permit will be required for the proposed partial building demolition.

The County of Oxford Public Works has indicated that, as a condition of severance, the owner shall agree to satisfy all requirements, financial and otherwise, of the County, regarding the installation of water and sanitary sewer services, to the satisfaction of the County.

The Township Fire Chief, Hydro One, and Canada Post have indicated that they had no objections or concerns with the subject application.

Public Consultation

Notice of the public meeting for the proposal was circulated to neighbouring property owners on March 24, 2022 in accordance with the requirements of the *Planning Act*. As of the date of this report, no comments or concerns had been received from the public.

## Planning Analysis

Planning staff are of the opinion that the proposal is generally consistent with the Provincial Policy Statement (PPS) and maintains the intent and purpose of the County Official Plan regarding residential intensification within a settlement area.

Specifically, staff are of the opinion that the proposal will facilitate increased density that will assist in meeting housing requirements of the regional market on lands designated for such use. Further, staff are satisfied that the proposal will also assist in utilizing existing and planned servicing infrastructure and public service facilities, while maintaining intended density targets and efficiently utilizing existing underutilized lands.

With respect to the policies of the Official Plan regarding street oriented infilling, residential development along Coleman Street is exclusively single detached dwellings. The proposal for a single detached dwelling on the proposed lot will be similar to existing development in the immediate vicinity and staff are of the opinion that the proposed severed and retained lots resulting from this proposal will be in-keeping with the character of the immediate neighbourhood.

Staff are of the opinion that the proposal will comply with the review criteria for infill proposals contained in the Official Plan, as adequate municipal services are present to accommodate the development, the lands will be of a sufficient size to provide for adequate off-street parking, and outdoor amenity areas.

In reviewing the proposal against the zoning requirements for the R1 Zone, both the lot to be severed and the lot to be retained would have larger lot frontages, lot areas, and lot depths than are required. The proposed lot to be severed will have sufficient space to meet the required front yard depth, rear yard depth, and interior side yard widths in accordance with the provisions of the R1 Zone. It is also noted that, based on the sketch provided by the applicant, there appears to be a 3 m (10 ft) interior side yard width between the proposed lot line and the existing dwelling on the lot to be retained. A minimum width of 1.2 (3.9 ft) is required by the Township By-law. No relief from the Zoning By-law is being requested at this time for either the lot to be severed or the lot to be retained.

In light of the foregoing, Planning staff are satisfied that the consent application is consistent with the PPS and maintains the intent and purpose of the County Official Plan. As such, Planning staff are satisfied that the application can be given favourable consideration, subject to the appropriate conditions, as noted in the ‘recommendations’ section of this report.

## RECOMMENDATIONS

**Whereas the application for consent is consistent with the 2020 Provincial Policy Statement, complies with the policies of the County of Oxford Official Plan, and the subject property is appropriately zoned, we are of the opinion that the application is acceptable from a planning perspective, and should be granted, subject to the following conditions:**

1. **If required, drainage assessment reapportionment be undertaken, pursuant to Section 65 of the Drainage Act, R.S.O. 1990, at the owner’s expense, to the satisfaction of the Township of East Zorra-Tavistock.**

2. **If required, the Owners shall enter into a standard Severance Agreement with the Township of East Zorra-Tavistock, to the satisfaction of the Township.**

3. **The existing attached garage on the lot to be severed is to be removed, subject to a Building Permit for Demolition and the resulting yard width between the dwelling on the retained lands and the new lot line shall comply with the minimum requirements of the Township Zoning By-law, to the satisfaction of the Township of East Zorra-Tavistock.**

4. **The Owners shall provide a Surveyor's Real Property Report after demolition of the attached garage showing the location of the single detached dwelling to the property line, to the satisfaction of the Township of East Zorra-Tavistock.**

5. **The Owners provide cash-in-lieu of parkland, to the satisfaction of the Township of East Zorra-Tavistock.**

6. **The County of Oxford Department of Public Works advise the Secretary-Treasurer of the County of Oxford Land Division Committee that all financial requirements of the County of Oxford with respect to provision of water and sewer services to the subject property have been complied with. This condition can be cleared by payment for the required services or entering into a severance agreement with the area municipality which states that no building permit shall be issued until payment is made to the County. In order to clear this condition, a copy of the draft Severance Agreement which addresses the above requirements to the satisfaction of the County of Oxford Public Works Department, must be provided to the Public Works Department.**

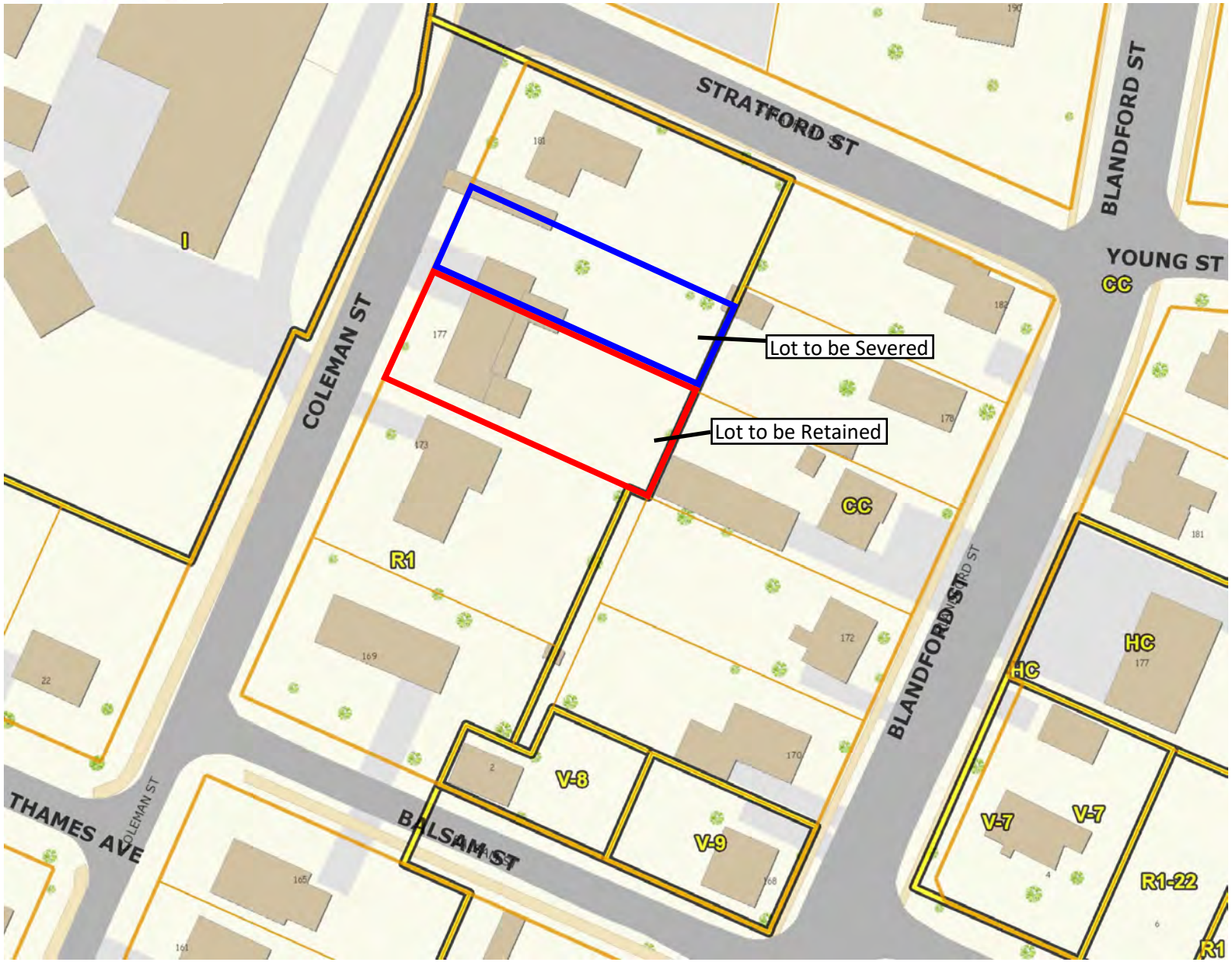
7. **The Clerk of the Township of East Zorra-Tavistock advise the Secretary-Treasurer of the Land Division Committee that all requirements of the Township of East Zorra-Tavistock, financial, services and otherwise, have been complied with.**

## SIGNATURES

**Authored by:** *"Original Signed By"* Dustin Robson, MCIP, RPP
Development Planner

**Approved for submission:** *"Original Signed By"* Gordon K. Hough, RPP
Director

Plate 1: Existing Zoning & Location Map
File No: B21-109-2 - Nemeth
Lot 26 & Part Lot 27, Plan 35, Township of East Zorra-Tavistock, 177 Coleman Street




## Legend

Parcel Lines
- Property Boundary
- Assessment Boundary
- Unit
- Road
- Municipal Boundary

Zoning Floodlines Regulation Limit
- 100 Year Flood Line
- 30 Metre Setback
- Conservation Authority Regulation Limit
- Regulatory Flood And Fill Lines

Land Use Zoning (Displays 1:16000 to 1:500)

## Notes

0 26 51 Meters

NAD_1983_UTM_Zone_17N

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. This is not a plan of survey

December 21, 2021

Plate 2: Existing Zoning & Aerial Map
File No: B21-109-2 - Nemeth
Lot 26 & Part Lot 27, Plan 35, Township of East Zorra-Tavistock, 177 Coleman Street


## Legend

Parcel Lines
- Property Boundary
- Assessment Boundary
- Unit
- Road
- Municipal Boundary

Zoning Floodlines Regulation Limit
- 100 Year Flood Line
- 30 Metre Setback
- Conservation Authority Regulation Limit
- Regulatory Flood And Fill Lines

Land Use Zoning (Displays 1:16000 to 1:500)

## Notes

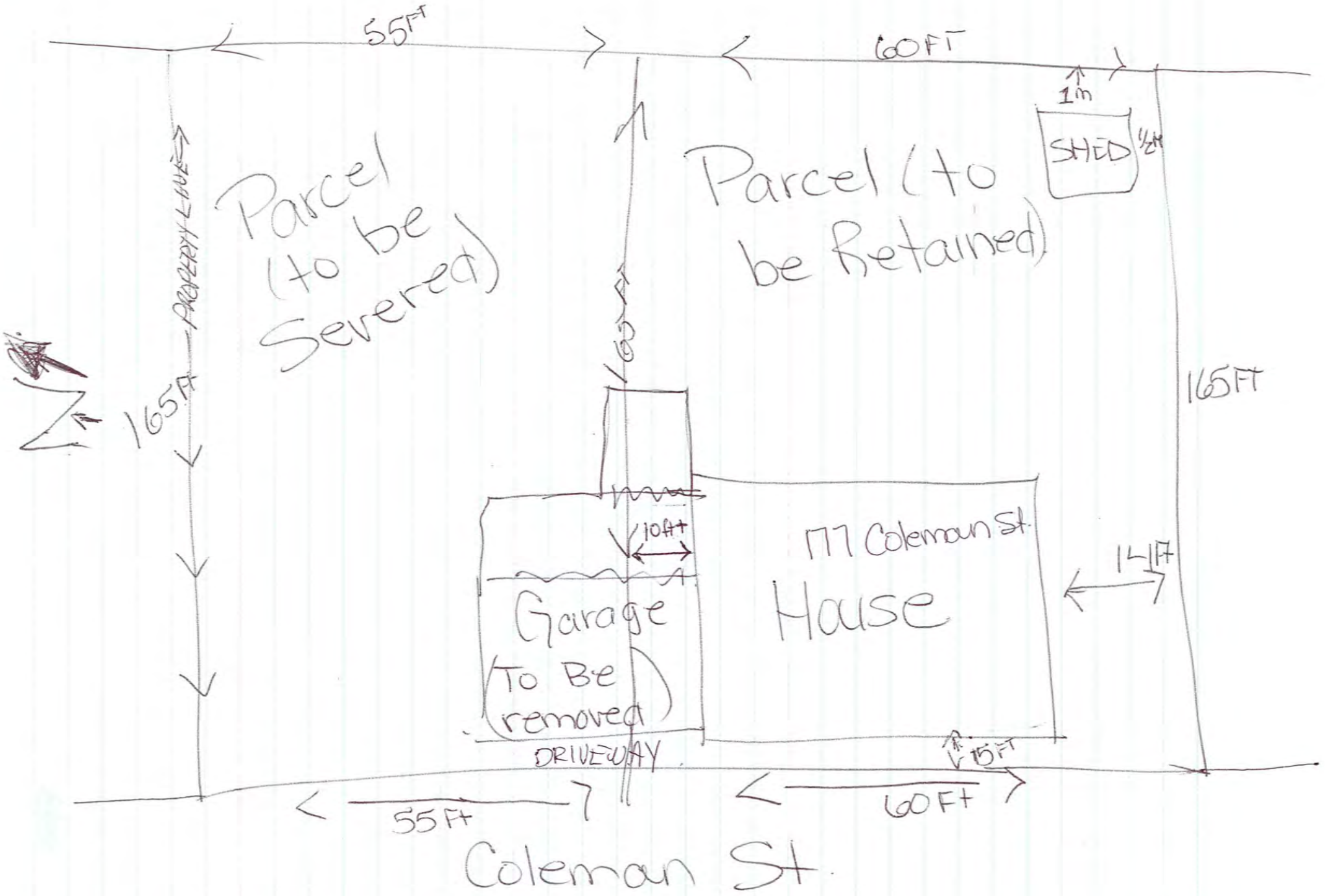
0 13 26 Meters

NAD_1983_UTM_Zone_17N

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. This is not a plan of survey

*December 23, 2021*

Plate 3: Applicant's Sketch
File No: B21-109-2 - Nemeth
Lot 26 & Part Lot 27, Plan 35, Township of East Zorra-Tavistock, 177 Coleman Street



Prior to adjourning to the COR, East Zorra-Tavistock will appoint three (3) members, and name a Chairperson for the COR.

AGENDA for COURT OF REVISION
Parker Drain 2022

1. Court opens (by resolution)

2. Written appeals received to the drain? (Clerk)

3. Chair Asks Engineer for comments

If there are verbal appeals:

4. Court must pass a resolution to accept any late appeals, or any verbal/written appeals from landowners present
    - Asks landowner(s) to state concerns
    - Asks Engineer for comments

5. After all appeals are heard (if any):
    - Deliberation by members of COR
    - Clarification from appellants or Engineer, if required to make decision

6. Court determines how appeals will be settled
    - Accept recommendation of Engineer?
    - Members agree on alternate recommendation?

If no verbal appeals:

7. Resolution(s) passed to adopt recommendations, amend assessments, etc.

8. Chair informs appellants that if they are not satisfied with the decision of the COR, they have 21 days in which to appeal to the Drainage Tribunal. (last day to submit appeal to the Clerk will be April 27, 2022)

If no appeals:

9. Resolution passed to sustain assessments.

10. Court adjourns and Council reconvenes (by resolution).

# Understanding Court of Revision Procedures Under the Drainage Act

**Sharon McCartan, OMAFRA**

**FEBRUARY 2010**

## INTRODUCTION

The Court of Revision is an appeal body established under the Drainage Act and administered by the local municipality. The Court of Revision allows landowners to challenge their drainage assessments quickly and informally. Unlike the Drainage Tribunal or the Drainage Referee, the Court of Revision has one power – to re-allocate funds in a drainage assessment schedule.

To learn more about assessments under the Drainage Act, refer to fact sheet Agdex 557 Order # 92-035, "Understanding Drainage Assessments."

## THE ROLE OF THE MEMBERS OF THE COURT OF REVISION

- Members of the Court may hear appeals on three grounds:
  1) Land or road has been assessed too high or low.
  2) Land or road should have been assessed but has not.
  3) Due consideration has not been given to the land's use.
- The members of Court must hear these appeals and decide whether they are valid. The members must comply with the *Statutory Powers Procedure Act*, and they must conduct themselves fairly and without bias.
- The Court only has authority to change the schedule of assessments; they cannot make changes to the technical aspects of the report and they cannot refer the report back to the engineer for modifications.
- Total costs of the project must remain the same, which means that if the Court reduces an assessment, the Court re-allocates the shortfall among other assessed property owners.
- If the Court is considering adding to the assessment of one or more properties whose owners are not in attendance, the Court must adjourn and send notice to assessed property owners who were not at the Court of Revision at the time of the re-allocation. This allows the re-assessed landowners to appeal their new assessments.

## THE ROLE OF THE APPELLANT

- If a landowner feels an assessment against their lands is too low, that land should have been assessed but has not, or that consideration has not been given to land use, they can file an appeal with the Court of Revision.
- Appeals must be filed with the clerk at least 10 days before the date of the Court of Revision.
- If a landowner wishes to appeal, but misses the date for filing the appeal, they can appear at the first sitting of the Court of Revision and request to have their appeal heard.
- At the sitting of the Court, the list of appellants will be read out and the Engineer will give evidence. When his or her time to present their case comes, the appellant must explain their reasons for appealing the assessment schedule.
- After the Court of Revision pronounces their decision, affected property owners have 21 days to appeal this decision to the Agriculture, Food and Rural Affairs Appeal Tribunal and the Tribunal's decision on this appeal is final.

## COMPOSITION OF THE COURT OF REVISION

- If a drainage works only affects the initiating municipality, the initiating municipality's council appoints 3 to 5 members to make up the Court of Revision.
- If a drainage works affects two or more municipalities, the council of the initiating municipality appoints two members of the Court; and every other involved municipality appoints one person to be a member. One of the members appointed by the initiating municipality is the chair of the Court of Revision.
- To be eligible to sit as a Court of Revision member, the individual must be eligible to seek election as a member of council.

- Members of council may be appointed as members of the Court. However, the two roles must be kept separate – if a council member wishes to hear information or pass resolutions outside of the scope of the Court of Revision, they must close the Court, then open a new council meeting.



**SUGGESTED PROCEDURE**

- Opening of the Court of Revision
- Oaths
  - Members may take an oath, but it is not legally required.
  - Members are still legally required to act fairly and impartially, whether they declare this publicly as an oath or not.
- Order of Appeals
  - The appeals and the order in which they will be held are read out.
- Engineer Gives Evidence
  - The engineer gives his or her evidence regarding each appeal before the Court, per s. 55 of the Act.
- Appellants Present their Case
  - The landowners orally make a case for why their land was improperly assessed before the members of court.
  - The engineer may rebut the landowner's case.
- Late Appeals
  - If the Court of Revision members choose, they agree to entertain late appeals, per s. 52(2) of the Act.
- Deliberations
  - The Court of Revision members should retreat to deliberate these appeals and make decisions in private.
  - If court is considering reducing an assessment and adding it to a property whose owner is not present, then they must adjourn the Court of Revision, send notice to the absent parties to allow them to appeal the change, then reconvene, per s. 53 of the Act.
- Closing the Court of Revision and Rendering a Decision
  - The Court of Revision may give oral decisions on each appeal but this oral decision should be followed up with a decision in writing.
- Choosing which schedule to adopt
  - The Court of Revision should document whether they decided to adopt an altered version of the assessment schedule, or whether they chose to adopt the schedule as presented by the engineer.

## Will Jaques

**Subject:** re: Parker Drain

**From:** Scott Alexander <willowbrae.10thline@gmail.com>
**Sent:** April 1, 2022 1:24 PM
**To:** Will Jaques <wjaques@ezt.ca>
**Subject:** re Parker Drain

Good afternoon,

KSmart attended our property on April 1st to discuss the improvements to the upcoming Parker Drain. In discussions with Curtis McIntyre, we were both in agreement that the SW corner of the field actually drains south towards the Braemar Sideroad, and Mr. McIntyre agreed to look further into the possibility that the north portion of the field may be draining more towards the SE corner of the field rather than towards the Parker Drain. I would ask the Court to respectfully please consider these 2 situations.

Thank you.

Scott Alexander

ENGINEERING REPORT

For

# PARKER DRAIN 2022

## Township of East Zorra-Tavistock

(Geographic Township of East Zorra)

County of Oxford

Date: February 3, 2022

File No. 20-150

K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS & PLANNERS
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Kitchener, ON N2R 1H6
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# TABLE OF CONTENTS

*Definitions*:

"Act" or "Drainage Act" means The Drainage Act RSO 1990
"CSP" means corrugated steel pipe
"Drain" means Parker Drain 2022
"Grant" means grant paid under the Agricultural Drainage Infrastructure Program
"HDPE" means high-density polyethylene
"KSAL" means K. Smart Associates Limited
"Municipality" or "Township" means Township of East Zorra-Tavistock
"OMAFRA" means the Ontario Ministry of Agriculture, Food and Rural Affairs
"Tribunal" or "Drainage Tribunal" means Agriculture, Food and Rural Affairs Appeal Tribunal
"Twp of EZT" means Township of East Zorra-Tavistock
"UTRCA" means Upper Thames River Conservation Authority

*Tables:*

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February 3, 2022 File No. 20-150

**PARKER DRAIN 2022**

**TOWNSHIP OF EAST ZORRA-TAVISTOCK**

## 1 EXECUTIVE SUMMARY

This report is prepared pursuant to Section 4 of the Drainage Act RSO 1990. On March 12, 2020, the Municipality received a petition from Stiek Farms Inc., Killcrest Farms Inc., Darrin Dodd, Braemont Farms Ltd., and Townsend Farms Inc. for improved drainage in the upper Parker Drain watershed (Lots 18 to 20, Con. 9 & 10). Pursuant to Section 8 of the Act, on May 6, 2020, K. Smart Associates Limited (KSAL) was appointed by resolution of Council to prepare a report on the petition received. During the investigation/design stage, the Municipality received a 2nd petition signed by two properties: Stephen & Laurie Killing, as well as Stephen, Laurie, and Stephanie Killing & Jake Van Ryswyck for an outlet to farms in Lot 17 & 18, Con. 10. On September 2, 2020, as per Section 8(4) of the Act, KSAL was appointed by resolution of Council to combine the two petitions into a single report.

To address the petitions received, this report recommends the following:

Main Drain

- Removal of an existing laneway culvert, to be replaced with 12m of 1600mm dia. CSP.
- 179m of ditch bottom cleanout/excavation, including the construction of a permanent stilling pool/sediment trap at new tile outlet.
- 2,268m of new closed tile drain, including a crossing of the Enbridge Gas Inc. Trafalgar Lines and the Enbridge Pipelines Inc. Lines 7-9.

Branches A, B, & C

- Incorporation of 196m of 200mm dia. plastic tubing and outlet pipe.
- 149m of new closed tile drain, including 300mm dia. perforated plastic tubing and a road crossing of 10th Line.
- 1,099m of new closed tile drain, including a road crossing of 10th Line and Enbridge Pipelines Inc. Lines 7-9

In summary, the total length of proposed open drain is 179m and closed drain is 3,712m (2,268m Main Drain, 345m Branch A, 757m Branch B and 342m Branch C).

The estimated cost of this project is $725,000.

The watershed served is approximately 177.6 hectares (439 acres).

Assessment schedules are for construction and future maintenance of the Drain.

- Schedule A shows the assessment of the total estimated cost
- Schedule B is for prorating future maintenance cost
- Schedule C is for levying the final cost of the Drain.
- Appendix A illustrates the calculation of the assessments outlined in Schedules A and B.

## 2 DRAINAGE HISTORY

The Parker Drain was originally established in accordance with a report of F. J. Ure dated July 30, 1901. The drain was located in Lots 18 to 20, Concession 9 and consisted of the cleanout of approximately 300 ft. of open ditch and the installation of 5,000 ft. of 7" to 10" (175 to 250mm) tile. The tile portion ended in the north half of Lot 18, Concession 9 (location referred to as Sta. 1+074 on Drawing 1 of this report).

The Parker Drain was later improved in accordance with a report of H. M. Gibson, P. Eng., O.L.S. (Skelton, Gibson and Associates) dated February 18, 1966. The report appears to have continued from the end of the existing 10" tile from 1901 downstream through Lot 18 & 17, Concession 9 and consisted of 2,900 ft. of 14" (350mm) tile. Furthermore, 503 ft. of open ditch was then cleaned out to a location that is now the D. & J. Leiper laneway. Some repairs were completed to the 1901 drain in this report, however, for the most part the upper portion of the Parker Drain (5,000 ft. or 1524m) still exists today as the original 10" tile from 1901.

## 3 INVESTIGATION

### *3.1 On-Site Meeting*

**Attendees**

| | |
|---|---|
| Erik Rotteveel – Stiek Farms (Roll No. 040-02200) | Connor Occleston (Twp. of EZT) |
| Doug Killing – Killcrest Farms (Roll No. 040-01100) | Claire Orhling (Twp. of EZT) |
| Jim Walton (Roll No. 040-01001) | Curtis MacIntyre, P. Eng. (KSAL) |
| Trevor Townsend – Townsend Farms Inc. (Roll No. 040-02100) | Joel Miller, P. Eng. (KSAL) |
| Doug Leiper (Roll No. 040-01900) | |

On June 30, 2020, an on-site meeting was held in accordance with Section 9(1) and 9(2) of the Act. Following the current Ontario COVID-19 gathering limitations imposed at the time, a notice was sent to only the petitioners and those believed to be directly affected by an improvement of the Parker Drain.

Upon briefly explaining the background of the petition received, as well as the documented history of the Parker Drain, all owners in attendance were given an opportunity to describe the drainage on their property and what they would like to

see completed. The following is a summary of the general comments listed by property:

*Erik Rotteveel – Stiek Farms (Roll No. 040-02200 & 040-03801) (Petitioner)*
Erik explained that he bought the farm on the west side of the road (Roll No. 040-02200) (meeting location) about 2 years ago and that he would be looking to systematically tile the land after obtaining an improved/upsized outlet. He believed the farm had some random tiling but did not know how much or when it would have been done. Erik explained that there are two hickenbottoms in the field, one on each side of the gas lines, but that they were private.

Erik described that he had purchased the adjacent farm on the east side of the road (Roll No. 040-03800) from Braemont Farms about a month prior. This explained why Braemont Farms was on the original petition. Erik thought it would be beneficial to look into the costs of continuing the drain upstream to this property.

*Doug Killing – Killcrest Farms (Roll No. 040-01100)*
Doug recalled that his farm was tiled at 40 foot spacing and that he would have tile plans for the farm. He knew that some of his farm was tiled away to the A.B. Murray Drain (northwest corner). Doug is in favour of oversizing the drain. Doug described three (3) Enbridge oil pipelines that cross his farm paralleling to the north of the four (4) Enbridge natural gas pipelines. Doug has edible beans in the southern portion of his field that should come off in September. The engineer described that this would likely be the most appropriate time to access the field and locate/document the pipelines for the purpose of designing the drain.

*Jim Walton (Roll No. 040-01001)*
Jim described taking photos this spring of large amounts of surface water over top of the drain that he would provide to KSAL. He leaves this area (route of the Parker Drain) as a grassed swale for that reason. Jim recalled that Mark Cook recently did some tiling on the north part of his farm but those tiles were taken west to the Balkema Drain. He did not think he would have any tile plans for tile towards the Parker Drain. Jim described that the row of trees around the farm were planted by him and would be on his side of the property line. He understood that the new drain construction would need to remove some trees.

*Trevor Townsend – Townsend Farms Inc. (Roll No. 040-02100)*
Trevor recalled that his family may have bought the farm around 1994 (at least sometime in the mid 1990's). He recalled that some of the farm is tiled at 60' spacing and some at 40' spacing, and that they did have tile plans. He stated that there is a bit of a berm on the property line between their property and the Spero Holsteins Ltd. farm, as well as two more in the field with catchbasins. He thought they may have created the berms around the time that the last pipeline was installed (therefore they are private and not a part of the drain). A grassed swale exists in between the two berms in the middle of the field. They also had received excess soil from the pipeline construction to fill the swale on their farm. He noted

that they are seeing considerable erosion of the ground around the berms and have dumped rocks around the berms to cut down on some of the erosion.

At the time of the meeting, considering the berms are already private, it was felt that the new drain construction may re-instate the berms as is, but will be kept private in case the landowner wishes to remove them in the future.

Trevor is in favour of oversizing the new municipal drain.

*Doug Leiper (Roll No. 040-01900)*
Doug recalled that the soils on the farm were Guelph Honeywood Complex and that the farm contained some tiling, but not very much and did not have tile plans. He could not recall how large the culvert under his laneway was, but a review after the meeting determined it was about a 1200mm dia. that was in somewhat poor shape. He recalled that a large storm around the year 2000 caused a flood that overtopped their laneway. He stated they had recently added some more gravel to the laneway over top of the culvert. Doug understood the need for a new drain upstream, but was concerned with the quantity of flow that would be coming to his lane culvert after a new, larger drain is installed. The engineers stated they would analyze his crossing and ensure it is properly sized for the new tile drain or propose an upgrade if it does not.

After the meeting, the laneway crossing was reviewed with the owner and the options to extend the tile down to the laneway, as well as install a stilling basin to dissipate the energy from the flow of water at the end of the tile drain was discussed as a likely feature to be proposed due to the size of the proposed drain.

*Connor Occleston (Drainage Superintendent, Twp of EZT)*
Connor suggested that test holes be dug to check for soil conditions/groundwater levels prior to finalizing the report. He also explained the working corridor width typically taken for a drain construction of this size, as well as the damage allowances. Connor described to the group the likely schedule for the upcoming design stage, meetings, and appeals phases.

### *3.2 Meeting with Other Affected Owners*

**Attendees**

| | |
|---|---|
| Jake Van Ryswyck (Roll No. 040-03500) | Doug Leiper (Roll No. 040-01900) |
| Steve Killing (Roll No. 040-3500 & 040-03600) | Connor Occleston (Twp. of EZT) |
| Scott Alexander (Roll No. 040-03400) | Claire Orhling (Twp. of EZT) |
| Laurence MacKay (tenant for Leiper farm) | Curtis MacIntyre, P. Eng. (KSAL) |

On August 19, 2020, an additional meeting was held with the owners in the southeast portion of the Parker Drain watershed who had not received an invite to the original on-site meeting (Lot 16 & 17, Concession 9 & 10). The engineer explained that, under normal circumstances, they would have been invited and

given the opportunity to comment on drainage needs at this on-site meeting. He also described the general positive feedback for full replacement of the Parker Drain received at that meeting. It was understood at the onset of the meeting that Mr. Van Ryswyck intends to systematically tile his farm in the future and that this would be a good time to secure a legal outlet.

Laurence MacKay explained that within the past 3 years they installed their own 200mm (8") tile through the field from the catchbasin on the west side of the road to the ditch outlet and was completed by Darrin Dodd (also an owner in the watershed). Laurence recalled it cost roughly $3,000 at the time.

The engineer explained that if they wished, this tile could be incorporated as a municipal drain, with the Leiper farm being provided an allowance representing the cost they incurred for installing the tile themselves. New catchbasins could be proposed on either side of the road with a new road crossing over to the VanRyswyck/Killing farm.

Laurence and Doug explained that the road culvert and swale through their field located south of the laneway sees surface water just as bad or worse than the location north of the laneway. Jake Van Ryswyck agreed that location is where he also sees water ponding on his side. At the end of the meeting it was agreed that in addition to the road crossing mentioned above, it would also be beneficial for all parties if a tile drain was extended southerly along the east side of the trees to the location where this other surface culvert crosses the road (adjacent to the east-west tree line within the Van Ryswyck/Killing field). At this location another catchbasin would be constructed to catch the majority of the surface water before it crosses the road.

Mr. Alexander took in the information and would let the engineer know if they wanted the drain to be extended up to their property line. It was also decided collectively that this could potentially be done privately between the Killing/Van Ryswyck/Alexander parties.

### *3.3 Site Investigations After the Meeting*

Following the original on-site meeting, the engineer walked the route of the drain and made the following observations, listed by property:

*Leiper Farm (Roll No. 040-01900)*

- Located existing CB on west side of the road for private branch to Killing/Van Ryswyck farm.
- Culvert under laneway is approx. 1200mm dia., is deformed and in poor shape. Culvert could/should be lengthened and upsized if new one installed.
- Found only one outlet at head of the ditch (400mm CSP).
- A berm was found at the property line shared with Spero-Holsteins, however no catchbasin was observed.

*Spero Holsteins Ltd. (Roll No. 040-00800)*

- Located a berm in middle of field with a DICB (DICB looks to be in decent condition). Hole in ground (blowout) over top of drain on the downstream side of the berm.
- Another berm exists on upstream property line, and located what looks to be a concrete catchbasin, however it contained a concrete cover with no surface water entrance. A swale has cut through the berm east of the structure, likely due to having no surface water entry to the drain.

*Townsend Farms Inc. (Roll No. 040-02100)*

- First berm in the middle of the field has considerable erosion around the west edge, as Trevor had indicated. Soils look to be very sandy. The erosion situation may be compounded due to the fact that the berm follows the east-west crop line and surface water flowing in a southwesterly direction looks to bypass the catchbasin. Surface water reaching the berm is diverted around the west end creating continued erosion at the end of the berm.
- Grassed swale exists in between the first and second berm in the middle of the field.
- Second berm also contained significant erosion around the outside edges. DICB visually looks to be in a good position and condition.
- Partial berm at the upstream property line and old catchbasin covered in grass, but is flowing water through it.

*Stiek Farms Inc. (downstream) (Roll No. 040-02200) / J. & B. Walton (Roll No. 040-01001)*

- Did not observe a catchbasin in the tree line on the upstream side of the Stiek property line with Walton farm.
- Grassed swale through corner of Walton farm overtop of the drain.
- Catchbasin found on north side of trees on upstream property line of Walton farm. Catchbasin had very little flow through it and appeared to be located east of the lowest point.

*Killcrest Farms Inc. (Roll No. 040-01100) / D. & K. Dodd (Roll No. 040-02300) / Stiek Farms Inc. (Roll No. 40-02200)*

- A catchbasin was found in the Killcrest Farms field where the crops are divided (edible beans to corn). Owner was later consulted and felt that a catchbasin remaining in this location would provide value.
- No catchbasin was located on the property line between Killcrest Farms and the Dodd farm, and although one was not originally found in the treeline property divide between the Dodd and Stiek farms, it was later located during survey.
- Two (2) hickenbottoms were found on the Stiek Farms property between the Enbridge gas lines (Trafalgar Lines) and Enbridge oil lines (Lines 7-9).

- Found a catchbasin on the west side of 10th line that is believed to be private. There was also a Hickenbottom in the field on the east side of the road (Erik Rotteveel's farm recently purchased from F. & B. Killing) that must cross into this catchbasin.

### 3.4 Phone Calls After the Meeting:

*Fred Killing - Braemont Farms (Roll No.040-03700)*

In a phone call following the on-site meeting, Fred said he had signed the petition back when he previously owned the farm to the north with Roll No. 040-03800, but also acknowledged that maybe 3-5 acres of their home farm to the south (Roll No. 040-03700) does still drain this way to the Parker Drain watershed. Fred recalled that they had constructed the hickenbottom in the field north of the laneway of the farm they used to own and connected it to the 4" tile that crosses the 10th Line approximately 10 years ago. At that time, the Municipality cleaned out the 4" pipe under the road to provide a better outlet. Fred recalled that the 4" crossing had been there longer than he could remember. Neither the farm they sold, nor the home farm contained any systematic tile drainage.

*David Vanderspek – Spero-Holsteins Ltd. (Roll No.040-00800)*

In a phone call to discuss the project and completing test holes on the property, David asked if the berm and catchbasin located in the centre of the property could be removed. The engineer also confirmed that a catchbasin would be added on the property line shared with the Townsend farm and that the existing berm would be re-instated to better direct surface water to that basin.

### 3.5 Site Examination and Survey

The routes of the existing drain were examined after the on-site meeting and on several occasions during 2020 and 2021. Topographic (GPS) survey was completed in July, 2020 from the existing laneway culvert in E½ Lot 17, Concession 9 upstream to the east side of the 10th Line in Lot 19, Concession 10, also well as the route of Branch A. Following later changes to the alignment, due to the impediments of crossing the pipelines, Branch B and Branch C were surveyed in July 2021.

### 3.6 Watershed Description

The perimeter watershed of the Drain has been established generally from the historic reports of the Parker Drain, however has been corrected as needed by the most current topographic information provided by the province. At the northern limits of the watershed, the Parker Drain watershed boundary was set to match a recent report completed by K. A. Smart, P. Eng. referred to as the Veale Drain Branch C 2019. The Drain also has common watersheds with the Balkema Drain 1997, Donald Murray Drain 1996, McDonald Drain and Veale Drain (1968 and 2007).

Land use in the watershed is predominately agricultural except for the 10th Line road allowance and one residential lot.

## 4 AUTHORITY FOR REPORT

Section 4 of the Drainage Act provides for the construction of new drainage works for an area requiring drainage. As a result of discussion at the site meeting and on-site examination, the area requiring drainage for the original petition received was determined to be the NE1/4 of Lot 18, Concession 9, the E1/2 of Lot 19, Concession 9, the majority of lands in Lot 20, Concession 9, and finally the NW1/4 of Lot 19, Concession 10. Of the seven owners in the area requiring drainage, five of which have signed the petition, representing a majority in number; thus, the petition is valid under Section 4(1)(a) of the Drainage Act.

The official on-site meeting for the second petition received was held at a meeting on December 10, 2021. The discussions of the meeting are later described in *Section 9 INFORMATION MEETING & ON-SITE MEETING FOR 2nd PETITION* of this report. The engineer determined that the area requiring drainage for the petition was the west half of the property with Roll No. 040-03500, as well as the surface water swale across property with Roll No. 040-01900 commencing at 10th Line westerly to the bush. With approximately 9.0 hectares of area proposed to one day be subsurface tile drained on the east side of 10th Line, the signatures on the petition represent greater than 60% of the area requiring drainage; thus, the second petition is valid under Section 4(1)(b) of the Drainage Act.

## 5 RECOMMENDED WORK

A property by property description of the proposed Parker Drain for construction and future maintenance can be found in the Special Provisions (Drawings 15-17). The proposed Drain is summarized as follows:

### *5.1 Main Drain*

The proposed Main Drain commences on the south side of the D. & J. Leiper laneway continuing north and following the path of the existing Parker Drain nearly to its existing terminus, though ends just short at the property line between Killcrest Farms Inc. and D. & K. Dodd. The proposed Main Drain includes:

- Removal of an existing 1200mm dia. CSP laneway culvert, to be replaced with 12m of 1600mm dia. CSP
- 58m of ditch bottom cleanout, 94m of ditch excavation (deepening) and the construction of a 15m long, 1.0m deep (350m³) permanent stilling pool/sediment trap at new tile outlet.
- 2,268m of new closed tile drain (ranging in size from 600mm-300mm dia.), including a crossing of the Enbridge Gas Inc. Trafalgar Lines and the Enbridge Pipelines Inc. Lines 7-9.

### 5.2 Branch A

The proposed Branch A includes:

- Incorporation of 196m of 200mm dia. plastic tubing and outlet pipe.
- 149m of new closed tile drain, including 300mm dia. perforated plastic tubing and a road crossing of 10th Line.

### 5.3 Branch B

The proposed Branch B provides an outlet for the Stiek Farms Inc. property with Roll No. 040-03800 on the east side of 10th Line, as well as an outlet for the southeast quadrant of Roll No. 040-02200. Branch B was designed to divert upstream flow away from having to cross downstream Enbridge pipelines with enlarged drain pipe sizes, as only limited space exists to cross the pipelines leaving the sufficient separation between pipes and cover over the tile drain. It also eliminates the originally proposed inverted siphon crossing of the Trafalgar Lines on property with Roll No. 040-02200. The proposed Branch B includes:

- 757m of new closed tile drain (350mm dia. in size – 375mm dia. solid plastic pipe for portion through hill), including a road crossing of 10th Line.

### 5.4 Branch C

Branch C has been proposed to service the top end of the existing Parker Drain on the property line between D. & K. Dodd and Stiek Farms Inc., however the branch diverts flow southerly across Lines 7-9, then westerly to the Main Drain so that the Main Drain crossing on the Killcrest Farms Inc. property does not receive as much flow as it normally would. Therefore reducing the size of the Main Drain crossing of Lines 7-9 on the Killcrest Farms Inc. property.

- 342m of new closed tile drain (300mm dia. solid plastic pipe through hill), including a crossing of the Enbridge Pipelines Inc. Lines 7-9

### 5.5 Existing Parker Drain

The existing 175mm to 250mm (7” to 10”) 1901 drain is to be removed/destroyed where encountered. The existing 350mm (14”) 1966 drain is proposed to be abandoned and will become a private drain to be maintained by the landowners upon whose property it exists.

## 6 DESIGN CONSIDERATIONS

### 6.1 Sufficient Outlet

Section 15 of the Act requires that the proposed work be continued downstream to a sufficient outlet. Section 1 of the Act defines sufficient outlet as “a point at which water can be discharged safely so that it will do no damage to lands or roads.” For

this project, the existing ditch downstream of the D. & J. Leiper laneway crossing at Station 0+000 on the Main Drain provides sufficient outlet and will allow the proposed works to function as intended.

### 6.2 Drain Capacity

The size of the proposed tile drain was determined using the Drainage Coefficient Method outlined in the *Drainage Guide for Ontario*, published by OMAFRA. The drainage coefficient is a measure of the amount of runoff that a closed drain can remove from an upstream watershed in a 24-hour period. Based on our watershed examination and landowner discussions, the proposed tile drains for the Main Drain, Branch B and Branch C on this project have been designed for a 38mm (1.5") drainage coefficient. Since the downstream portion of the proposed Branch A is an existing tile drain to be incorporated, in order to not overload the existing tile, the proposed 10th Line road crossing and plastic tubing on property with Roll No. 040-03500 has been designed for the 31.8mm (1-1/4") drainage coefficient. The maximum capacity of the proposed road crossing is equal to the capacity of the existing downstream 200mm (8") tile.

The open ditch portion of the Drain is designed to provide adequate depth for the proposed Main Drain tile outlet and will also convey between the 2-year and 5-year storms within the channel cross-section.

The new laneway culvert is designed for the 10-year storm with a water level at the top of the proposed culvert. With the laneway surface being an additional 1.2m above the top of the culvvert, the crossing is still able to pass the 50-year storm without overtopping the laneway.

### 6.3 Enbridge Pipeline Crossings

The existing Parker Drain currently crosses the four (4) pipelines of Enbridge's Trafalgar Lines (Enbridge Gas Inc.), as well as the three (3) lines referred to as Lines 7-9 (Enbridge Pipelines Inc.), all within the Killcrest Farms Inc. property. Due to the topography of the land and the desire of the original petitioner (Stiek Farms Inc.) to extend the Parker Drain further upstream through property with Roll No. 040-02200, across 10th Line and provide an outlet for property with Roll No. 040-03800, it was anticipated that additional crossings of all the aforementioned lines would need to be made again on the Stiek Farms Inc. property, bringing the total proposed pipeline crossings to 14.

Upon completing the daylighting of the lines in various locations by hydrovac excavation, it was immediately clear that normal gravity crossings along the natural drainage pathway could not be achieved without conflicting with the next set of pipeline crossings downstream or causing the proposed tile drain to be too deep or shallow.

Several different designs were reviewed, however the natural drainage pathway could not be followed without requiring the use of multiple inverted siphon crossings of the pipelines. Ultimately the decision was made to propose alternate alignments through two (2) deep cuts in the hill, in order to divert the larger flows around the pipelines and avoid proposing any inverted siphons. This design decision is also favoured as it reduces/eliminates the maintenance/operational concerns of an inverted siphon. Further information regarding how increased costs are assessed is discussed in *Section 12.4 Increased Cost (Special) Assessments (Section 26).*

Preliminary drawings were sent to both Enbridge Gas Inc. and Enbridge Pipelines Inc. for their review and comment in July 2021. Response from Enbridge Pipelines Inc. requested a neoprene sheet over the crossing of Line 7 due to the minimal crossing separation. Response from Enbridge Gas Inc. requested that the crossing of all four (4) Trafalgar Lines be completed below the lines. The original design sent to Enbridge proposed to cross above the deeper 48" & 42" lines, and then drop under the more shallow 34" & 26" lines. More on this is discussed in *Section 9 INFORMATION MEETING & ON-SITE MEETING FOR 2nd PETITION.*

### *6.4 Berms*

Berming behind catchbasins has been proposed at Stations 0+510, 0+856, 1+257, 1+631, 1+832, 1+984, and 2+436 along the Main Drain, some of which are newly proposed and some are existing berms to be repaired. The existing berms at 0+697 and 1+075 are to be completely removed. Berms range in height from 150-900mm at the centre, depending on the topography of the land. The main purpose of the berms is to direct as much of the surface water into the subsurface tile drain as possible during a rain event. The actual storage capacity of the berms is considered minimal.

All berms located at catchbasins on property lines are to remain in place and are considered/recognized to be part of the Drain for maintenance purposes. The proposed berm at Station 1+257 on the Townsend Farms Inc. property is to be considered private and can therefore be removed at the owner's discretion.

### *6.5 Soil Conditions*

The Oxford County soils mapping for this area indicates that the soils adjacent to this Drain are Honeywood Silt Loams, with good drainage and considered to be slightly stony.

Test hole excavations were completed in seven (7) locations across the route of the drain. Most holes can be summarized as containing little to no stones, stable trench wall and topsoil depths in the 250-500mm range. The majority of holes contained no groundwater except for the hole dug on the Killcrest Farms Inc. property and the hole at the top end of the drain on the west side of 10th Line. Further detail on the test hole information can be found on Drawings 18-21.

Based on available information, adverse subsurface conditions are not expected to be a concern on this project, with the possible exception of some select locations in the upper portion of the watershed. The use of conventional construction equipment is anticipated. Refer to the Standard Specifications for drain construction procedures when adverse subsurface conditions are encountered.

### 6.6 Downstream Tile Drain Extension Inquiry

In a discussion between the engineer and Mr. Leiper following the on-site meeting, the engineer said he would consult with the Upper Thames River Conservation Authority (UTRCA) on a possible enclosure of the Drain from it's current tile drain outlet down to the Leiper laneway (approximate enclosure distance of 150m). On September 14, 2021, staff from the UTRCA, KSAL, and the affected property owners met on site to review the request. From the site visit, UTRCA staff indicated that, at a staff level, they could not support issuing a permit for the enclosure due in part to the contributing watershed area and the storage area that could potentially be lost. It was understood that a presentation could be made to the board for approval beyond the staff level if it was still desired to proceed, however the owner did not wish to pursue any further.

## 7 ENVIRONMENTAL CONSIDERATIONS

### 7.1 Agency Consultation

#### 7.1.1 UTRCA

The UTRCA did not request an environmental appraisal under Section 6 of the Act. The Conservation Authority were sent notices to the public meetings. Other than the consultation mentioned above regarding the ditch enclosure inquiry, no comments regarding the petition and proposed improvements were received.

## 8 CONSTRUCTION CONSIDERATIONS

### 8.1 Pre-Construction Approvals

Before starting work, the Contractor shall ensure all public utilities are located and shall contact all landowners along the proposed drain route to determine the location of any private utilities. Permits will be required for the proposed work at the Enbridge Gas Inc. and Enbridge Pipelines Inc. crossings. It is also expected that a permit may be required with Hydro One for the portion of the Main Drain constructed within the transmission line corridor.

### 8.2 Construction Scheduling

Construction cannot commence until ten days after a bylaw to adopt this report is given third reading in accordance with the Act.

### 8.3 Minor Adjustments During Construction

Changes to the drain requested by landowners, agencies or other authorities after the bylaw is passed cannot be undertaken unless the report is amended.

Section 84.1 of the Act and the associated regulation, O. Reg. 500/21, now provide a process to amend this report if design changes are required during construction. Design changes must: arise from unforeseen circumstances encountered during construction, comply with existing agency approvals, not increase the total project cost to more than 133% of the tendered amount and not impact drain capacity. If design changes meet these criteria and are approved by the engineer, the report can be amended after construction with the as-constructed design before passing the actual cost bylaw.

Additional work desired by the landowner(s) which is not part of the drainage works may be arranged with the Contractor provided the cost of the work is paid by the landowner(s), and the engineer reviews the additional work in advance. Such additional work is not part of the drainage works for future maintenance. If a substantial alteration is required, a revised report can be prepared and processed through the Act, or an application can be made under the Act to the Drainage Tribunal to recognize the substantial alteration. The application to the Tribunal must occur before final costs are levied.

### 8.4 Alignment of Drains

All drains shall be constructed and maintained generally to the alignment, as noted on the plans and specified by the Special Provisions. In the absence of survey bars, existing fences and similar boundary features are assumed to represent property lines.

Should landowners desire a more precise location for the drains in relation to their property line or if there is a dispute about the location of any property line, landowners may obtain a legal survey at their own cost before construction.

## 9 INFORMATION MEETING & ON-SITE MEETING FOR 2nd PETITION

**Attendees**

| | |
|---|---|
| John R Townsend – Townsend Farms Inc. (Roll No. 040-02100) | Jake Van Ryswyck (Roll No. 040-03500) |
| Robin and Erik Rotteveel – Stiek Farms (Roll No. 040-02200 & 040-03800) | Tom Lightfoot (Roll No. 040-02000) |
| Doug Leiper (Roll No. 040-01900) | Connor Occleston (Twp. of EZT) |
| Laurence MacKay (tenant for Leiper farm) | Claire Orhling (Twp. of EZT) |
| Leroy Van Ryswyck (Roll No. 040-01000) | Curtis MacIntyre, P. Eng. (KSAL) |
| Steve Killing (Roll No. 040-3500 & 040-03600) | Alex Pasley, P. Eng. (KSAL) |

On December 10, 2021, an information meeting with landowners was held. Notice for the meeting was sent to all landowners in the watershed. At the meeting, the results of the investigation to-date were presented along with a summary of the proposed work, preliminary cost estimates and assessments. The meeting also served as the official on-site meeting for the Killing/Van Ryswyck petition.

Those present at the meeting were in general agreement with the work proposed.

- A revision was made to the watershed and schedules to reflect the L. & K. Van Ryswyck farm tiled out of the watershed.
- Laurence MacKay also clarified that the existing tile to be incorporated as a part of Branch A was actually believed to be a 200mm dia. (not 250mm). Following the meeting, the proposed upstream tile size was reduced to not overload this existing tile and was agreed to by Jake Van Ryswyck.
- Finally, the southerly existing private berm located within the Townsend Farms property was determined to no longer be needed due to the increased size of proposed drain and close proximity to another berm on the property upstream. As with an existing berm located on the Spero Holsteins property proposed to be removed, a buried junction box is still proposed partly due to a drop of the tile inverts, but also so that the owner may convert back to a catchbasin should they wish to re-instate the berm in the future.

After the meeting, comment was received from Enbridge Gas Inc. requesting that the proposed Parker Drain cross below all four (4) Trafalgar Lines, as discussed earlier. To accommodate such, without flattening the grade and increasing the tile size downstream, the Drain was required to be deepened by approximately 0.5-0.85m for a distance of nearly 1km downstream. Furthermore, the portion of the Main Drain downstream through the Walton & Stiek farms was converted to solid plastic pipe due to the concerning depth of a non-reinforced concrete tile.

## 10 DRAWINGS AND SPECIFICATIONS

### *10.1 Drawings*

The location of the Drain, watershed boundary and the affected properties are shown on Drawing No. 1 included with this report. The numbers adjacent to the Drain are station numbers, which indicate in metres the distance along the Drain from the outlet.

The profiles for the Drain are on Drawings 2 to 5. The profiles show the depth and grade for proposed work and future maintenance. Drawings 6 to 13 contain the details at specific locations, such as catchbasins, and road and pipeline crossings. Drawing 14 contains cross-sections of the open ditch. Drawings 15 to 17 contain the Special Provisions – Construction Specifications. Drawing 18 to 21 contain the Test Hole Investigations.

### *10.2 Specifications*

This report incorporates the General Conditions, Standard Specifications and Special Provisions listed in the Table of Contents, which govern the construction and maintenance of the Drain.

## 11 COST ESTIMATE

The estimated cost of this project includes allowances to owners, the construction cost, the engineering cost and other costs associated with the project.

### *11.1 Allowances*

Sections 29 to 33 of the Drainage Act provides for allowances (compensation) to owners affected by proposed drain construction. On this project, there are only allowances for Sections 30 & 31.

#### *11.1.1 Section 30 - Damages*

Section 30 provides for payment of an allowance to landowners along the Drain for damages caused by the construction of the Drain. Where separate access routes to the working area are specified in this report, Section 30 allowances also account for access route damage. In agricultural areas, crop damages are computed based on published crop values and declining productivity loss in the years following construction.

The allowance for damage to land and crops was calculated using a rate of $2,000 per hectare applied to the defined working area. For the basis of the Section 30 allowance calculations, a 25m width corridor is typically used for the closed drain portion, with the exception of 30m width for sections of closed drain deeper than 2.5m (See Section 300.2 Construction Specifications for more details). A 10m width is used for the open ditch portion. There is a minimum Section 30 allowance of $100.

#### *11.1.2 Section 31 – Existing Drains*

Section 31 provides for payment of an allowance to the owner of an existing drain that is to be incorporated as part of the new Drain. The allowance for incorporating the existing 180m of 200mm dia. plastic tubing on Branch A on the D. & J. Leiper property (Roll No. 040-01900) was set at the approximate construction cost as quoted by the landowner, and is for $3,000.

#### *11.1.3 Summary of Allowances*

The table below summarizes the amounts of the allowances to be provided under this report.

*Table 11.1-1 - Summary of Allowances*

| | Main Drain | Branch A | | Branch B | Branch C | |
|---|---|---|---|---|---|---|
| Roll Number | Dam. Sec. 30 ($) | Dam. Sec. 30 ($) | Ex. Drain Sec. 31 ($) | Dam. Sec. 30 ($) | Dam. Sec. 30 ($) | **Total ($)** |
| ***Main Drain*** | | | | | | |
| 040-00800 | 2,400 | | | | | **2,400** |
| 040-01001 | 1,000 | | | | | **1,000** |
| 040-01100 | 2,900 | | | | 1,200 | **4,100** |
| 040-01900 | 2,000 | | 3,000 | | | **5,000** |
| 040-02100 | 4,400 | | | | | **4,400** |
| 040-02200 | 1,200 | | | 4,200 | 900 | **6,300** |
| 040-02300 | 100 | | | | 100 | **200** |
| 040-03500 | | 400 | | | | **400** |
| 040-03800 | | | | 100 | | **100** |
| **TOTAL ALLOWANCES:** | **14,000** | *400* | *3,000* **3,400** | **4,300** | **2,200** | **23,900** |

In accordance with Section 62(3) of the Act, the allowances shown may be deducted from the final assessment levied. Payment to the owner would only be made when the allowance is greater than the final assessment. The allowances are a fixed amount and are not adjusted due to construction.

## *11.2 Construction Cost Estimate*

The estimated cost for Labour, Equipment and Materials to construct the proposed Drain is outlined in detail in *Table 11.6-1 - Estimated Cost Summary*. The construction cost estimate is based on recent costs for comparable work. A contingency amount is included to cover additional work that may be required due to field conditions or minor alterations to the project.

The contract for the Drain will be awarded by public tender. If the contract price is more than 33% over the engineer's estimate, Section 59 of the Act requires a Council meeting with the petitioners to determine if the project should proceed.

## *11.3 Engineering Cost Estimate*

Engineering costs include report preparation and attending the Council meeting to consider the report and the Court of Revision.

Construction Phase Services may include: preparing tender documents and tender call, review of tenders, attending the pre-construction meeting, periodic construction inspection, payments, final inspection, post-construction follow-up, final cost analysis and preparation of the grant application.

The cost for report preparation is usually not altered at the conclusion of a project unless the report is referred back or the report is appealed to the Drainage Tribunal, which would result in additional costs. The amount shown for meetings is an estimate. The final cost will be based on the actual time required for meetings. The estimate shown for construction phase services is based on experience and assumes good construction conditions and a Contractor who efficiently completes the construction. The final cost for the construction phase will vary as per the actual time spent during and following drain construction. Engineering costs are summarized in *Table 11.6-1 - Estimated Cost Summary*.

## 11.4 Estimate of Section 73 Costs

Section 73(2) and 73(3) of the Act direct that the cost of services provided by municipal staff and the Council to carry out the Act process shall not form part of the final cost of the Drain. However, Section 73(1) outlines that the following costs incurred by the Municipality can be included in the cost of the Drain: "*cost of any application, reference or appeal and the cost of temporary financing.*"

The estimate of Section 73 costs is included to cover the above-referenced items from Section 73(1) and primarily provides for interest charges on financing the project until it is completed. This cost estimate may not be adequate to cover legal or engineering costs incurred by or assessed to the Municipality should the project be appealed beyond the Court of Revision though such costs will form part of the final drain cost.

Grant policy indicates that municipal cost for photo-copying and mailing required to carry out the required procedures under the Act can be included in the final drain cost. Section 73 costs are summarized in *Table 11.6-1 - Estimated Cost Summary*.

## 11.5 Harmonized Sales Tax

The Harmonized Sales Tax (HST) will apply to most costs on this project. The Municipality is eligible for a partial refund on HST paid, the net 1.76% HST is included in the cost estimates in this report.

## 11.6 Estimated Cost Summary

*Table 11.6-1 - Estimated Cost Summary*

| DESCRIPTION | | | TOTAL |
|---|---|---|---|
| **ALLOWANCES:** | | | **$23,900** |
| **CONSTRUCTION COST ESTIMATE** | | | |
| Item | Stations | Description | Cost |
| **i) Main Drain** | | | |
| M1 | 0+000 to 0+012 | Remove and dispose of ex. 1200mm dia. CSP. Install 12m length of 1600mm dia. galvanized CSP, 2.8mm thickness, 125x25mm corrugations. Restore laneway to existing conditions. | 16,000 |

| | DESCRIPTION | | TOTAL |
|---|---|---|---|
| M2 | 0+012 to 0+070 | 58m of ditch bottom cleanout, 1.0m bottom width, 2:1 side slopes. | 1,500 |
| M3 | 0+070 to 0+164 | 94m of ditch excavation, 1.0m bottom width, 2:1 side slopes. | 4,700 |
| M4 | 0+164 to 0+179 | Permanent stilling pool (350m³) with 25m² of new riprap on geotextile at outlet. | 12,000 |
| M5 | 0+179 to 0+185 | 6m of 600mm dia. solid plastic pipe (HDPE) with rodent gate at outlet. | 1,700 |
| M6 | 0+179 to 0+185 | Remove existing 400mm dia. CSP outlet pipe and install 6m of 375mm dia. HDPE pipe with rodent gate at outlet. | 1,500 |
| M7 | 0+185 to 0+511 | 326m of 600mm dia. concrete tile with joint wrap. | 22,800 |
| M8 | 0+510 | Repair berm to existing conditions. | 500 |
| M9 | 0+511 | 900x1500mm concrete DICB, including connections and birdcage grate. Also includes removal of existing 600x600mm DICB. | 4,900 |
| M10 | 0+511 to 0+697 | 186m of 600mm dia. concrete tile with joint wrap. | 13,000 |
| M11 | 0+697 | 900x1500mm concrete JB, including connections and birdcage grate. Also includes removal of existing 600x600mm DICB. | 3,000 |
| M12 | 0+697 | Existing berm to be removed. Spread material on downstream side of JB. | 500 |
| M13 | 0+697 to 0+857 | 160m of 600mm dia. concrete tile with joint wrap. | 11,200 |
| M14 | 0+856 | Use existing partial berm to construct 75m long new berm (0.5m top width, 2:1 side slopes). | 2,500 |
| M15 | 0+857 | 900x1500mm concrete DICB, including connections and birdcage grate. Also includes removal and disposal of existing 600x600mm DICB | 5,000 |
| M16 | 0+857 to 1+075 | 218m of 600mm dia. concrete tile with joint wrap. | 15,300 |
| M17 | 1+075 | Existing berm to be removed. Spread material around low areas. | 1,000 |
| M18 | 1+075 | 900x1500mm concrete JB, including connections and birdcage grate. Also includes removal of existing 600x600mm DICB. | 2,500 |
| M19 | 1+075 to 1+260 | 185m of 600mm dia. concrete tile with joint wrap. Includes break up/destroy and bury existing 250mm dia. concrete tile (1901) | 13,000 |
| M20 | 1+257 | Repair berm to existing conditions. Extend both ends of berm, 10m of west end and 16m on east end using 2 truck loads of imported clay material as per detail. | 1,500 |
| M21 | 1+260 | 900x1200mm concrete CB, including connections and birdcage grate. Also includes removal of existing 600x600mm DICB | 3,500 |
| M22 | 1+260 to 1+633 | 373m of 600mm dia. concrete tile with joint wrap. Includes break up/destroy and bury existing 200/250mm dia. concrete tile (1901) | 29,800 |
| M23 | 1+631 | Construct 30m of new berm as per detail. | 1,200 |
| M24 | 1+633 | 900x1200mm concrete CB, including connections and birdcage grate. Also includes removal of existing 600x600mm DICB | 4,000 |
| M25 | 1+633 to 1+833 | 200m of 600mm dia. HDPE pipe (solid). Includes break up/destroy and bury existing 200mm dia. clay tile (1901) | 50,000 |
| M26 | 1+832 | Construct 30m of new berm as per detail. | 1,200 |
| M27 | 1+833 | 900x1200mm concrete CB, including connections and birdcage grate. | 4,500 |
| M28 | 1+835 | Incidental clearing of 1-2 trees for tile and CB installation. To be hauled away unless other arrangements made with owner. | 500 |
| M29 | 1+833 to 1+988 | 155m of 525mm dia. HDPE pipe (solid). Includes break up/destroy and bury existing 200mm dia. clay tile (1901) | 34,900 |
| M30 | 1+984 | Construct 20m of new berm as per detail. | 1,000 |

| | | DESCRIPTION | TOTAL |
|---|---|---|---|
| M31 | 1+988 | Incidental clearing of 1-2 trees for tile and CB installation. To be hauled away unless other arrangements made with owner. | 500 |
| M32 | 1+988 | 900x1200mm concrete CB, including connections and birdcage grate. Also includes removal of existing 600x600mm DICB. | 4,500 |
| M33 | 1+988 to 2+032 | Locate, expose and protect four (4) Enbridge natural gas pipelines with extreme caution for Drain construction to proceed underneath of pipelines, consult specifications. | 20,000 |
| M34 | 1+988 to 2+032 | 44m of 525mm dia. PVC pipe crossing beneath four (4) Enbridge Natural Gas Pipelines by open cut. | 15,000 |
| M35 | 2+032 | 900x1200mm concrete JB, including connections. | 4,500 |
| M36 | 2+032 to 2+136 | 104m of 525mm dia. concrete tile with joint wrap. Includes break up/destroy and bury existing 200mm dia. clay tile (1901). | 6,200 |
| M37 | 2+136 | 900x1200mm concrete CB, including connections and birdcage grate. Also includes removal of existing 600x600mm CB. | 3,000 |
| M38 | 2+136 to 2+166 | 30m of 400mm dia. concrete tile with joint wrap. Includes break up/ destroy and bury existing 200mm dia. clay tile (1901). | 1,500 |
| M39 | 2+166 | 900x1200mm concrete JB, including connections. | 2,500 |
| M40 | 2+166 to 2+184 | 18m of twin runs (2) of 300mm PVC pipe crossing above three (3) Enbridge Oil Pipelines by open cut. Install neoprene sheet below drain and above Line 7 (approx. 1m wide x 3m long x 1/2" thick). | 8,000 |
| M41 | 2+184 | 900x1200mm concrete JB, including connections. | 2,500 |
| M42 | 2+184 to 2+437 | 253m of 300mm dia. concrete tile with joint wrap. Includes break up/destroy and bury existing 175mm dia. clay tile (1901). | 10,100 |
| M43 | 2+436 | Construct 10m of new berm as per detail. | 500 |
| M44 | 2+437 | 600x600mm concrete CB, including connections and birdcage grate. | 2,000 |
| | | **Sub Total Part i)** | **345,500** |
| **ii) Branch A** | | | |
| A1 | 0+000 to 0+196 | Incorporate 190m of existing 200mm dia. perforated plastic tubing and 6m of 200mm dia. plastic outlet pipe. | 0 |
| A2 | 0+196 | Construct 600x600mm CB, including removal of existing 600x600mm CB, existing rock salvaging/placement, grate and connections. Connect existing 200mm tubing to new CB with 2m of 200mm plastic tubing. | 2,100 |
| A3 | 0+196 to 0+215 | 19m of 250mm dia. solid plastic pipe across 10th Line by open cut methods. | 6,000 |
| A4 | 0+215 | Construct 600x600mm CB, including 5m$^2$ riprap, 8m stub of 200mm dia. HDPE, grate and connections. | 3,000 |
| A5 | 0+215 to 0+345 | 130m of 250mm dia. perforated plastic tubing. | 5,200 |
| A6 | 0+345 | Construct 600x600mm CB, including grate and connections. | 2,000 |
| A7 | 0+345 | Construct 10m of new berm as per detail. | 500 |
| | | **Sub Total Part ii)** | **18,800** |
| **iii) Branch B** | | | |
| B1 | 0+000 to 0+080 | 80m of 350mm dia. concrete tile with joint wrap. | 3,600 |
| B2 | 0+080 to 0+347 | 267m of 375mm dia. HDPE pipe (solid). | 32,000 |
| B3 | 0+347 | Construct 600x600mm JB, including grate and connections. | 1,800 |
| B4 | 0+347 to 0+737 | 390m of 350mm dia. concrete tile with joint wrap. | 17,600 |
| B5 | 0+390 & 0+478 | Remove two (2) existing tree stumps on drain alignment for installation of drain. | 300 |
| B6 | 0+737 | 600x600mm concrete CB, including 5m$^2$ riprap, connections and birdcage grate. Also includes removal of existing 600x600mm CB. | 2,500 |

| | | DESCRIPTION | TOTAL |
|---|---|---|---|
| B7 | 0+737 to 0+757 | 20m of 375mm dia. solid plastic pipe across 10th Line by open cut including full granular backfill and road restoration (gravel). | 7,000 |
| B8 | 0+757 | 600x600mm concrete CB, including 5m$^2$ riprap, connections and birdcage grate. | 2,500 |
| | | **Sub Total Part iii)** | **67,300** |
| **iv) Branch C** | | | |
| C1 | 0+000 to 0+324 | 324m of 300mm dia. HDPE pipe (solid). | 24,300 |
| C2 | 0+324 | 600x600mm concrete JB, including connections. | 1,800 |
| C3 | 0+324 to 0+342 | 18m of twin runs (2) of 200mm PVC pipe crossing above three (3) Enbridge Oil Pipelines by open cut. | 6,000 |
| C4 | 0+339 | Incidental clearing of 1 tree for tile and CB installation. To be hauled away unless other arrangements made with owner. | 300 |
| C5 | 0+342 | 600x600mm concrete DICB, including birdcage grate and connections. | 2,000 |
| | | **Sub Total Part iv)** | **34,400** |
| **v) Contingencies** | | | |
| D1 | | Increased costs to install 200m of tile by backhoe in areas of muck or wet/unstable soils, including geotextile and 300mm of clear crushed stone. (Contingency is intended to be independent of tile size. If required and authorized, would be paid in addition to regular bid item above). | 12,000 |
| D2 | | Increased costs to install 300m of tile by backhoe in stony conditions, where authorized and with thin bedding of clear crushed stone. (Contingency is intended to be independent of tile size. If required and authorized, would be in paid in addition to regular bid item above). | 12,000 |
| D3 | | Contingency allowance for lift-outs of wheel machine to allow for stone removal, including the stone removal and restarting/continuing the wheel machine (based on 5 @ $300/lift-out). | 1,500 |
| D4 | | Tile Connections (based on 15 @ $100/connection). | 1,500 |
| D5 | | Contingency for steel lid to be used instead of typical concrete lid on 900x1200mm junction box (1" thick A36 steel plate, with hooks welded onto ends of plate for lifting and angle irons welded to bottom side of plate to avoid shifting- see Dwg 11). | 600 |
| D6 | | Lump sum contingency allowance. | 19,000 |
| | | **Sub Total Part v)** | **46,600** |
| | | Net HST (1.76%) | 9,020 |
| | | **TOTAL CONSTRUCTION COST ESTIMATE:** | **521,620** |
| **ENGINEERING COSTS** | | | |
| | | Report Preparation | 90,000 |
| | | Enbridge pipeline locating (Super Sucker Hydro Vac Services) | 16,200 |
| | | Consideration of Report Meeting | 1,000 |
| | | Court of Revision | 1,000 |
| | | Construction Phase Services | 50,000 |
| | | Net HST (1.76%) | 2,785 |
| | | **TOTAL ENGINEERING COST ESTIMATE:** | **160,985** |
| **SECTION 73 COSTS** | | | |
| | | Printing of reports | 200 |
| | | Interest estimate | 6,000 |
| | | Other unforeseen costs & applications | 12,295 |
| | | **TOTAL SECTION 73 COST ESTIMATE:** | **18,495** |
| | | **TOTAL ESTIMATED COST:** | **725,000** |

# 12 ASSESSMENTS

The Drainage Act requires that the total estimated cost be assessed to the affected lands and roads under the categories of Benefit (Section 22), Outlet Liability (Section 23), Injuring Liability (Section 23), Special Benefit (Section 24) and Increased Cost (Section 26). On this project, assessments for Benefit, Outlet Liability and Increased Cost (Special) Assessments are involved.

## *12.1 Calculation of Assessments*

For each individual branch, the first step in the assessment calculation is to determine the benefit assessment to the affected lands and roads, then special assessments to roads and utilities are determined, where applicable. After deducting the total benefit and special assessments from the total cost of each interval, the balance of the cost is then assessed as outlet liability on a per hectare basis to all lands and roads in the interval watershed.

## *12.2 Benefit Assessments (Section 22)*

Benefit assessments are listed in Schedule A – Schedule of Assessments and shown on a per interval basis in Appendix A – Calculation of Assessments.

Section 22 benefits were determined based on the estimated value provided to the property by the works and are not proportional to the watershed area. For this specific project, benefit assessments are generally balanced and applied on the following three criteria: Direct Outlet (ability of a property to connect directly to the new drain), Subsurface Service Area (size of land area that is or can be directly connected via subsurface tile drains), and Improved Drainage (improved drainage along the length of the drain crossing a property).

## *12.3 Outlet Liability Assessments (Section 23)*

Section 23(3) of the Drainage Act states that outlet liability assessment is to be based on the volume and rate of flow of the water artificially caused to flow. Therefore the lands and roads in the watershed are assessed on a per hectare basis, with adjustments made to recognize the different amount of runoff generated by different land uses. The basis for the adjustments is 1 hectare of cleared agricultural land contributing both surface and subsurface water to the Drain. Land uses with a different runoff rate are adjusted by the factors given in *Table 12.3-1 - Runoff Factors*.

*Table 12.3-1 - Runoff Factors*

| Land Use | Runoff factor |
|---|---|
| Agricultural | 1 |
| Lands Tiled Away | 0.5 |
| Gravel Road | 2 |

## 12.4 Increased Cost (Special) Assessments (Section 26)

Section 26 of the Drainage Act directs that any increased cost due to a public utility (utility) or road authority (road) shall be paid for by that utility or road. This assessment is known as a Special Assessment.The estimated special assessments are presented in *Table 12.4-1 - Estimated Special Assessments*. The equivalent drain cost is based on the length of Drain affected by the road allowance/utility right of way and the unit price of normal drain construction. The increased cost caused by the road or utility is determined by subtracting the equivalent drain cost from the construction and engineering costs.

The special assessments below represented by (C), (D), (F), (H), and (I) are those incurred by the physical crossings of the pipelines or road. Special assessments (A) and (B) are portions of the Parker Drain 2022 that are required to be installed much deeper (approx. 0.5 – 0.85m) than would normally be proposed, using high-density polyethylene pipe instead of concrete tile. Finally, special assessments (E) and (G) are identified by the engineer as increased costs, necessitated by the pipelines, for the alternative drain alignments to go through deep hills using high-density polyethylene pipe compared to using the natural drainage alignment with concrete tile. These alternative alignments avoided a second crossing of the Trafalgar Lines and the use of several inverted siphons. It should be noted that the special assessments of (E) and (G) are comparable to the special assessment that would instead have been incurred for a second crossing of the Trafalgar Lines.

*Table 12.4-1 - Estimated Special Assessments*

| Drain | Location | Authority/ Owner | Construction Cost | + Eng. Cost | - Equiv. Drain Cost | + Net HST | = Est. Special Assess. |
|---|---|---|---|---|---|---|---|
| **(A) Main Drain** | 1+633 to 1+833 | Enbridge Gas Inc. | 54,500 *(Items M25 & M27)* | 13,700 | -17,000 | 900 | **52,100** |
| **(B) Main Drain** | 1+833 to 1+988 | Enbridge Gas Inc. | 39,400 *(Items M29 & M32)* | 10,500 | -12,300 | 660 | **38,260** |
| **(C) Main Drain** | 1+988 to 2+032 | Enbridge Gas Inc. | 39,500 *(Items M33, M34 & M35)* | 15,300 | -2,640 | 920 | **53,080** |
| **(D) Main Drain** | 2+166 to 2+184 | Enbridge Pipelines Inc. | 13,000 *(Items M39, M40 & M41)* | 5,800 | -900 | 315 | **18,215** |
| **(E) Branch C** | 0+000 to 0+324 | Enbridge Pipelines Inc. | 24,300 *(Item C1)* | 6,600 | -8,820 | 390 | **22,470** |
| **(F) Branch C** | 0+324 to 0+342 | Enbridge Pipelines Inc. | 7,800 *(Items C2 & C3)* | 4,000 | -990 | 190 | **11,000** |
| **(G) Branch B** | 0+000 to 0+347 | Enbridge Gas Inc. | 37,400 *(Items B1, B2, & B3)* | 10,900 | -9,900 | 680 | **39,080** |
| **(H) Branch B** | 10th Line | Twp. of EZT | 9,500 *(Items B6 & B7)* | 4,000 | -900 | 220 | **12,820** |
| **(I) Branch A** | 10th Line | Twp. of EZT | 8,100 *(Items A2 & A3)* | 3,000 | -760 | 180 | **10,520** |

The actual special assessments will be determined after construction by inserting the actual construction and engineering costs in the Special Assessments Table. Any additional costs identified by the engineer will be added to the Special Assessment where appropriate.

The road authority or utility may elect to construct the Drain within their right of way with their forces. In this case, the special assessment is calculated by inserting zero for the construction cost.

If there are increased costs to the Drain at the time of construction due to a utility or road not listed in the table above, a Special Assessment will be based on the actual costs incurred.

Special Assessments do not apply to future maintenance assessments.

## *12.5 Assessment Schedules*

In the assessment schedules each parcel of land assessed has been identified by the municipal assessment roll number at the time of the preparation of this report. The size of each parcel was established using the assessment roll information. If an "F" is shown in the first column, it denotes lands with current Farm Property Tax Class designation that may qualify for Grant. For convenience only, each parcel is also identified by the owner name(s) from the last revised assessment roll.

### *12.5.1 Schedule A- Schedule of Assessments*

The estimated cost for the drainage works in this report is distributed among lands, roads and utilities, as shown in Schedule A, the Schedule of Assessments for Construction.

### *12.5.2 Schedule B -Schedule of Assessments for Maintenance*

In accordance with Section 74 of the Act, the Drain shall be maintained by the Municipality, and the cost of maintenance shall be assessed to lands and roads upstream of the maintenance location, pro rata with the amounts in Schedule B. The $ amounts in Schedule B are listed solely for calculating percentages (share of future maintenance costs), and will not be levied with the final cost of the drainage works.

Schedule B is divided into columns to reflect the different branches and intervals where maintenance work may be undertaken. These column intervals assist in identifying upstream lands and roads to be assessed for future maintenance. The percentages shown in Schedule B determine the share of future maintenance to be levied to property or road. For example, a $1,000 ditch cleanout or tile repair will result in a $50 assessment to a property with a 5% maintenance assessment.

The Municipality will confirm eligibility for the grant at the time the maintenance cost is levied.

*12.5.3 Schedule C – Schedule for Actual Cost Bylaw*

After the construction of the Drain is certified, complete by the Engineer, the Municipality will determine the actual cost of the Drain. Actual assessments will be determined by prorating the actual cost of the Drain using Schedule C. Schedule C illustrates the estimated net assessments after deducting allowances and grants from the total assessments shown in Schedule A. Eligibility for the grant will be confirmed by the Municipality at the time the actual cost is levied. Actual assessments in Schedule C will be levied to the owner of the identified parcel at the time the Actual Cost Bylaw is passed.

## 13 GRANT

In accordance with the provisions of Section 85 of the Act, a grant not exceeding 1/3 (33-1/3%) may be available on the assessments against lands used for agricultural purposes. The current OMAFRA grant policy defines agricultural lands as privately owned parcels of land which have the Farm Property Class Tax Rate. Based on Municipal assessment roll information, parcels that have the Farm Property Tax Class are identified with an 'F' in the first column of the assessment schedules.

Section 88 of the Act provides for the Municipality to apply for this grant after the construction of the Drain is certified complete by the Engineer. The Municipality must confirm the Farm Property Tax Class on the assessed parcels at the time the grant application is completed and submitted to OMAFRA. OMAFRA has the authority to determine grant eligibility regardless of the designation herein.

If any portion of the drainage works is not eligible for the grant, those ineligible costs have been separately identified in this report.

## 14 PRIVACY OF LANDS

A right-of-way for the Municipality will exist along the Drain once constructed on each property. However, the property on which the right-of-way is located remains private property. Other landowners or the public may not enter or use the Drain right-of-way. Persons authorized to enter the Drain right-of-way to carry out duties authorized under the Act include Engineers, Contractors and the appointed Drainage Superintendents and/or their assistants.

## 15 MAINTENANCE

### *15.1 General*

Section 74 of the Act requires the Drain, as outlined in this report, to be maintained by the Municipality, and the cost of maintenance to be assessed to the upstream lands and roads pro rata with the assessments in Schedule B.

All parties affected by the Drain, are encouraged to periodically inspect the Drain and report any visible or suspected problems to the Municipality.

A right-of-way along the Drain and access routes to the Drain exist for the Municipality to maintain the Drain.

Any landowner making a new connection to the Drain shall notify the Drainage Superintendent before making the connection. If the Drainage Superintendent is not notified, the cost to remedy new connections that obstruct or otherwise damage the Drain will be the responsibility of the owner.

### *15.2 Updating Future Maintenance Schedules*

To ensure future maintenance assessments are equitable, the assessments provided in this report should be reapportioned under Section 65 when severances or amalgamations occur when new lands are connected to the Drain or when a land-use change occurs that can be accommodated by the existing Drain. If a future land-use change will cause the drain capacity to be exceeded, a report under Section 4 or 78 may be required to provide increased capacity.

### *15.3 Drains To Be Abandoned*

In accordance with Section 19 of the Act, the entirety of the existing Parker Drain (1901) and Parker Drain (1966) is hereby abandoned of status under the Act. The original 1901 portion is proposed to be destroyed with the completion of this Report, with the 1966 portion (Station 0+179 to Station 1+075) to become private and maintained by the owner of the property.

## 16 BYLAW

This report including the drawings and specifications, assessment schedules and appendices, when adopted by bylaw in accordance with the Act, provides the basis for construction and maintenance of the Drain.

All of which is respectfully submitted,

K. SMART ASSOCIATES LTD.


Curtis MacIntyre, P. Eng.

mw

**SCHEDULE A - SCHEDULE OF ASSESSMENTS FOR CONSTRUCTION**
**PARKER DRAIN 2022**
**TOWNSHIP OF EAST ZORRA - TAVISTOCK**

| | | | Main Drain | | | | | Branch A | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Con | Lot | Roll Number (Owner) | Total ha affected | Benefit (Sec. 22) | Special (Sec. 26) | Outlet (Sec. 23) | Total | Total ha affected | Benefit (Sec. 22) | Special (Sec. 26) | Outlet (Sec. 23) | Total |
| ***Twp of East Zorra-Tavistock (Roll No. 32-38-010)*** | | | | | | | | | | | | |
| F 9 | Pt. Lots 17 & 18 | 040-00800 (Spero Holsteins Ltd) | 16.5 | 30,200 | 0 | 9,004 | 39,204 | 0.0 | 0 | 0 | 0 | 0 |
| F 9 | Pt. Lots 18 & 19 | 040-01000 (L. & K. VanRyswyck) | 5.6 | 0 | 0 | 2,248 | 2,248 | 0.0 | 0 | 0 | 0 | 0 |
| F 9 | Pt. Lot 19 | 040-01001 (J. & B. Walton) | 4.4 | 5,700 | 0 | 7,533 | 13,233 | 0.0 | 0 | 0 | 0 | 0 |
| F 9 | Pt. Lot 20 | 040-01100 (Killcrest Farms Inc) | 28.3 | 28,900 | 0 | 49,169 | 78,069 | 0.0 | 0 | 0 | 0 | 0 |
| F 9 | Pt. Lot 17 | 040-01900 (Douglas and Jean Leiper) | 18.6 | 32,400 | 0 | 6,801 | 39,201 | 0.0 | 2,250 | 0 | 0 | 2,250 |
| 9 | Lot 18 Part 1 | 040-02000 (C. & C. Lightfoot) | 0.4 | 0 | 0 | 146 | 146 | 0.0 | 0 | 0 | 0 | 0 |
| F 9 | Pt . Lots 18 & 19 | 040-02100 (Townsend Farms Inc) | 30.0 | 62,700 | 0 | 29,871 | 92,571 | 0.0 | 0 | 0 | 0 | 0 |
| F 9 | Pt. Lots 19 & 20 | 040-02200 (Stiek Farms Inc) | 30.4 | 10,400 | 0 | 44,250 | 54,650 | 0.0 | 0 | 0 | 0 | 0 |
| F 9 | Pt Lot 20 | 040-02300 (D. & K. Dodd) | 16.2 | 5,600 | 0 | 28,231 | 33,831 | 0.0 | 0 | 0 | 0 | 0 |
| F 10 | Pt. Lots 16 & 17 | 040-03400 (S. & H. Alexander) | 4.1 | 0 | 0 | 444 | 444 | 4.1 | 0 | 0 | 2,534 | 2,534 |
| F 10 | Pt. Lot 17 | 040-03500 (S., L., & S. Killing & J. VanRyswyck) | 9.0 | 0 | 0 | 974 | 974 | 9.0 | 5,600 | 0 | 5,562 | 11,162 |
| F 10 | Pt. Lots 17 & 18 | 040-03600 (S. & L. Killing) | 1.2 | 0 | 0 | 130 | 130 | 1.2 | 0 | 0 | 741 | 741 |
| F 10 | Pt. Lots 18 & 19 | 040-03700 (F. & B. Killing) | 2.1 | 0 | 0 | 2,545 | 2,545 | 0.0 | 0 | 0 | 0 | 0 |
| F 10 | Pt. Lots 19 & 20 | 040-03800 (Stiek Farms Inc) | 9.0 | 0 | 0 | 10,909 | 10,909 | 0.0 | 0 | 0 | 0 | 0 |
| | | **Subtotal (Lands):** | 175.8 | 175,900 | 0 | 192,255 | 368,155 | 14.3 | 7,850 | 0 | 8,837 | 16,687 |
| | | 10th Line (Township of East Zorra-Tavistock) | 1.8 | 0 | 0 | 2,415 | 2,415 | 0.5 | 3,750 | 10,520 | 618 | 14,888 |
| | | Enbridge Gas Inc. (Special Assessment) | | 0 | 143,440 | 0 | 143,440 | | 0 | 0 | 0 | 0 |
| | | Enbridge Pipelines Inc. (Special Assessment) | | 0 | 18,215 | 0 | 18,215 | | 0 | 0 | 0 | 0 |
| | | **Subtotal (Roads & Utilities):** | 1.8 | 0 | 161,655 | 2,415 | 164,070 | 0.5 | 3,750 | 10,520 | 618 | 14,888 |
| | | **TOTAL ASSESSMENT PARKER DRAIN 2022:** | **177.6** | **175,900** | **161,655** | **194,670** | **532,225** | **14.8** | **11,600** | **10,520** | **9,455** | **31,575** |

Notes:

1. Lands noted with an "F" are classified as agricultural and according to current OMAFRA policy qualify for the 1/3 grant.
   Eligibility for the 1/3 grant will be confirmed at the time the final cost is levied.
2. Section 21 of the Drainage Act, RSO 1990 requires that assessments be shown opposite each parcel of land and road affected. The affected parcels of land have been identified using the roll number from the last revised assessment roll for the Township. For convenience the owner's names as shown by the last revised assessment roll have also been included.

**SCHEDULE A - SCHEDULE OF ASSESSMENTS FOR CONSTRUCTION**
**PARKER DRAIN 2022**
**TOWNSHIP OF EAST ZORRA - TAVISTOCK**

| Con | Lot | Roll Number (Owner) | Branch B Total ha affected | Branch B Benefit (Sec. 22) | Branch B Special (Sec. 26) | Branch B Outlet (Sec. 23) | Branch B Total | Branch C Total ha affected | Branch C Benefit (Sec. 22) | Branch C Special (Sec. 26) | Branch C Outlet (Sec. 23) | Branch C Total | Gross Total Assessment ($) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Twp of East Zorra-Tavistock (Roll No. 32-38-010)*** | | | | | | | | | | | | | |
| F 9 | Pt. Lots 17 & 18 | 040-00800 (Spero Holsteins Ltd) | 0.0 | 0 | 0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 39,204 |
| F 9 | Pt. Lots 18 & 19 | 040-01000 (L. & K. VanRyswyck) | 0.0 | 0 | 0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 2,248 |
| F 9 | Pt. Lot 19 | 040-01001 (J. & B. Walton) | 0.0 | 0 | 0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 13,233 |
| F 9 | Pt. Lot 20 | 040-01100 (Killcrest Farms Inc) | 0.0 | 0 | 0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 78,069 |
| F 9 | Pt. Lot 17 | 040-01900 (Douglas and Jean Leiper) | 0.0 | 0 | 0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 41,451 |
| 9 | Lot 18 Part 1 | 040-02000 (C. & C. Lightfoot) | 0.0 | 0 | 0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 146 |
| F 9 | Pt . Lots 18 & 19 | 040-02100 (Townsend Farms Inc) | 0.0 | 0 | 0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 92,571 |
| F 9 | Pt. Lots 19 & 20 | 040-02200 (Stiek Farms Inc) | 10.6 | 28,900 | 0 | 4,068 | 32,968 | 20.1 | 7,800 | 0 | 8,730 | 16,530 | 104,148 |
| F 9 | Pt Lot 20 | 040-02300 (D. & K. Dodd) | 0.0 | 0 | 0 | 0 | 0 | 0.0 | 5,600 | 0 | 0 | 5,600 | 39,431 |
| F 10 | Pt. Lots 16 & 17 | 040-03400 (S. & H. Alexander) | 0.0 | 0 | 0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 2,978 |
| F 10 | Pt. Lot 17 | 040-03500 (S., L., & S. Killing & J. VanRyswyck) | 0.0 | 0 | 0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 12,136 |
| F 10 | Pt. Lots 17 & 18 | 040-03600 (S. & L. Killing) | 0.0 | 0 | 0 | 0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 871 |
| F 10 | Pt. Lots 18 & 19 | 040-03700 (F. & B. Killing) | 2.1 | 0 | 0 | 1,680 | 1,680 | 0.0 | 0 | 0 | 0 | 0 | 4,225 |
| F 10 | Pt. Lots 19 & 20 | 040-03800 (Stiek Farms Inc) | 9.0 | 7,600 | 0 | 7,199 | 14,799 | 0.0 | 0 | 0 | 0 | 0 | 25,708 |
| | | **Subtotal (Lands):** | 21.7 | 36,500 | 0 | 12,947 | 49,447 | 20.1 | 13,400 | 0 | 8,730 | 22,130 | 456,419 |
| | | 10th Line (Township of East Zorra-Tavistock) | 0.8 | 3,000 | 12,820 | 1,253 | 17,073 | 0.0 | 0 | 0 | 0 | 0 | 34,376 |
| | | Enbridge Gas Inc. (Special Assessment) | | 0 | 39,080 | 0 | 39,080 | | 0 | 0 | 0 | 0 | 182,520 |
| | | Enbridge Pipelines Inc. (Special Assessment) | | 0 | 0 | 0 | 0 | | 0 | 33,470 | 0 | 33,470 | 51,685 |
| | | **Subtotal (Roads & Utilities):** | 0.8 | 3,000 | 51,900 | 1,253 | 56,153 | 0.0 | 0 | 33,470 | 0 | 33,470 | 268,581 |
| | | **TOTAL ASSESSMENT PARKER DRAIN 2022:** | **22.5** | **39,500** | **51,900** | **14,200** | **105,600** | **20.1** | **13,400** | **33,470** | **8,730** | **55,600** | **725,000** |

Notes:

1. Lands noted with an "F" are classified as agricultural and according to current OMAFRA policy qualify for the 1/3 grant.
   Eligibility for the 1/3 grant will be confirmed at the time the final cost is levied.
2. Section 21 of the Drainage Act, RSO 1990 requires that assessments be shown opposite each parcel of land and road affected. The affected parcels of land have been identified using the roll number from the last revised assessment roll for the Township. For convenience the owner's names as shown by the last revised assessment roll have also been included.

**SCHEDULE B - SCHEDULE OF ASSESSMENTS FOR FUTURE MAINTENANCE**
**PARKER DRAIN 2022**
**TOWNSHIP OF EAST ZORRA - TAVISTOCK**

| | | | MAIN DRAIN | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Interval 1 | | Interval 2 | | Interval 3 | | Interval 4 | | Interval 5 | | Interval 6 | |
| | | | 0+000 to 0+044 | | 0+044 to 0+511 | | 0+511 to 1+260 | | 1+260 to 1+832 | | 1+832 to 2+136 | | 2+136 to 2+437 | |
| Con | Lot | Roll No. (Owner) | $ | % | $ | % | $ | % | $ | % | $ | % | $ | % |
| | **Twp of East Zorra-Tavistock (Roll No. 32-38-010)** | | | | | | | | | | | | | |
| 9 | Pt. Lots 17 & 18 | 040-00800 (Spero Holsteins Ltd) | *1,786* | 8.02 | *7,447* | 12.89 | *17,871* | 21.32 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 9 | Pt. Lots 18 & 19 | 040-01000 (L. & K. VanRyswyck) | *303* | 1.36 | *721* | 1.25 | *1,224* | 1.46 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 9 | Pt. Lot 19 | 040-01001 (J. & B. Walton) | *476* | 2.14 | *1,132* | 1.96 | *1,923* | 2.29 | *1,802* | 2.75 | *10,050* | 25.41 | *0* | 0.00 |
| 9 | Pt. Lot 20 | 040-01100 (Killcrest Farms Inc) | *3,064* | 13.76 | *7,284* | 12.61 | *10,866* | 12.96 | *11,590* | 17.67 | *14,003* | 35.40 | *6,803* | 50.00 |
| 9 | Pt. Lot 17 | 040-01900 (Douglas and Jean Leiper) | *5,164* | 23.20 | *17,837* | 30.88 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 9 | Lot 18 Part 1 | 040-02000 (C. & C. Lightfoot) | *43* | 0.19 | *103* | 0.18 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 9 | Pt . Lots 18 & 19 | 040-02100 (Townsend Farms Inc) | *3,248* | 14.58 | *7,721* | 13.37 | *27,554* | 32.88 | *22,698* | 34.61 | *0* | 0.00 | *0* | 0.00 |
| 9 | Pt. Lots 19 & 20 | 040-02200 (Stiek Farms Inc) | *3,291* | 14.78 | *7,824* | 13.54 | *11,784* | 14.05 | *17,650* | 26.92 | *7,401* | 18.71 | *0* | 0.00 |
| 9 | Pt Lot 20 | 040-02300 (D. & K. Dodd) | *1,754* | 7.88 | *4,170* | 7.22 | *7,079* | 8.44 | *6,634* | 10.12 | *8,101* | 20.48 | *6,802* | 50.00 |
| 10 | Pt. Lots 16 & 17 | 040-03400 (S. & H. Alexander) | *444* | 1.99 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 10 | Pt. Lot 17 | 040-03500 (S., L., & S. Killing & J. VanRyswyck) | *974* | 4.37 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 10 | Pt. Lots 17 & 18 | 040-03600 (S. & L. Killing) | *130* | 0.58 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 10 | Pt. Lots 18 & 19 | 040-03700 (F. & B. Killing) | *227* | 1.02 | *540* | 0.93 | *918* | 1.09 | *860* | 1.31 | *0* | 0.00 | *0* | 0.00 |
| 10 | Pt. Lots 19 & 20 | 040-03800 (Stiek Farms Inc) | *974* | 4.37 | *2,316* | 4.00 | *3,933* | 4.69 | *3,686* | 5.62 | *0* | 0.00 | *0* | 0.00 |
| | | Total Assessments on Lands: | *21,878* | 98.24 | *57,095* | 98.83 | *83,152* | 99.18 | *64,920* | 99.00 | *39,555* | 100.00 | *13,605* | 100.00 |
| | | 10th Line (Township of East Zorra-Tavistock) | *392* | 1.76 | *670* | 1.17 | *698* | 0.82 | *655* | 1.00 | *0* | 0.00 | *0* | 0.00 |
| | | Total Assessments on Roads: | *392* | 1.76 | *670* | 1.17 | *698* | 0.82 | *655* | 1.00 | *0* | 0.00 | *0* | 0.00 |
| | | **TOTAL ASSESSMENTS:** | *22,270* | 100.00 | *57,765* | 100.00 | *83,850* | 100.00 | *65,575* | 100.00 | *39,555* | 100.00 | *13,605* | 100.00 |

Notes:
1. Agricultural designation not included as grant eligibility has to be confirmed at the time of maintenance cost levy.
2. $ amounts above are listed solely for calculating percentages (share of future

**SCHEDULE B - SCHEDULE OF ASSESSMENTS FOR FUTURE MAINTENANCE**
**PARKER DRAIN 2022**
**TOWNSHIP OF EAST ZORRA - TAVISTOCK**

| | | | BRANCH A | | | | BRANCH B | | | | BRANCH C | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Interval 1 | | Interval 2 | | Interval 1 | | Interval 2 | | Interval 1 | |
| | | | 0+000 to 0+195 | | 0+195 to 0+345 | | 0+000 to 0+737 | | 0+737 to 0+757 | | 0+000 to 0+342 | |
| Con | Lot | Roll No. (Owner) | $ | % | $ | % | $ | % | $ | % | $ | % |
| | **Twp of East Zorra-Tavistock (Roll No. 32-38-010)** | | | | | | | | | | | |
| 9 | Pt. Lots 17 & 18 | 040-00800 (Spero Holsteins Ltd) | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 9 | Pt. Lots 18 & 19 | 040-01000 (L. & K. VanRyswyck) | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 9 | Pt. Lot 19 | 040-01001 (J. & B. Walton) | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 9 | Pt. Lot 20 | 040-01100 (Killcrest Farms Inc) | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 9 | Pt. Lot 17 | 040-01900 (Douglas and Jean Leiper) | *800* | 40.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 9 | Lot 18 Part 1 | 040-02000 (C. & C. Lightfoot) | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 9 | Pt . Lots 18 & 19 | 040-02100 (Townsend Farms Inc) | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 9 | Pt. Lots 19 & 20 | 040-02200 (Stiek Farms Inc) | *0* | 0.00 | *0* | 0.00 | *17,003* | 55.00 | *0* | 0.00 | *12,344* | 80.00 |
| 9 | Pt Lot 20 | 040-02300 (D. & K. Dodd) | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 | *3,086* | 20.00 |
| 10 | Pt. Lots 16 & 17 | 040-03400 (S. & H. Alexander) | *268* | 13.40 | *2,576* | 20.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 10 | Pt. Lot 17 | 040-03500 (S., L., & S. Killing & J. VanRyswyck) | *654* | 32.70 | *7,728* | 60.00 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 10 | Pt. Lots 17 & 18 | 040-03600 (S. & L. Killing) | *78* | 3.90 | *663* | 5.15 | *0* | 0.00 | *0* | 0.00 | *0* | 0.00 |
| 10 | Pt. Lots 18 & 19 | 040-03700 (F. & B. Killing) | *0* | 0.00 | *0* | 0.00 | *2,077* | 6.72 | *152* | 5.00 | *0* | 0.00 |
| 10 | Pt. Lots 19 & 20 | 040-03800 (Stiek Farms Inc) | *0* | 0.00 | *0* | 0.00 | *9,658* | 31.24 | *1,366* | 45.00 | *0* | 0.00 |
| | | Total Assessments on Lands: | *1,800* | 90.00 | *10,967* | 85.15 | *28,738* | 92.96 | *1,518* | 50.00 | *15,430* | 100.00 |
| | | 10th Line (Township of East Zorra-Tavistock) | *200* | 10.00 | *1,913* | 14.85 | *2,177* | 7.04 | *1,517* | 50.00 | *0* | 0.00 |
| | | Total Assessments on Roads: | *200* | 10.00 | *1,913* | 14.85 | *2,177* | 7.04 | *1,517* | 50.00 | *0* | 0.00 |
| | | **TOTAL ASSESSMENTS:** | *2,000* | 100.00 | *12,880* | 100.00 | *30,915* | 100.00 | *3,035* | 100.00 | *15,430* | 100.00 |

Notes:
1. Agricultural designation not included as grant eligibility has to be confirmed at the time of maintenance cost levy.
2. $ amounts above are listed solely for calculating percentages (share of future

**SCHEDULE C - SCHEDULE FOR ACTUAL COST BYLAW**
**PARKER DRAIN 2022**
**TOWNSHIP OF EAST ZORRA-TAVISTOCK**

| | Con | Lot | Roll No. (Owner) | Ha. Affected | Gross Assessment | 1/3 Grant | Allowances | NET |
|---|---|---|---|---|---|---|---|---|
| | ***Twp of East Zorra-Tavistock (Roll No. 32-38-010)*** | | | | | | | |
| F | 9 | Pt. Lots 17 & 18 | 040-00800 (Spero Holsteins Ltd) | 16.5 | 39,204 | 13,068 | 2,400 | 23,736 |
| F | 9 | Pt. Lots 18 & 19 | 040-01000 (L. & K. VanRyswyck) | 5.6 | 2,248 | 749 | | 1,499 |
| F | 9 | Pt. Lot 19 | 040-01001 (J. & B. Walton) | 4.4 | 13,233 | 4,411 | 1,000 | 7,822 |
| F | 9 | Pt. Lot 20 | 040-01100 (Killcrest Farms Inc) | 28.3 | 78,069 | 26,023 | 4,100 | 47,946 |
| F | 9 | Pt. Lot 17 | 040-01900 (Douglas and Jean Leiper) | 18.6 | 41,451 | 13,817 | 5,000 | 22,634 |
| | 9 | Lot 18 Part 1 | 040-02000 (C. & C. Lightfoot) | 0.4 | 146 | 0 | | 146 |
| F | 9 | Pt . Lots 18 & 19 | 040-02100 (Townsend Farms Inc) | 30.0 | 92,571 | 30,857 | 4,400 | 57,314 |
| F | 9 | Pt. Lots 19 & 20 | 040-02200 (Stiek Farms Inc) | 30.4 | 104,148 | 34,716 | 6,300 | 63,132 |
| F | 9 | Pt Lot 20 | 040-02300 (D. & K. Dodd) | 16.2 | 39,431 | 13,144 | 200 | 26,087 |
| F | 10 | Pt. Lots 16 & 17 | 040-03400 (S. & H. Alexander) | 4.1 | 2,978 | 993 | | 1,985 |
| F | 10 | Pt. Lot 17 | 040-03500 (S., L., & S. Killing & J. VanRyswyck) | 9.0 | 12,136 | 4,045 | 400 | 7,691 |
| F | 10 | Pt. Lots 17 & 18 | 040-03600 (S. & L. Killing) | 1.2 | 871 | 290 | | 581 |
| F | 10 | Pt. Lots 18 & 19 | 040-03700 (F. & B. Killing) | 2.1 | 4,225 | 1,408 | | 2,817 |
| F | 10 | Pt. Lots 19 & 20 | 040-03800 (Stiek Farms Inc) | 9.0 | 25,708 | 8,569 | 100 | 17,039 |
| | | | **Subtotal (Lands):** | 175.8 | 456,419 | 152,090 | 23,900 | 280,429 |
| | | | 10th Line (Township of East Zorra-Tavistock) | 1.8 | 34,376 | 0 | | 34,376 |
| | | | Enbridge Gas Inc. (Special Assessment) | | 182,520 | 0 | | 182,520 |
| | | | Enbridge Pipelines Inc. (Special Assessment) | | 51,685 | 0 | | 51,685 |
| | | | **Subtotal (Roads & Utilities):** | 1.8 | 268,581 | 0 | 0 | 268,581 |
| | | | **TOTAL ASSESSMENT PARKER DRAIN 2022:** | 177.6 | 725,000 | 152,090 | 23,900 | 549,010 |

Notes:

1. Lands noted with an "F" are classified as agricultural and according to current OMAFRA policy qualify for the 1/3 grant Eligibility for the 1/3 grant will be confirmed at the time the final cost is levied.
2. Actual assessment is levied to the owner of the parcel at the time the final cost is levied.

| | | | | Main Drain | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Interval 1 | | | | Interval 2 | | | | Interval 3 | | | | Interval 4 | | | | Interval 5 | | | |
| | | | | Station | 0+000 | to | 0+044 | Station | 0+044 | to | 0+511 | Station | 0+511 | to | 1+260 | Station | 1+260 | to | 1+833 | Station | 1+833 | to | 2+136 |
| **ESTIMATED COST** | Allowances | | | | | 100 | | | | 1,900 | | | | 4,400 | | | | 3,600 | | | | 2,400 | |
| | Construction | | | | | 18,500 | | | | 53,700 | | | | 79,200 | | | | 99,800 | | | | 99,100 | |
| | Engineering | | | | | 3,900 | | | | 11,000 | | | | 16,000 | | | | 20,500 | | | | 21,200 | |
| | Construction Supervision | | | | | 1,800 | | | | 4,300 | | | | 7,000 | | | | 9,000 | | | | 10,000 | |
| | Administration | | | | | 695 | | | | 1,900 | | | | 2,800 | | | | 3,600 | | | | 3,600 | |
| | Net HST | | | | | 425 | | | | 1,215 | | | | 1,800 | | | | 2,275 | | | | 2,295 | |
| | TOTAL | | | | | 25,420 | | | | 74,015 | | | | 111,200 | | | | 138,775 | | | | 138,595 | |
| Roll No. (Owner) | Total Ha Affected | Run-off Factor | Total ha Adjusted | Benefit (Sec. 22) | Special (Sec. 26) | Adj Ha | Outlet (Sec. 23) | Benefit (Sec. 22) | Special (Sec. 26) | Adj Ha | Outlet (Sec. 23) | Benefit (Sec. 22) | Special (Sec. 26) | Adj Ha | Outlet (Sec. 23) | Benefit (Sec. 22) | Special (Sec. 26) | Adj Ha | Outlet (Sec. 23) | Benefit (Sec. 22) | Special (Sec. 26) | Adj Ha | Outlet (Sec. 23) |
| ***Twp of East Zorra-Tavistock (Roll No. 32-38-010)*** | | | | | | | | | | | | | | | | | | | | | | | |
| 040-00800 (Spero Holsteins Ltd) | 16.5 | 1.0 | 16.5 | | | 16.5 | 1,786 | 6,400 | | 16.5 | 4,247 | 23,800 | | 6.8 | 2,971 | | | 0.0 | 0 | | | 0.0 | 0 |
| 040-01000 (L. & K. VanRyswyck) | 5.6 | 0.5 | 2.8 | | | 2.8 | 303 | | | 2.8 | 721 | | | 2.8 | 1,224 | | | 0.0 | 0 | | | 0.0 | 0 |
| 040-01001 (J. & B. Walton) | 4.4 | 1.0 | 4.4 | | | 4.4 | 476 | | | 4.4 | 1,132 | | | 4.4 | 1,923 | | | 4.4 | 1,802 | 5,700 | | 4.4 | 2,200 |
| 040-01100 (Killcrest Farms Inc) | 28.3 | 1.0 | 28.3 | | | 28.3 | 3,064 | | | 28.3 | 7,284 | | | 28.3 | 12,366 | | | 28.3 | 11,590 | 9,700 | | 28.3 | 14,153 |
| 040-01900 (Douglas and Jean Leiper) | 18.6 | 1.0 | 18.6 | 6,300 | | 18.6 | 2,014 | 26,100 | | 18.6 | 4,787 | | | 0.0 | 0 | | | 0.0 | 0 | | | 0.0 | 0 |
| 040-02000 (C. & C. Lightfoot) | 0.4 | 1.0 | 0.4 | | | 0.4 | 43 | | | 0.4 | 103 | | | 0.0 | 0 | | | 0.0 | 0 | | | 0.0 | 0 |
| 040-02100 (Townsend Farms Inc) | 30.0 | 1.0 | 30.0 | | | 30.0 | 3,248 | | | 30.0 | 7,721 | 30,900 | | 27.7 | 12,104 | 31,800 | | 16.6 | 6,798 | | | 0.0 | 0 |
| 040-02200 (Stiek Farms Inc) | 30.4 | 1.0 | 30.4 | | | 30.4 | 3,291 | | | 30.4 | 7,824 | | | 30.4 | 13,284 | 10,400 | | 30.4 | 12,450 | | | 14.8 | 7,401 |
| 040-02300 (D. & K. Dodd) | 16.2 | 1.0 | 16.2 | | | 16.2 | 1,754 | | | 16.2 | 4,170 | | | 16.2 | 7,079 | | | 16.2 | 6,634 | | | 16.2 | 8,101 |
| 040-03400 (S. & H. Alexander) | 4.1 | 1.0 | 4.1 | | | 4.1 | 444 | | | 0.0 | 0 | | | 0.0 | 0 | | | 0.0 | 0 | | | 0.0 | 0 |
| 040-03500 (S., L., & S. Killing & J. VanRyswyck) | 9.0 | 1.0 | 9.0 | | | 9.0 | 974 | | | 0.0 | 0 | | | 0.0 | 0 | | | 0.0 | 0 | | | 0.0 | 0 |
| 040-03600 (S. & L. Killing) | 1.2 | 1.0 | 1.2 | | | 1.2 | 130 | | | 0.0 | 0 | | | 0.0 | 0 | | | 0.0 | 0 | | | 0.0 | 0 |
| 040-03700 (F. & B. Killing) | 2.1 | 1.0 | 2.1 | | | 2.1 | 227 | | | 2.1 | 540 | | | 2.1 | 918 | | | 2.1 | 860 | | | 0.0 | 0 |
| 040-03800 (Stiek Farms Inc) | 9.0 | 1.0 | 9.0 | | | 9.0 | 974 | | | 9.0 | 2,316 | | | 9.0 | 3,933 | | | 9.0 | 3,686 | | | 0.0 | 0 |
| **Subtotal (Lands):** | 175.8 | | 173.0 | 6,300 | 0 | 173.0 | 18,728 | 32,500 | 0 | 158.7 | 40,845 | 54,700 | 0 | 127.7 | 55,802 | 42,200 | 0 | 107.0 | 43,820 | 15,400 | 0 | 63.7 | 31,855 |
| 10th Line (Township of East Zorra-Tavistock) | 1.8 | 2.0 | 3.6 | | | 3.6 | 392 | | | 2.6 | 670 | | | 1.6 | 698 | | | 1.6 | 655 | | | 0.0 | 0 |
| Enbridge Gas Inc. (Special Assessment) | | | | | | | | | | | | | | | | | 52,100 | | | | 91,340 | | |
| Enbridge Pipelines Inc. (Special Assessment) | | | | | | | | | | | | | | | | | | | | | | | |
| **Subtotal (Roads & Utilities):** | 1.8 | | 3.6 | 0 | 0 | 3.6 | 392 | 0 | 0 | 2.6 | 670 | 0 | 0 | 1.6 | 698 | 0 | 52,100 | 1.6 | 655 | 0 | 91,340 | 0.0 | 0 |
| **TOTAL ASSESSMENT PARKER DRAIN 2022:** | **177.6** | | **176.6** | **6,300** | **0** | **176.6** | **19,120** | **32,500** | **0** | **161.3** | **41,515** | **54,700** | **0** | **129.3** | **56,500** | **42,200** | **52,100** | **108.6** | **44,475** | **15,400** | **91,340** | **63.7** | **31,855** |

| | | | | Main Drain - Continued | | | | | | | | Branch A | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Interval 6 | | | | Main Drain | | | | Interval 1 | | | | Interval 2 | | | | "A" Branch | | | |
| | | | | Station | 2+136 | to | 2+437 | Total | | | | Station | 0+000 | to | 0+195 | Station | 0+195 | to | 0+345 | Total | | | |
| **ESTIMATED COST** | Allowances | | | | | 1,600 | | | | 14,000 | | | | 3,000 | | | | 400 | | | | 3,400 | |
| | Construction | | | | | 29,800 | | | | 380,100 | | | | 0 | | | | 20,700 | | | | 20,700 | |
| | Engineering | | | | | 6,700 | | | | 79,300 | | | | 0 | | | | 4,300 | | | | 4,300 | |
| | Construction Supervision | | | | | 4,300 | | | | 36,400 | | | | 0 | | | | 2,000 | | | | 2,000 | |
| | Administration | | | | | 1,100 | | | | 13,695 | | | | 0 | | | | 700 | | | | 700 | |
| | Net HST | | | | | 720 | | | | 8,730 | | | | 0 | | | | 475 | | | | 475 | |
| | TOTAL | | | | | 44,220 | | | | 532,225 | | | | 3,000 | | | | 28,575 | | | | 31,575 | |
| Roll No. (Owner) | Total Ha Affected | Run-off Factor | Total ha Adjusted | Benefit (Sec. 22) | Special (Sec. 26) | Adj Ha | Outlet (Sec. 23) | **Total Benefit** | **Total Special** | **Total Outlet** | **Total** | Benefit (Sec. 22) | Special (Sec. 26) | Adj Ha | Outlet (Sec. 23) | Benefit (Sec. 22) | Special (Sec. 26) | Adj Ha | Outlet (Sec. 23) | **Total Benefit** | **Total Special** | **Total Outlet** | **Total** |
| ***Twp of East Zorra-Tavistock (Roll No. 32-38-010)*** | | | | | | | | | | | | | | | | | | | | | | | |
| 040-00800 (Spero Holsteins Ltd) | 16.5 | 1.0 | 16.5 | | | 0.0 | 0 | 30,200 | 0 | 9,004 | 39,204 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 |
| 040-01000 (L. & K. VanRyswyck) | 5.6 | 0.5 | 2.8 | | | 0.0 | 0 | 0 | 0 | 2,248 | 2,248 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 |
| 040-01001 (J. & B. Walton) | 4.4 | 1.0 | 4.4 | | | 0.0 | 0 | 5,700 | 0 | 7,533 | 13,233 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 |
| 040-01100 (Killcrest Farms Inc) | 28.3 | 1.0 | 28.3 | 19,200 | | 23.4 | 712 | 28,900 | 0 | 49,169 | 78,069 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 |
| 040-01900 (Douglas and Jean Leiper) | 18.6 | 1.0 | 18.6 | | | 0.0 | 0 | 32,400 | 0 | 6,801 | 39,201 | 1,500 | | 0.0 | 0 | 750 | | 0.0 | 0 | 2,250 | | 0 | 2,250 |
| 040-02000 (C. & C. Lightfoot) | 0.4 | 1.0 | 0.4 | | | 0.0 | 0 | 0 | 0 | 146 | 146 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 |
| 040-02100 (Townsend Farms Inc) | 30.0 | 1.0 | 30.0 | | | 0.0 | 0 | 62,700 | 0 | 29,871 | 92,571 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 |
| 040-02200 (Stiek Farms Inc) | 30.4 | 1.0 | 30.4 | | | 0.0 | 0 | 10,400 | 0 | 44,250 | 54,650 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 |
| 040-02300 (D. & K. Dodd) | 16.2 | 1.0 | 16.2 | 5,600 | | 16.2 | 493 | 5,600 | 0 | 28,231 | 33,831 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 |
| 040-03400 (S. & H. Alexander) | 4.1 | 1.0 | 4.1 | | | 0.0 | 0 | 0 | 0 | 444 | 444 | | | 4.1 | 268 | | | 4.1 | 2,266 | 0 | | 2,534 | 2,534 |
| 040-03500 (S., L., & S. Killing & J. VanRyswyck) | 9.0 | 1.0 | 9.0 | | | 0.0 | 0 | 0 | 0 | 974 | 974 | 250 | | 9.0 | 588 | 5,350 | | 9.0 | 4,974 | 5,600 | | 5,562 | 11,162 |
| 040-03600 (S. & L. Killing) | 1.2 | 1.0 | 1.2 | | | 0.0 | 0 | 0 | 0 | 130 | 130 | | | 1.2 | 78 | | | 1.2 | 663 | 0 | | 741 | 741 |
| 040-03700 (F. & B. Killing) | 2.1 | 1.0 | 2.1 | | | 0.0 | 0 | 0 | 0 | 2,545 | 2,545 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 |
| 040-03800 (Stiek Farms Inc) | 9.0 | 1.0 | 9.0 | | | 0.0 | 0 | 0 | 0 | 10,909 | 10,909 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 |
| **Subtotal (Lands):** | 175.8 | | 173.0 | 24,800 | 0 | 39.6 | 1,205 | 175,900 | 0 | 192,255 | 368,155 | 1,750 | 0 | 14.3 | 934 | 6,100 | 0 | 14.3 | 7,903 | 7,850 | 0 | 8,837 | 16,687 |
| 10th Line (Township of East Zorra-Tavistock) | 1.8 | 2.0 | 3.6 | | | 0.0 | 0 | 0 | 0 | 2,415 | 2,415 | 250 | | 1.0 | 66 | 3,500 | 10,520 | 1.0 | 552 | 3,750 | 10,520 | 618 | 14,888 |
| Enbridge Gas Inc. (Special Assessment) | | | | | | | | 0 | 143,440 | 0 | 143,440 | | | | | | | | | | | | |
| Enbridge Pipelines Inc. (Special Assessment) | | | | | 18,215 | | | 0 | 18,215 | 0 | 18,215 | | | | | | | | | | | | |
| **Subtotal (Roads & Utilities):** | 1.8 | | 3.6 | 0 | 18,215 | 0.0 | 0 | 0 | 161,655 | 2,415 | 164,070 | 250 | 0 | 1.0 | 66 | 3,500 | 10,520 | 1.0 | 552 | 3,750 | 10,520 | 618.0 | 14,888 |
| **TOTAL ASSESSMENT PARKER DRAIN 2022:** | **177.6** | | **176.6** | **24,800** | **18,215** | **39.6** | **1,205** | **175,900** | **161,655** | **194,670** | **532,225** | **2,000** | **0** | **15.3** | **1,000** | **9,600** | **10,520** | **15.3** | **8,455** | **11,600** | **10,520** | **9,455** | **31,575** |

| | | | | Branch B | | | | | | | | "B" Branch | | | | Branch C | | | | Grand |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Interval 1 | | | | Interval 2 | | | | | | | | | | | | |
| | | | | Station | 0+000 | to | 0+737 | Station | 0+737 | to | 0+757 | Total | | | | Station | 0+000 | to | 0+342 | Total |
| ESTIMATED COST | Allowances | | | | | 4,200 | | | | 100 | | 4,300 | | | | | | 2,200 | | 23,900 |
| | Construction | | | | | 60,800 | | | | 13,200 | | 74,000 | | | | | | 37,800 | | 512,600 |
| | Engineering | | | | | 13,000 | | | | 2,900 | | 15,900 | | | | | | 8,700 | | 108,200 |
| | Construction Supervision | | | | | 5,500 | | | | 1,500 | | 7,000 | | | | | | 4,600 | | 50,000 |
| | Administration | | | | | 2,200 | | | | 500 | | 2,700 | | | | | | 1,400 | | 18,495 |
| | Net HST | | | | | 1,395 | | | | 305 | | 1,700 | | | | | | 900 | | 11,805 |
| | TOTAL | | | | | 87,095 | | | | 18,505 | | 105,600 | | | | | | 55,600 | | 725,000 |
| Roll No. (Owner) | Total Ha Affected | Run-off Factor | Total ha Adjusted | Benefit (Sec. 22) | Special (Sec. 26) | Adj Ha | Outlet (Sec. 23) | Benefit (Sec. 22) | Special (Sec. 26) | Adj Ha | Outlet (Sec. 23) | Total Benefit | Total Special | Total Outlet | Total | Benefit (Sec. 22) | Special (Sec. 26) | Adj Ha | Outlet (Sec. 23) | Total Benefits | Total Special | Total Outlets | TOTAL |
| ***Twp of East Zorra-Tavistock (Roll No. 32-38-010)*** | | | | | | | | | | | | | | | | | | | | | | | |
| 040-00800 (Spero Holsteins Ltd) | 16.5 | 1.0 | 16.5 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 | | | 0.0 | 0 | 30,200 | 0 | 9,004 | 39,204 |
| 040-01000 (L. & K. VanRyswyck) | 5.6 | 0.5 | 2.8 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 | | | 0.0 | 0 | 0 | 0 | 2,248 | 2,248 |
| 040-01001 (J. & B. Walton) | 4.4 | 1.0 | 4.4 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 | | | 0.0 | 0 | 5,700 | 0 | 7,533 | 13,233 |
| 040-01100 (Killcrest Farms Inc) | 28.3 | 1.0 | 28.3 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 | | | 0.0 | 0 | 28,900 | 0 | 49,169 | 78,069 |
| 040-01900 (Douglas and Jean Leiper) | 18.6 | 1.0 | 18.6 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 | | | 0.0 | 0 | 34,650 | 0 | 6,801 | 41,451 |
| 040-02000 (C. & C. Lightfoot) | 0.4 | 1.0 | 0.4 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 | | | 0.0 | 0 | 0 | 0 | 146 | 146 |
| 040-02100 (Townsend Farms Inc) | 30.0 | 1.0 | 30.0 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 | | | 0.0 | 0 | 62,700 | 0 | 29,871 | 92,571 |
| 040-02200 (Stiek Farms Inc) | 30.4 | 1.0 | 30.4 | 28,900 | * | 5.3 | 4,068 | | | 0.0 | 0 | 28,900 | | 4,068 | 32,968 | 7,800 | * | 14.8 | 8,730 | 47,100 | 0 | 57,048 | 104,148 |
| 040-02300 (D. & K. Dodd) | 16.2 | 1.0 | 16.2 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 | 5,600 | | 0.0 | 0 | 11,200 | 0 | 28,231 | 39,431 |
| 040-03400 (S. & H. Alexander) | 4.1 | 1.0 | 4.1 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 | | | 0.0 | 0 | 0 | 0 | 2,978 | 2,978 |
| 040-03500 (S., L., & S. Killing & J. VanRyswyck) | 9.0 | 1.0 | 9.0 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 | | | 0.0 | 0 | 5,600 | 0 | 6,536 | 12,136 |
| 040-03600 (S. & L. Killing) | 1.2 | 1.0 | 1.2 | | | 0.0 | 0 | | | 0.0 | 0 | 0 | | 0 | 0 | | | 0.0 | 0 | 0 | 0 | 871 | 871 |
| 040-03700 (F. & B. Killing) | 2.1 | 1.0 | 2.1 | | | 2.1 | 1,612 | | | 2.1 | 68 | 0 | | 1,680 | 1,680 | | | 0.0 | 0 | 0 | 0 | 4,225 | 4,225 |
| 040-03800 (Stiek Farms Inc) | 9.0 | 1.0 | 9.0 | 3,800 | | 9.0 | 6,908 | 3,800 | | 9.0 | 291 | 7,600 | | 7,199 | 14,799 | | | 0.0 | 0 | 7,600 | 0 | 18,108 | 25,708 |
| **Subtotal (Lands):** | 175.8 | | 173.0 | 32,700 | 0 | 16.4 | 12,588 | 3,800 | 0 | 11.1 | 359 | 36,500 | 0 | 12,947 | 49,447 | 13,400 | 0 | 14.8 | 8,730 | 233,650 | 0 | 222,769 | 456,419 |
| 10th Line (Township of East Zorra-Tavistock) | 1.8 | 2.0 | 3.6 | 1,500 | | 1.6 | 1,227 | 1,500 | 12,820 | 0.8 | 26 | 3,000 | 12,820 | 1,253 | 17,073 | 0 | | 0.0 | 0 | 6,750 | 23,340 | 4,286 | 34,376 |
| Enbridge Gas Inc. (Special Assessment) | | | | | 39,080 | | | | | | | 0 | 39,080 | 0 | 39,080 | | | | | 0 | 182,520 | 0 | 182,520 |
| Enbridge Pipelines Inc. (Special Assessment) | | | | | | | | | | | | 0 | 0 | 0 | 0 | | 33,470 | | | 0 | 51,685 | 0 | 51,685 |
| **Subtotal (Roads & Utilities):** | 1.8 | | 3.6 | 1,500 | 39,080 | 1.6 | 1,227 | 1,500 | 12,820 | 0.8 | 26 | 3,000 | 51,900 | 1,253.0 | 56,153 | 0 | 33,470 | 0.0 | 0 | 6,750 | 257,545 | 4,286 | 268,581 |
| **TOTAL ASSESSMENT PARKER DRAIN 2022:** | **177.6** | | **176.6** | **34,200** | **39,080** | **18.0** | **13,815** | **5,300** | **12,820** | **11.9** | **385** | **39,500** | **51,900** | **14,200** | **105,600** | **13,400** | **33,470** | **14.8** | **8,730** | **240,400** | **257,545** | **227,055** | **725,000** |

**Note:**

***10.6 hectares of Roll No. 040-02200 is to be subsurface connected to Branch B, Interval 1. No surface water admitted at this location, therefore assessed at half rate (5.3 hectares).**

**This amount removed from Branch C contribution (20.1 - 5.3 = 14.8 hectares).**

# 200 GENERAL CONDITIONS

## TABLE OF CONTENTS

# 200 GENERAL CONDITIONS

## 200.1 SCOPE

The work to be done under this contract consists of supplying all labour, equipment and materials to construct the drainage work as outlined in the Instructions to Tenderers, the Form of Tender and Agreement, the Schedule of Tender Prices, the Drawings, the General Conditions, Special Provisions and the Standard Specifications.

## 200.2 ORDER OF PRECEDENCE

In case of any inconsistency or conflict between the drawings and specifications, the following order of precedence shall apply: Addenda, Form of Tender and Agreement, Schedule of Tender Prices, Special Provisions, Contract Drawings, Standard Specifications, General Conditions.

## 200.3 MUNICIPALITY

Municipality refers to a municipal corporation in the Province of Ontario. Where reference to Township, County, Region, Town, City or Owner appears it shall be deemed to be the same as the word Municipality. Where reference to owner appears in the specifications it is usually in reference to the owner of the property on which the drain is being constructed.

## 200.4 TENDERS

Tenders are to be submitted on a lump sum basis for the complete works or a portion thereof, as instructed by the Municipality. The Schedule of Tender Prices must be completed and submitted with the Form of Tender and Agreement even though the Contract will be a lump sum. As outlined in the Instructions to Tenders a deposit in the form of a certified cheque, bank draft, bonding or irrevocable letter of credit must accompany each tender as a guarantee of good faith. The deposit shall name the Municipality as the payee. All deposits, except that of the Tenderer to whom the work is awarded, will be returned within 10 days of the time the contract is awarded. The certified cheque of the Tenderer awarded the work will be retained as Contract Security and returned with the Completion Certificate for the work. A Performance Bond may also be required to ensure maintenance of the work for a period of one year after the date of the Completion Certificate.

## 200.5 EXAMINATION OF SITE, PLANS AND SPECIFICATIONS

Prior to the submission of the Tender, the Tenderer must examine the premises and site to compare them with the Drawings and Specifications in order to be satisfied with the existing conditions and the extent of the work to be done. The Tenderer must ensure that the meaning and intent of the drawings, estimated quantities and specifications is clearly understood before submission of the Tender. No allowances shall be made on behalf of the Contractor by reason of any error made in the preparation of the tender submission.

Any estimates of quantities shown or indicated on the drawings or elsewhere in the tender document are provided for the convenience of the Tenderer. The Tenderer should check the estimate of quantities for accuracy. Any use made of the estimated quantities by the Tenderer in calculating the tendered amounts is done at the Tenderers risk.

## 200.6 COMMENCEMENT AND COMPLETION OF WORK

The work must commence immediately after the Tenderer is notified of the contract award or at a later date, if set out as a condition in the Form of Tender and Agreement. If weather and ground conditions are unsuitable, work may be started at a later date from either of the above two dates if such delay is approved by the Engineer. The Contractor shall provide a minimum of 48 hours advance notice to the Engineer and the Municipality before commencement of any work. The work must proceed in such manner as to ensure its completion at the earliest possible date consistent with first class workmanship and within the time limit set out in the tender/contract document. Failure to commence or complete the work as set out in the tender/contract document may result in a forfeiture of all or part of the Contract Security if the Engineer deems that damages have been sustained to the Municipality or to any landowner because of the non-commencement or non-completion of the contract as awarded and that the failure to meet the specified dates has been the fault of the Contractor.

## 200.7 NOTICES RE COMMENCEMENT OF WORK

If the Contractor leaves the job site for a period of time after initiation of work, a minimum of 48 hours advance notice shall be given to the Engineer and the Municipality before commencement of any further work. If any work is commenced without the advance notice the Contractor shall be fully responsible for all such work undertaken prior to such notification and shall make good any works or materials judged to be inadequate or constructed in any manner that may have been subject to alteration if made known to the Engineer prior to commencement of construction.

## 200.8 PERMITS, NOTICES, LAWS AND RULES

The Contractor shall apply and pay for all necessary permits or licenses required for the execution of the work. This shall not include the obtaining of permanent easements or rights or servitude. The Contractor shall give all necessary notices and pay all fees required by the law and comply with all laws, ordinances, rules and regulations relating to the work and to the preservation of the public's health and safety and if the specifications and drawings are at variance therewith, any resulting additional expense incurred by the Contractor shall constitute an addition to the contract price.

## 200.9 HEALTH AND SAFETY

*Contractor must comply with the Occupational Health and Safety Act (OHSA) and the associated Regulations for Construction Projects. Contractor will also follow any site-specific* safety and training requirements of the Municipality, agencies, utility companies or other authorities.

Communication about site-specific hazards and safety requirements shall occur at the pre-construction meeting. If no pre-construction meeting is conducted, Contractor will communicate site-specific hazards and safety requirements before beginning work.

Contractor shall immediately report any workplace incidents, near misses, injuries and occupational illnesses to the Engineer.

## 200.10 LIMITATIONS OF OPERATIONS

Except for such work as may be required by the Engineer to maintain the works in a safe and satisfactory condition, the Contractor shall not carry out operations under the contract on Sundays or Statutory Holidays without permission in writing from the Engineer. The Engineer may direct in writing to the Contractor to cease or limit operations under the contract on any day or days if the operations are of such a nature, or if the work is so located, or if the traffic is of such a volume, that the Engineer deems it necessary or expedient to do so.

**200.11 SUPERVISION**

The Contractor shall provide constant supervision of the construction work and shall keep a competent foreman in charge at the site.

**200.12 CHARACTER AND EMPLOYMENT OF WORKERS**

The Contractor shall employ only orderly, competent and skillful workers to do the work and shall give preference to available qualified residents in the area of the contract. Whenever the Engineer informs the Contractor in writing that any workers are, in the opinion of the Engineer, disorderly, incompetent, or breaking the law, such workers shall be discharged from the job site and shall not again be employed on the job site without the written consent of the Engineer.

**200.13 SUB-CONTRACTORS**

If the Municipality so directs, the Contractor shall not sublet the whole or any part of this contract without the approval of the Engineer.

**200.14 PAYMENT**

Progress payments in cash equal to about 90% of the value of the work done and materials incorporated in the work will be made to the Contractor monthly. If directed by the Engineer the Contractor may be required to provide a written request for the progress payment amount. An additional 7% will be paid 45 days after the date of the Completion Certificate by the Engineer and 3% of the contract price may be reserved by the Municipality as a maintenance holdback for one year from the date of the Completion Certificate.

The holdbacks noted above may be increased by the Municipality if, in the written opinion of the Engineer, particular conditions of the contract require such greater holdback.

After the completion of the work any part of maintenance holdback may be used to correct defects from faulty construction and/or materials provided that notice shall first be given by the Engineer in writing to the Contractor stating that the Contractor has seven (7) days in which to remedy the defect in construction and/or materials.

**200.15 TERMINATION OF CONTRACT BY THE MUNICIPALITY**

Termination of the contract by the Municipality may be considered if the Contractor:

1. should be adjudged bankrupt or make a general assignment for the benefit of creditors or if a receiver should be appointed on account of insolvency;
2. should refuse or fail to supply enough properly skilled workmen or proper materials after having received seven (7) days' notice in writing from the Engineer to supply such additional workmen or materials in order to commence or complete the works;
3. should fail to make prompt payment to sub-contractors or for materials or labour;
4. should persistently disregard laws, ordinances, or instructions from the Engineer, or otherwise be guilty of a substantial violation of the provisions of the contract;

then the Municipality, upon Certificate of the Engineer that sufficient cause exists to justify such action, may without prejudice to any other right or remedy, give written notice to the Contractor to terminate the employment of the Contractor and take possession of the premises, and of all materials, tools and appliances thereon, and may finish the work by whatever method the Municipality may deem expedient, but without undue delay or expense. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price will exceed the expense of finishing the work including compensation to the Engineer for additional

services and including other damages of every name and nature, such excess shall be paid to the Contractor. If such expense will exceed such unpaid balance including the Contract Security, the Contractor shall pay the difference to the Municipality. The expense incurred by the Municipality, as herein provided, shall be certified by the Engineer. If the contract is terminated by the Municipality due to the Contractor's failure to properly commence the works, the Contractor shall forfeit the Contract Security and furthermore shall pay to the Municipality an amount to cover the increased costs, if any, associated with a new tender for the contract being terminated.

If any unpaid balance and the Contract Security do not equal the monies owed by the Contractor upon the termination of the contract, the Municipality may also charge such expenses against any money which is or may thereafter be due to the Contractor from the Municipality.

## 200.16 LIQUIDATED DAMAGES

It is agreed by the parties to the Contract that in case all the work called for under the Contract is not finished or complete within the period of time as set forth in the Tender/Contract Document, damage will be sustained by the Municipality. It is understood by the parties that it will be impracticable and extremely difficult to ascertain and determine the actual damage which the Municipality will sustain in the event of and by reason of such delay. The parties hereto agree that the Contractor will pay to the Municipality a sum as set out in the Form of Tender and Agreement for liquidated damages for each and every calendar day delay, including Saturdays, Sundays and Statutory Holidays, in finishing the work in excess of the number of working days prescribed. It is agreed that the liquidated damages amount is an estimate of the actual damage to the Municipality which will accrue during the period in excess of the prescribed number of working days.

The Municipality may deduct any amount due under this section from any monies that may be due or payable to the Contractor on any account whatsoever. The liquidated damages payable under this section are in addition to and without prejudice to any other remedy, action or other alternative that may be available to the Municipality.

The Contractor shall not be assessed with liquidated damages for any delay caused by acts of nature, or of the Public Enemy, Acts of the Province or of any Foreign State, Fire, Flood, Epidemics, Quarantine Restrictions, Embargoes or any delays of Sub-Contractors due to such causes.

If the time available for the completion of the work is increased or decreased by reason of alterations or changes made under the provisions of the Contract, the number of working days shall be increased or decreased as determined by the Engineer.

If the Form of Tender and Agreement does not show an amount for Liquidated Damages then Liquidated Damages do not apply for this contract.

## 200.17 CONTRACTOR'S LIABILITY

The Contractor and all workers, agents or any party under the Contractor's control, including Sub-Contractors, shall use due care that no person or property is injured and that no rights are infringed during the construction work outlined in the contract. The Contractor shall be solely responsible for all damages by whomsoever claimable in respect of any injury to persons or to lands, buildings, structures, fences, livestock, trees, crops, roadways, ditches, drains and watercourses, whether natural or artificial, or property of whatever description and in respect of any infringement of any right, privilege or easement wherever occasioned in the carrying on of the work or any part thereof, or by any neglect, misfeasance or non-feasance on the Contractor's part or on the part of any workers, agents or parties under the Contractor's control including Sub-Contractors, and shall bear the full cost thereof. The Contractor shall be fully responsible to make such temporary provisions as may be necessary to ensure the avoidance of any such damage, injury or infringement and to prevent the interruption of or danger or menace to the traffic in any railway or any public or private road entrance or sidewalk and to secure to all persons and corporations the uninterrupted enjoyment of all their

rights, in and during the performance of the work. The Contractor shall indemnify and save harmless the Municipality and the Engineer from and against all claims, demands, losses, costs, damages, actions, suits or other proceedings by whomsoever made, brought or prosecuted in any manner based upon, occasioned by, or attributed to any such damage, injury or infringement.

Wherever any work is of such an extent and nature that it must necessarily be confined to particular areas of a roadway, a working area, or private property, the Contractor shall use reasonable care not to damage or deface the remaining portions of the property, and if any damage is occasioned as a result of the Contractor's operations, it shall be rectified by and at the expense of the Contractor, to the satisfaction of the Engineer. Notwithstanding the indemnity provisions contained in this section, where in the opinion of the Engineer the Contractor has failed to rectify any damage, injury or infringement or has failed to adequately compensate any person for any damage, injury or infringement for which the Contractor is responsible under the contract, the Engineer, following notice in writing to the Contractor of an intention so to do, may withhold payment of any monies due the Contractor under this or any other contract until the Contractor has rectified such damage, injury or infringement or has paid adequate compensation for such damage, injury or infringement, provided however, that the Municipality will not withhold such monies where in the opinion of the Engineer there are reasonable grounds upon which the Contractor denies liability for such damage, injury or infringement and the Contractor has given the claimant a reasonable time in which to establish the validity of the claim, and provided further that the amount withheld under this section shall not exceed the amount of such claims against the Contractor.

Where the Contractor uses privately owned lands for pits or waste disposal areas, the Contractor shall comply with applicable laws and provide the Engineer with a release signed by or on behalf of the owner of each pit or waste disposal area used by the Contractor. If the said release is not obtained, then sufficient monies will be withheld from the Contractor except, however, where the owner's signature is withheld solely on the basis of damage, injury, or infringement it will be dealt with as provided elsewhere in this subsection.

Nothing herein contained shall be construed as in any way restricting or limiting the liability of the Contractor under the laws of the country, province or locality in which the work is being done. Neither the Completion Certificate nor final payment thereunder, nor any provision in the Contract Document shall relieve the Contractor from this liability.

## 200.18 LIABILITY INSURANCE

The Contractor shall take out and keep in force until the date of acceptance of the entire work by the Engineer, a comprehensive policy of public liability and property damage insurance providing insurance coverage of at least $3,000,000 for each and every accident, exclusive of interest and cost, against loss or damage resulting from bodily injury to or death of one or more persons and loss of or damage to property and such policy shall where, and as requested by the Municipality, name the Municipality and the Engineer as an additional insured thereunder and shall protect the Municipality against all claims for all damage or injury including death to any person or persons and for damage to any property of the Municipality or any other public or private property resulting from or arising out of any act or omission on part of the Contractor or any of his servants or agents during the execution of the Contract.

## 200.19 LOSSES DUE TO ACTS OF NATURE, ETC.

All damage, loss, expense and delay incurred or experienced by the Contractor in the prosecution of the work, by reason of unanticipated difficulties, bad weather, strikes, wars, acts of nature, or other mischances, shall be borne by the Contractor and shall not be the subject of a claim for additional compensation.

# 400 STANDARD SPECIFICATIONS FOR CONSTRUCTION OF DRAINS

## TABLE OF CONTENTS

# 400 STANDARD SPECIFICATIONS FOR CONSTRUCTION OF DRAINS

## 400.1 ABBREVIATIONS

i) MTO means the Ministry of Transportation of Ontario.
ii) ASTM means the American Society for Testing Materials.
iii) CSA means the Canadian Standard Association.
iv) OPSD means Ontario Provincial Standard Drawings
v) OPSS means Ontario Provincial Standard Specifications
vi) DFO means Fisheries and Oceans Canada
vii) MNRF means Ministry of Natural Resources and Forestry
viii) MECP means Ministry of Environment, Conservation and Parks

## 400.2 PRE CONSTRUCTION MEETING

The Contractor should arrange a pre-construction meeting with the Engineer, Municipality, affected landowners prior to commencement of construction.

If there is no pre-construction meeting or if a landowner is not present at the pre-construction meeting, the following shall apply. The drain is to be walked by the Contractor and each landowner prior to construction to ensure that both agree on the work to be done. Any difference of opinion shall be referred to the Engineer for decision. If the landowner is not contacted for such review, they are to advise the Engineer and/or Municipality.

## 400.3 COLD WEATHER

When working in cold weather is approved by the Engineer, the Contractor shall provide suitable means for heating, protection, and snow and ice removal. All work completed in cold weather conditions shall be to the satisfaction of the Engineer and any additional cost to remedy unsatisfactory work, or protect the work shall be borne by the Contactor. All backfilling operations shall be done as soon as possible to avoid backfilling with ground containing frozen particles. The Contractor will assume all responsibility for damages to any tile drains and for settlements or bank slippages that may result from work in cold weather.

## 400.4 WORKING AREA

Where any part of the drain is on a road allowance, the road allowance shall be the working area. For a closed drain the working area shall be a 10 metre width on either side of the trench or any combination not exceeding 20 metres. A 10m x 10m working area shall exist around any catchbasin, junction box or access point. For an open drain the working area shall be 17 metres on the side for leveling and 3 metres on the opposite side. A 10m working area shall exist for any overflow swale or grassed waterway. If any part of the drain is close to a property line then the fence line shall be one of the limits of the work area. Reduced or increased working areas will be described in detail on the Drawings.

## 400.5 ACCESS

The Contractor shall have access to the drain by entering the working area directly from road allowances or along access routes shown on the Drawings. All specifications governing fences, livestock and crops during drain construction apply to access routes. No other access routes shall be used unless first approved by the Engineer and the affected landowner. The Contractor shall contact each landowner prior to using the designated access routes. Contractor shall make good any damages caused by using the designated access routes.

## 400.6 ACCESS TO PROPERTIES ADJOINING THE WORK

The Contractor shall provide at all times and at no additional cost, adequate pedestrian access to private homes and commercial establishments unless otherwise authorized by the Engineer. Where interruptions to access have been authorized by the Engineer, reasonable notice shall be given by the Contractor to the affected landowners and such interruptions shall be arranged to minimize interference to those affected.

## 400.7 DRAINAGE SUPERINTENDENT

Where a Drainage Superintendent (Superintendent) is appointed by the Municipality, the Engineer may designate the Superintendent to act as the Engineer's representative. If so designated, the Superintendent will have the power to inspect and direct the execution of the work.

Any instructions given by the Superintendent which change the proposed work or with which the Contractor does not agree shall be referred to the Engineer for final decision.

## 400.8 ALTERATIONS TO WORK

The Engineer shall have the power to make alterations, additions and/or deletions in the work as shown or described in the Drawings or Specifications and the Contractor shall proceed to implement such changes without delay. Alterations ordered by the Engineer shall in no way render the contract void.

If a landowner desires deviations from the work described on the Drawings, the landowner shall submit a written request to the Engineer, at least 48 hours in advance of the work in question.

In every such case, the contract amount shall be increased or decreased as required according to a fair evaluation of the work completed. Where such changes involve additional work similar to items in the contract, the price for additional work shall be determined after consideration is given to the tendered price for similar items.

In no case shall the Contractor commence work considered to be extra work without the Engineer's approval. Payment for extra work is contingent on receipt of documentation to the satisfaction of the Engineer. Refer to the Extra Work Summary included in the Special Provisions.

## 400.9 ERRORS AND UNUSUAL CONDITIONS

The Contractor shall notify the Engineer immediately of any error or unusual conditions which may be found. Any attempt by the Contractor to correct the error without notice shall be done at the Contractor's risk. Any additional cost incurred by the Contractor to remedy an error or unusual condition without notice shall be borne by the Contractor. The Engineer shall direct the alteration necessary to correct errors or unusual conditions. The contract amount shall be adjusted in accordance with a fair evaluation of documentation for the work added, deleted or adjusted.

## 400.10 TESTS

The Engineer reserves the right to subject any materials to a competent testing laboratory for compliance with the standard. If any materials supplied by the Contractor are determined to be inadequate to meet the applicable standards, the Contractor shall bear full responsibility to remove and/or replace all such inadequate materials with materials capable of meeting the standards.

The cost of testing the materials supplied by the Contractor shall be borne by the Contractor.

## 400.11 BENCHMARKS AND STAKES

Prior to construction, the Engineer will confirm the benchmarks. The Contractor shall be held liable for the cost of replacing any benchmarks destroyed during construction.

If the Engineer provides layout stakes, the Contractor shall be held liable for the cost of replacing any layout stakes destroyed during construction.

Where property bars are shown on the Drawings, they are to be protected and if damaged by the Contractor, they will be reinstated by an Ontario Land Surveyor at the expense of the Contractor. Where property bars not shown on the Drawings are damaged, they will be reinstated by an Ontario Land Surveyor at the expense of the project.

## 400.12 OPENING UP OF FINISHED WORK

If ordered by the Engineer, the Contractor shall make such openings in the work as are needed to re-examine the work, and shall forthwith make the work good again. Should the Engineer find the work so opened up to be faulty in any respect, the whole of the expense of opening, inspecting and making the work good shall be borne by the Contractor. Should the Engineer find the work opened up to be in an acceptable condition the Contractor shall be paid for the expense of opening and making the work good, unless the Contractor has been obligated by any specification or by the direction of the Engineer to the leave the work open for the Engineer's inspection.

## 400.13 FINAL INSPECTION

Final inspection by the Engineer will be made within twenty (20) days after receiving notice in writing from the Contractor that work is complete, or as soon thereafter as weather conditions permit. All the work included in the contract must at the time of final inspection have the full dimensions and cross-sections.

Prior to commencing the final inspection an on-site meeting may be held by the Engineer and landowners directly affected by the construction of the drain. The Contractor will attend this meeting upon notice by the Engineer.

If there is no on-site meeting with the Engineer and landowners, the Contractor shall obtain from each landowner a written statement indicating that the work has been performed to the owner's satisfaction. If the Contractor is unable to obtain a written statement from the landowner, the Engineer will determine if further work is required prior to issuing the Completion Certificate.

## 400.14 WARRANTY

There shall be a one-year warranty period on all completed work. The warranty period will commence on the date of the Completion Certificate.

When directed by the Engineer, the Contractor shall repair and make good any deficiencies in the work that may appear during the warranty period.

Before the work shall be finally accepted by the Municipality, the Contractor shall complete all work as directed by the Engineer and remove all debris and surplus materials and leave the work neat and presentable.

## 400.15 MATERIALS

### 400.15.1 Concrete Drain Tile

Concrete drain tile shall conform to the requirements of the most recent ASTM C412 specifications for heavy duty extra quality, unless a stronger concrete tile is required by the Special Provisions or Drawings. All tile furnished shall be subject to the approval of the Engineer.

The minimum nominal lengths of the tile shall be 750mm for 150 to 350mm diameter tile and 1200mm for 400 to 900mm diameter tile.

All tile should be of good quality, free from distortions and cracks and shall meet the standards specified. The ends should be smooth and free from cracks or checks. All rejected tile are to be immediately removed from the site.

Granular backfill, where required, shall consist of approved sand or gravel having no particles retained on a screen having 50mm square openings.

Earth backfill shall consist of approved material having no large lumps or boulders.

### 400.15.2 Corrugated Plastic Tubing

Corrugated plastic tubing shall conform to the *Land Improvement Contractors of Ontario Standard Specification for Corrugated Plastic Drainage Tubing, 2006*. Type of material (solid or perforated) and need for filter sock will be specified on the Drawings or in the description of the work in the Special Provisions. Filter sock where specified shall be a standard synthetic filter material as provided by a recognized plastic tubing manufacturer unless noted differently on the contract drawings or elsewhere in the contract document. Protect coils of plastic tubing from damage and deformation.

### 400.15.3 Corrugated Steel Pipe

Corrugated Steel Pipe (CSP) shall be according to OPSS 1801 (CSA G401). Unless stated otherwise in the Special Provisions the pipe shall be:

- galvanized
- helical corrugation with lock seam and re-rolled annular ends
- 68mm x 13mm corrugation profile for diameters up to 1200mm
- 125mm x 25mm corrugation profile for diameters 1200mm and larger
- minimum wall thickness of 1.6mm for diameters up to 500mm
- minimum wall thickness of 2.0mm for diameters 600mm and larger
- joined using standard couplers matching the pipe diameter and material

Other coatings that may be specified include aluminized Type 2 or polymer. Polymer coating shall be a 254mm polymer film laminated to both sides of the pipe.

### 400.15.4 Plastic Pipe

Plastic Pipe shall be a high density polyethylene (HDPE) double wall corrugated pipe with smooth inner wall, solid with no perforations in accordance with OPSS 1840.

A minimum stiffness of 320 KPa at 5% deflection

The pipe shall be joined with snap-on or split couplers.

### 400.15.5 Concrete Sewer Pipe

Concrete sewer pipe shall be in accordance with OPSS 1820.

Non-reinforced concrete sewer pipe shall be used for pipe 375mm in diameter and smaller and reinforced concrete sewer pipe shall be used for pipe over 375mm.

Classes shall be as shown on the Contract Drawings or as described in the Form of Tender.

All new concrete sewer pipe shall have rubber-type gasket joints.

Where concrete sewer pipe “seconds” are specified, the pipe should exhibit no damage or cracks on the barrel section and shall be capable of satisfying the crushing strength requirements of OPSS 1820. The pipe may contain cracks or chips in the bell or spigot which prevent the use of rubber gaskets but the joints must be protected with filter cloth.

## 400.16 RIPRAP

All riprap is to be placed on a geotextile underlay (Terrafix 360R or equal) unless directed otherwise in the specific construction notes. The riprap is to be graded heavy angular stone (quarry stone is recommended) with particles averaging in size from 200mm to 300mm and is to be placed at 300mm thickness. Fine particles may be included to fill voids. Along upstream edges of riprap, where surface water will enter, underlay is to extend a minimum of 300mm upstream from riprap and then be keyed down a minimum of 300mm. Wherever riprap is placed, the area is to be over-dug so that finished top of riprap is at design cross-section, at design elevation or flush with existing ground.

## 400.17 GEOTEXTILE

To be non-woven fabric that is rot proof, non-biodegradable, chemically resistant to acidic or alkaline soils and is dimensionally stable under different hydraulic conditions. The filter fabric is to be a material whose primary function is to act as a highly permeable, non-clogging soil separator for fine soils (Terrafix 360R or equal). Contractor is to follow the manufacturer's recommendations for cutting, installation and precautions necessary to avoid damage to fabric. Other approved equals will be considered by the Engineer prior to construction.

## 400.18 DISPOSAL OF MATERIALS

The Contractor shall remove all surplus materials from the job site at the end of the project. The Contractor shall locate the disposal site for all materials to be disposed of. Disposal of materials shall comply with applicable regulations.

## 400.19 NOTIFICATION OF RAILROADS, ROAD AUTHORITIES AND UTILITIES

Contractor will notify any Railroad, Road Authority or Utility at least 48 hours in advance regarding work to be performed on their property or affecting their infrastructure. The notice will be in writing and is exclusive of Saturdays, Sundays and Holidays.

A utility includes any entity supplying the general public with necessaries or conveniences.

## 400.20 WORKING IN ROAD ALLOWANCES

### 400.20.1 General

Work within public road allowances shall be done in accordance with the Ontario Traffic Manual Book 7, latest edition.

### 400.20.2 Road Crossings

If no specific detail is provided for road crossings on the drawings or in the specifications the following shall apply:

- A Road Authority will supply no labour, equipment or materials for the construction of the road crossing.
- Contractor will not commence road crossing work until any required permits have been obtained. The Engineer may apply for any required permits prior to construction.
- Contractor will notify the Road Authority at least 72 hours in advance of any construction in the road allowance.
- Road crossings may be made with an open cut unless otherwise noted.
- Exact location of crossing shall be verified with the Road Authority and the Engineer.
- Pipe shall be placed on a minimum 150mm depth of Granular A shaped for the pipe.
- Pipe backfill shall be compacted Granular A and extend 300mm above the top of the pipe.
- Trench shall be backfilled with acceptable native material for the base width of the road bed.
- The material shall be placed in lifts not exceeding 300mm in depth and shall be thoroughly compacted with an approved mechanical vibrating compactor.
- Top 600mm of the road bed backfill shall consist of 450mm Granular B and 150mm of Granular A placed in lifts and fully compacted.
- Any surplus excavated material within the road allowance may be spread on the right-of-way with consent of the Road Superintendent otherwise the surplus material shall be hauled away.
- Existing asphalt or concrete pavement or surface treatment shall be replaced by the Contractor to the satisfaction of the Engineer and Road Authority.
- Contractor shall be responsible for correcting any backfill settlement during construction and during the warranty period. Upon approval of the road authority, surplus gravel shall be stockpiled near gravel road crossings to provide backfill for future trench settlement.
- All road crossings shall meet the approval of the Road Authority.
- If any road crossing is not left in a safe manner at the end of the working day barricades and warning signs shall be erected to guarantee the safety of the travelling public.
- If the Engineer deems a road to surface to have been damaged by the construction of a drain, either across or along the road, the Engineer may direct the Contractor to restore the road surface to existing or better condition at no additional cost.

### 400.20.3 Maintenance of Traffic

Unless directed otherwise on the drawings or in the specifications the Contractor shall keep the road open to traffic at all times. The Contractor shall provide suitable warning signs and/or flagging to the satisfaction of the Road Authority to notify of the construction work.

If a detour is required, the Contractor shall submit a proposal as to the details of the detour for approval by the Road Authority. If necessary to close the road to through traffic, the Contractor shall provide for and adequately sign the detour route. Contractor shall undertake all notifications required for a road closure in consultation with the Municipality.

## 400.21 LOCATIONS OF EXISTING UTILITIES

The position of pole lines, conduits, watermains, sewers and other underground and overhead utilities are not necessarily shown on the Contract Drawings, and, where shown, the accuracy of the position of such utilities and structures is not guaranteed. Before starting work, the Contractor shall have all utilities located in accordance with the Ontario Underground Infrastructure Notification System Act.

All utilities shall be exposed to the satisfaction of the utility company to verify that the construction proposed will not conflict with the utility structure. Additional payment will be allowed for relocation of utilities if conflicts should occur.

The Contractor is responsible for protecting all located and exposed utilities from damage during construction. The Contractor shall assume liability for damage caused to all properly located utilities.

## 400.22 LANEWAYS

If no specific detail is provided for laneway crossings on the Drawings or in the Specifications the following shall apply:

- Pipe backfill shall be acceptable native material that can be compacted in place.
- Top 450mm of laneway backfill shall consist of 300mm Granular B and 150mm of Granular A placed in lifts and fully compacted.
- Minimum cover on laneway culverts shall be 300mm.
- Existing asphalt or concrete pavement or surface treatment shall be replaced by the Contractor.
- The width of surface restoration shall match the existing laneway.
- Contractor shall be responsible for correcting any backfill settlement during construction and during the warranty period.

The timing of laneway closures will be coordinated by the Contractor to the satisfaction of the landowner.

## 400.23 EXISTING CROSSING CLEANOUT

Where the Special Provisions require an existing crossing to be cleaned, the Contractor shall provide a bottom width and depth that provides capacity equivalent to the capacity of the channel on either side. Excavated materials shall be hauled away unless adjacent landowners give permission for leveling. Care shall be taken to ensure that existing abutments or any portion of the structure are not damaged or undercut. The method of removing the material is to be pre-approved by the Engineer.

## 400.24 FENCES

If the Contractor is responsible to remove and install fences, the following shall apply:

- All fences removed by a Contractor are to be re-erected in as good a condition as existing materials permit.
- All fences shall be properly stretched and fastened. Where directed by the Engineer, additional steel posts shall be placed to adequately support a fence upon re-erection.
- Where practical and where required by the landowner, the Contractor shall take down an existing fence at the nearest anchor post and roll the fence back rather than cutting the fence and attempting to patch it.
- Where fence materials are in such poor condition that re-erection is not possible, the Contractor shall replace the fence using equivalent materials. Such fence material shall be approved by the Engineer and the landowner. Where the Engineer approves new fence material, additional payment will be provided.

Any fences paralleling an open drain, that are not line fences, that hinder the proper working of the excavating machinery for drain construction or maintenance shall be removed and rebuilt by the landowner at their own expense. If such parallel fences are line fences they shall be removed and reinstalled by the Contractor.

No excavated or cleared material shall be placed against fences.

The installation of all fences shall be done to the satisfaction of the Engineer and the landowner.

## 400.25 LIVESTOCK

If any construction will be within a fenced field containing livestock that are evident or have been made known to the Contractor, the Contractor shall notify the owner of the livestock 48 hours in advance of access into the field. Thereafter, the owner shall be responsible for the protection of the livestock in the field during construction and shall also be liable for any damage to or by the livestock.

Where the owner so directs or where the Contractor has failed to reach the owner, the Contractor shall adequately re-erect all fences at the end of each working day. No field containing livestock shall have a trench left open at the end of the working day, unless the trench has been adequately backfilled or protected. Failure of the Contractor to comply with this paragraph shall render the Contractor liable for any damage to or by the livestock.

Where livestock may be encountered on any property the Contractor shall notify the Engineer to arrange for inspection of the work prior to backfilling.

## 400.26 STANDING CROPS

The Contractor shall not be held responsible for damages to standing crops within the working area for the drain. However, the Contractor shall notify the owner of the crops 48 hours prior to commencement of construction so as to allow the owner an opportunity to harvest or salvage the crop within the drain working area. If this advance notice is not given the Contractor may be liable for the loss of the standing crops.

## 400.27 CLEARING VEGETATION

### 400.27.1 General
The area for clearing, if not defined elsewhere, shall be 15m on each side of the drain.

### 400.27.2 Trees to Remain
Where it is feasible to work around existing trees that do not impede the function of the drainage works, the Contractor shall not remove any deciduous tree larger than 300mm and any coniferous tree larger than 200mm, unless authorized by the Engineer.

### 400.27.3 Incidental Clearing
Incidental clearing includes removal of trees, brush or other vegetation with an excavator during construction activities, and the cost is to be included in the price for the related construction activity.

### 400.27.4 Power Brushing
Power brushing includes removal of above-ground vegetation with a rotary brush cutter or other mechanical means. Stump and root removal is not required. Power brushed vegetation in a channel cross-section shall be removed and leveled in the working area. Excavated material may be placed and leveled on power brushed vegetation.

### 400.27.5 Close-Cut Clearing
Close-cut clearing includes removal of above-ground vegetation cut flush with the ground. Stump and root removal is not required.

### 400.27.6 Clearing And Grubbing
Clearing and grubbing includes removal of vegetation, including stumps and roots. Removal of earth from the grubbed area into the windrows or piles is to be minimized.

**400.27.7 Disposal of Cleared Vegetation**

400.27.7.1 *In Bush Areas*

Cleared vegetation is to be pushed into windrows or piles at the edge of the cleared area. Stumps and roots are to be piled first at the edge of the cleared area, followed by other vegetation (trunks, branches, etc.). Provisions for lateral drainage are required through all windrows. Windrows are not to block any laneways or trails. After removing cleared vegetation, the working area shall be leveled to the satisfaction of the Engineer.

400.27.7.2 *In Field Areas*

Cleared vegetation resulting from incidental clearing or power brushing may be hauled away, mulched in place or reduced to a size that permits cultivation using conventional equipment without causing undue hardship on farm machinery.

Cleared vegetation resulting from close-cut clearing or clearing and grubbing is to be hauled away to an approved location. Disposal sites may be in bush areas or other approved locations on the same farm. No excavated material shall be levelled over any logs, brush or rubbish of any kind.

**400.27.8 Landowner Requested Salvage**

A landowner may request that wood be separated from the windrows for the landowner's future use. This additional work would be eligible for extra payment, subject to the approval of the Engineer. The cost of the additional work would be assessed to the landowner.

**400.27.9 Clearing by Landowner**

Wherever the Special Provisions indicate that clearing may be undertaken by the landowner, work by the landowner shall be in accordance with the Clearing Vegetation requirements of this specification and must be completed so as not to cause delay for the Contractor. If the landowner does not complete clearing in accordance with these requirements, the Contractor will undertake the clearing at a price approved by the Engineer.

**400.28 ROCK REMOVAL**

**400.28.1 General**

Rock shall be defined as bedrock and boulders that are greater than one-half cubic metre in size and that require blasting or hoe-ram removal. Bedrock or boulders that can be removed with a standard excavator bucket are not considered rock removal.

**400.28.2 Blasting Requirements**

All blasting shall be performed by a competent, qualified blaster in accordance with OPSS 120. Blasting mats are required. A pre-blast survey meeting the requirements of OPSS 120 must be completed for any structure within 200m of any blasting. The cost for pre-blast survey shall be included in the tender price for rock removal.

**400.28.3 Typical Sections and Pay Limits**

For tile drains and road culverts, rock shall be removed to 150mm below the proposed grade shown on the profile so that pipes are not in direct contact with rock. The width of rock removal shall be 1m minimum or the diameter of the pipe plus 600mm.

For open drains, rock removal shall match the proposed grade and bottom width shown on the Drawings. Side slopes shall be vertical or sloped outward. Side slopes shall be free of loose rock when excavation is completed.

Payment for the quantity of rock removed will be based on the typical sections described in these specifications and confirmed by field measurements. There will be no payment for overbreak.

**400.28.4 Disposal of Rock**

Excavated rock shall be piled at the edge of the working area at locations designated by the landowner. The cost to pile excavated rock shall be included in the tender price for rock removal. If the Special Provisions or the landowner require excavated rock to be hauled away, additional payment will be considered.

Where approved by the Engineer, excavated rock may be used in place of imported riprap.

**400.29 SEEDING**

**400.29.1 General**

Contractor responsible for re-seeding as necessary for uniform catch during warranty period.
Areas that remain grassed after construction may not need to be seeded unless directed otherwise by the Engineer.

**400.29.2 Drainage Works and Road Allowances**

All disturbed ditch banks, berms and road allowances are to be seeded at the end of the day.

The following seed mixture shall be applied at 60kg/ha using a mechanical (cyclone) spreader:

- 35% Creeping Red Fescue
- 25% Birdsfoot Trefoil
- 25% Kentucky Bluegrass
- 10% Cover Crop (Oats, Rye, Barley, Wheat)
- 5% White Clover

Provide temporary cover for late fall planting by adding an additional 10 kg/ha of rye or winter wheat.

**400.29.3 Hydroseeding**

Where hydroseeding is specified, disturbed areas will be restored by the uniform application of a standard roadside mix, fertilizer, mulch and water at a rate of 2,000 kg/ha and be in accordance with OPSS 804.

**400.29.4 Seeding Lawns**

Unless specified otherwise, lawn areas shall be seeded with Canada No. 1 lawn grass mixture applied at 300 kg/ha using a mechanical (cyclone) spreader on 100mm of topsoil. Fertilizer shall be 5:20:20 or 10:10:10 applied at 300 kg/ha. Seed and fertilizer shall be applied together. Contractor shall arrange for watering with landowners.

**400.29.5 Sod**

Where sod is specified, sod is to be commercial grade turfgrass nursery sod, Kentucky Bluegrass placed on 50mm of topsoil. Fertilizer shall be 5-20-20 applied at 10kg/ha. Place sod in accordance with supplier instructions. Contractor is responsible for saturating the sod with water on the day of sod placement. Subsequent watering is the responsibility of the landowner.

## 400.30 EROSION CONTROL BLANKETS

Erosion Control Blankets (ECB) shall be biodegradable and made of straw/coconut (Terrafix SC200, Nilex SC32 or equal) or coconut (Terrafix C200, Nilex C32 or equal) with photodegradable, double net construction. The blanket and the staples shall be supplied and installed as per OPSS 804.

Erosion control blanket shall be placed and stapled into position as per the manufacturer's installation instructions on slopes as directed by the Engineer. Blankets shall be installed in direct contact with the ground surface to form a uniform, cohesive mat over the seeded earth area. The blankets are to be single course with 150mm overlap between blankets and joints are to be staggered. The Contractor shall ensure that the ECB is anchored to the soil and that tenting of the ECB does not occur.

On slopes, when the ECB cannot be extended 1m beyond the crest of the slope, the uppermost edge of the ECB shall be anchored in a 150mm wide by 150mm deep trench. The trench shall be backfilled with earth and compacted.

## 400.31 SEDIMENT CONTROL

### 400.31.1 General

Contractor shall install sediment control features at the downstream limits of the project and at other locations as shown on the drawings or directed by the Engineer.

Sediment control features shall be installed prior to any excavation taking place upstream of that location. The Contractor shall maintain all sediment control features throughout construction and the warranty period.

Sediment that accumulates during construction shall be removed and levelled as required.

### 400.31.2 Flow Check Dams

400.31.2.1 *Temporary Straw Bale Flow Check Dam*

The straw bale flow check dam shall consist of a minimum of 3 bales. Each bale is to be embedded at least 150mm into the channel bottom and shall be anchored in place with 2 T-bar fence posts or 1.2m wooden stakes driven through the bale.

Straw bales shall be hauled away at the end of the warranty period. Accumulated sediments shall be excavated and levelled when the temporary straw bale flow check dam is removed.

400.31.2.2 *Temporary Rock Flow Check Dam*

The temporary rock flow check dam shall extend to the top of the banks so that dam overtopping does not cause bank erosion. Rock shall be embedded a minimum of 150mm into the ditch bottom and banks. No geotextile is required for temporary rock flow check dams.

Accumulated sediments shall be excavated and levelled when the temporary rock flow check dam is removed at the conclusion of the warranty period.

400.31.2.3 *Permanent Rock Flow Check Dam*

The requirements of temporary rock flow check dams shall apply except rock shall be placed on geotextile and the dam shall remain in place permanently.

### 400.31.3 Sediment Traps

400.31.3.1 *General*

The channel bottom shall be deepened in accordance with the dimensions provided in the Drawings or Special Provisions. If dimensions are not specified on the Drawings, the sediment trap shall be excavated within the channel cross-section at least 0.3m below the design grade.

The Contractor will monitor the sediment trap during construction and cleanout accumulated sediments as required to maintain the function of the sediment trap.

If specified to be temporary, no sediment trap maintenance is required after construction is complete.

If specified to be permanent, the contractor will clean out the sediment trap at the conclusion of the warranty period, unless directed otherwise by the Engineer.

400.31.3.2 *Sediment Trap with Flow Check Dam*

A permanent rock sediment trap shall include a permanent sediment trap and a rock flow check dam.

A temporary rock/straw sediment trap shall include a temporary sediment trap and a rock/straw flow check dam.

### 400.31.4 Turbidity Curtains

A turbidity curtain is required when there is permanent water level/flow and a sediment trap is not feasible.

Turbidity curtains shall be in accordance with OPSS 805 and installed per manufacturer's instructions.

Turbidity curtains shall be sized and anchored to ensure the bottom edge of the curtain is continuously in contact with the waterbody bed so that sediment passage from the enclosed area is prevented. The curtain must be free of tears and capable of passing the base flow from the drainage works. Turbidity curtain locations may be approved by the Engineer.

Turbidity curtains are to remain functional until work in the enclosed area is completed. Prior to relocating or removing turbidity curtains, accumulated sediment is to be removed from the drain and levelled.

Where a turbidity curtain remains in place for more than two weeks it shall be inspected for damage or clogging and replaced, repaired or cleaned as required.

### 400.31.5 Silt Fence

Silt fence shall be in accordance with OPSS 805.07.02.02 and OPSD 219.110 (light-duty).

## 400.32 GRASSED WATERWAYS AND OVERFLOW SWALES

Grassed waterways and overflow swales typically follow low ground along the historic flow route. The cross-section shall be saucer shaped with a nominal 1m bottom width, 8:1 side slopes and 300mm depth unless stated otherwise in the Special Provisions.

All grassed waterways are to be permanently vegetated. Grassed waterways shall be seeded with the following permanent seed mixture: 50% red fescue, 45% perennial ryegrass and 5% white clover, broadcast at 80 kg/ha. Fertilizer to be 7-7-7 applied at 80 kg/ha.
Provide temporary cover for late fall planting by adding an additional 10 kg/ha of rye or winter wheat.

Overflow swales may be cropped using conventional farming practice.

### 400.33 BUFFER STRIPS

Open drains shall include minimum 3m wide, permanently vegetated buffer strips on each side of the drain. Catchbasins shall include a minimum 1m radius, vegetated buffer strip around the catchbasin.

Cultivation of buffer strips using conventional farming practice may be undertaken, provided sediment transport into the drain is minimized.

### 400.34 MAINTENANCE CORRIDOR

The maintenance corridor along the route of the drain, as established in the report, shall be kept free of obstructions, ornamental vegetation and structures. When future maintenance is undertaken, the cost of removing such items from the corridor shall be assessed to the landowner.

### 400.35 POLLUTION

The Contractor shall keep their equipment in good repair. The Contractor or any landowner shall not spill or cause to flow any polluted material into the drain that is not acceptable to the MECP. The local MECP office and the Engineer shall be contacted if a polluted material enters the drain. The Contractor shall refill or repair equipment away from open water. If the Contractor causes a spill, the Contractor is responsible to clean-up the spill in accordance with MECP clean-up protocols.

### 400.36 SPECIES AT RISK

If a Contractor encounters a known Species At Risk designated by the MECP, MNRF or DFO, the Contractor shall notify the Engineer immediately and follow the Ministry's guidelines for work around the species.

# 410 STANDARD SPECIFICATIONS FOR OPEN DRAINS

## TABLE OF CONTENTS

## 410.1 DESCRIPTION

Work under this item shall include the supply of labour, equipment and materials required for: channel excavation to the cross-section specified, leveling or disposal of all excavated material (spoil) as directed, reconstruction of all intercepted drains as required and any other items related to open drain construction as required by the Schedule of Tender Prices, Special Provisions or the Drawings.

## 410.2 MATERIALS

Refer to Section 400, Standard Specifications for Drain Construction for any materials required for open drain construction.

## 410.3 CONSTRUCTION

### 410.3.1 Excavation

The bottom width and the side slopes of the ditch shall be as shown on the profile drawing. If the channel cross-section is not specified in the Special Provisions it shall be a 1m bottom width with 1.5m horizontal to 1m vertical (1.5:1) bank slope. At locations along the drain where the specified side slopes change there shall be a transitional length of not less than 5m between the varying side slopes. At locations along the drain where the specified bottom width changes there shall be a transitional length of not less than 5m. In all cases there shall be a smooth transition between changes in any part of the channel cross-section. Where the bottom width of the existing ditch matches the specified bottom width, ditch excavation shall be completed without disturbing existing banks.

### 410.3.2 Low Flow Channels

Unless specified otherwise in the Special Provisions, all intermittent open drains with a bottom width greater than 1.8m and a grade less than 0.07%, shall have a low flow channel. The bottom of the low flow channel shall be the grade shown on the profiles.

The low flow channel shall have a U-shaped cross-section with an average top width of 0.5m and a minimum depth of 0.3m. The low flow channel will not be seeded and may meander along the main channel bottom provided it remains at least .3m from the toe of main channel bank slope.

### 410.3.3 Line

The drain shall be constructed according to the alignment shown on the drawings or shall follow the course of the existing ditch. All bends shall have a minimum inside radius of 2m. There shall be a smooth transition between changes in the channel alignment. The Contractor shall contact the Engineer before removing any bends or irregularities in an existing ditch.

### 410.3.4 Grade Control

The profile shows the grade line for the bottom of the ditch. Cuts may be shown on the profile from the existing top of bank and/or from the existing ditch bottom to the new ditch bottom. These cuts are shown for the convenience of the Contractor and are not recommended for quantity estimate or grade control. Accurate grade control must be maintained by the Contractor during ditch excavation. The ditch bottom elevation should be checked every 50 metres and compared to the elevation on the profile.

Benchmarks are identified on the Contract Drawings. The Engineer will confirm all benchmark elevations prior to construction.

### 410.3.5 Variation from Design Grade

A variation of greater than 25mm above the design grade line may require re-excavation. Excavation below design grade up to 150mm is recommended so that sediment accumulation during or following excavation will not place the ditch bottom above the design grade at completion. Under some circumstances the Engineer may direct that over excavation greater than 200mm will have to be backfilled. No additional payment will be made if backfilling is required to remedy over excavation.

### 410.3.6 Excavated Material

Excavated material (spoil) shall be deposited on either or both sides of the drain within the specified working area as directed in the Special Provisions. The Contractor shall verify the location for the spoil with each landowner before commencing work on their property. If not specified, spoil shall be placed on the low side of the ditch or opposite trees and fences. The spoil shall be placed a minimum 1m from the top of the bank. No excavated material shall be placed in tributary drains, depressions, or low areas such that water is trapped behind the spoil bank. Swales shall be provided through the leveled or piled spoil at approximately 60m intervals to prevent trapping water behind the spoil bank.

The excavated material shall be placed and leveled to a maximum depth of 250mm; unless otherwise instructed. If excavating more than 450mm topsoil shall be stripped, stockpiled separately and replaced over the leveled spoil, unless stated otherwise in the Special Provisions. The edge of the spoil bank furthest from the ditch shall be feathered down to existing ground. The edge of the spoil bank nearest the ditch shall have a maximum slope of 2:1. The material shall be leveled such that it may be cultivated with conventional equipment without causing undue hardship on farm machinery.

Wherever clearing is necessary prior to leveling, the Contractor shall remove all stumps and roots from the working area. No excavated material shall cover any logs, brush or rubbish of any kind. Large stones in the leveled spoil that are greater than 300mm in diameter shall be moved to the edge of the spoil bank nearest to the ditch but in general no closer than 1m to the top of bank.

Lateral channels that outlet into the drain shall be tapered over a distance of 10m to match the grade of drain excavation. No additional payment will be made for this work.

Where the elevation difference between the lateral channel and the drain is greater than 450mm, a rock chute or similar bank protection approved by the Engineer shall be provided. Additional payment may be allowed for this work.

Where it is specified to straighten any bends or irregularities in the alignment of the ditch or to relocate any portion of an existing ditch, the excavation from the new cut shall be used for backfilling the original ditch. Regardless of the distance between the new ditch and old ditch, no additional payment will be allowed for backfilling the existing ditch.

The Contractor shall contact the Engineer if a landowner indicates in writing that spoil on the owner's property does not need to be leveled. The Engineer may release the Contractor from the obligation to level the spoil and the Engineer shall determine the credit to be applied to the Contractor's payment. No additional compensation is provided to the owner if the spoil is not leveled.

The Engineer may require the Contractor to obtain written statements from any or all of the landowners affected by the leveling of the spoil. Final determination on whether or not the leveling of spoil meets the specification shall be made by the Engineer.

### 410.3.7 Excavation at Existing Bridge and Culvert Sites

The Contractor shall excavate the drain to the specified depth under all bridges and to the full width of the structure unless specified otherwise in the Special Provisions. All necessary care and precautions shall be taken to protect permanent structures. Temporary bridges may be removed and left on the bank of the drain. In cases where the design grade line falls below the top of footings, the Contractor shall take care to not over-excavate below the grade line. The Contractor shall notify the Engineer if excavation of the channel exposes the footings of the bridge or culvert, so the Engineer can make an evaluation.

The Contractor shall clean through all pipe culverts to the grade line and width specified on the profile. The Contractor shall immediately contact the Engineer after a culvert cleanout if it is found that the culvert bottom is above the grade line or where the structural integrity of the culvert is questionable.

Material resulting from cleanout through bridges or culverts shall be levelled on the adjacent private lands or hauled offsite at the expense of the bridge/culvert owner.

### 410.3.8 Bridges and Culverts

The size and material for any new ditch crossings shall be as outlined in the Special Provisions.

For culvert installation instructions, refer to the General Specifications for Drain Construction and the Drawings.

Any crossings assembled on-site shall be assembled in accordance with the manufacturer's specifications.

If directed on the drawings that the existing crossing is to be salvaged for the owner, the Contractor shall carefully remove the existing crossing and place it beside the ditch or haul to a location as specified by the owner. If the existing crossing is not to be saved then the Contractor shall remove and dispose of the existing crossing. Disposal by burying on-site must be approved by the Engineer and the owner.

All new pipe crossings shall be installed at the invert elevations as specified on the Drawings, usually a minimum of 50mm below design grade. If the ditch is over excavated greater than 200mm below design grade the Contractor shall confirm with the Engineer the elevations for installation of the new pipe crossing.

For backfill and surface restoration, refer to the General Specifications for Drain Construction and the Drawings.

Installation of private crossings during construction must be approved by the Engineer.

### 410.3.9 Obstructions

All trees, brush, fallen timber and debris shall be removed from the ditch cross-section and as required for spreading of the spoil. The roots shall be left in the banks if no bank excavation is required as part of the new channel excavation. In wooded or heavily overgrown areas all cleared material may be pushed into piles or rows along the edge of the cleared path and away from leveled spoil. All dead trees along either side of the drain that may impede the performance of the drain if allowed to remain and fall into the ditch, shall be removed and put in piles, unless directed otherwise by the Engineer.

### 410.3.10 Tile Outlets

The location of all existing tile outlets may not be shown on the profile for the drain. The Contractor shall contact each owner and ensure that all tile outlets are marked prior to commencing excavation on the owner's property. If a marked tile outlet or the tile upstream is damaged due to construction, it shall be replaced at the Contractor's expense. Additional payment will be allowed for the repair or replacement of any unmarked tile outlets encountered during excavation. In all cases, if an existing tile outlet requires replacement the Contractor shall confirm the replacement tile outlet with the Engineer. Where riprap protection exists at any existing tile outlet such protection shall be removed and replaced as necessary to protect the outlet after reconstruction of the channel.

If any tile outlet becomes plugged as a result of construction, the Contractor shall remove the obstruction.

### 410.3.11 Completion

At the time of final inspection, all work in the contract shall have the full dimensions and cross-sections specified.

# 420 STANDARD SPECIFICATIONS FOR TILE DRAINS

## TABLE OF CONTENTS

# 420 STANDARD SPECIFICATIONS FOR TILE DRAINS

## 420.1 DESCRIPTION

Work under this specification will consist of supplying, hauling, laying and backfilling subsurface drainage conduit with the conduit materials as described on the Drawings and in the location, depth and invert grade as shown on the Drawings. In this specification the word "tile" will apply to all described conduit materials. Lengths are in millimeters (mm) and meters (m).

The work shall include the supplying of all labour, tools, equipment and extra materials required for the installation of the tile; the excavation and backfilling of the trenches; the hauling, handling, placing and compaction of the excavated material for backfill, the loading, hauling, handling and disposal of surplus excavation material; the removal and replacing of topsoil and sod where required by the Engineer.

All existing laterals crossed by the new line shall be reconnected in an approved manner. Either special manufactured connections shall be used or another method of sealing connections as approved by the Engineer. The Contractor shall also construct catchbasins, junction boxes and other structures where directed by the Engineer.

Except where complete removal of an existing pipe is required by new construction, existing pipes to be abandoned shall be sealed with a concrete or mortar plug with a minimum length of 300mm to the satisfaction of the Engineer.

Sections 6 and 7 of the current version of the *Drainage Guide for Ontario*, OMAFRA Publication 29 shall provide a general guide to all methods and materials to be used in the construction of tile drains except where superseded by this Contract.

The licensing requirements of the *Agricultural Tile Drainage Installation Act, 1990* will not be applicable to this Contract unless specified otherwise by this Contract.

## 420.2 MATERIALS

Refer to Section 400, Standard Specifications for Drain Construction for any materials required for tile drain construction.

## 420.3 CONSTRUCTION

### 420.3.1 Outlet

A tile drain outlet into a ditch or creek shall be protected using a 6m length of rigid pipe with a hinged grate for rodent protection. Maximum spacing between bars on the rodent grate shall be 50mm. Material for rigid pipe will be specified in the Special Provisions, plastic pipe is preferred. The joint between the rigid pipe and the tile drain shall be wrapped with filter fabric. All outlets will be protected with rock riprap to protect the bank cut and as a splash apron. In some locations riprap may also be required on the bank opposite the outlet. The quantity of riprap required will be specified in the Special Provisions. A marker stake as approved by the Engineer shall be placed at each tile outlet.

### 420.3.2 Line

The Engineer will designate the general location of the new drain. A landowner may indicate a revised location for the drain which must be approved by the Engineer. Where a change in alignment is required that is not accommodated in a catchbasin, junction box or similar structure the alignment change shall run on a curve with a radius not less than the minimum installation radius specified for the tile material.

The Contractor shall exercise care to not disturb any existing tile drains which parallel the course of the new drain, particularly where the new and existing tile act together to provide the necessary capacity. Where an existing tile is disturbed or damaged the Contractor shall perform the necessary correction or repair with no additional compensation.

**NOTE**: It is the Contractor's responsibility to ascertain the location of, and to contact the owners of all utility lines, pipes and cables in the vicinity of drain excavations. The Contractor shall be completely responsible for all damages incurred.

### 420.3.3 Grade Control

Tile is to be installed to the elevation and grade shown on the profiles. Accurate grade control must be maintained by the Contractor at all times during tile installation. The tile invert elevation should be checked every 50m and compared to the elevation on the profile.

Benchmarks are identified on the Contract Drawings. The Engineer will confirm all benchmark elevations prior to construction.

### 420.3.4 Variation from Design Grade

No reverse grade will be allowed. A small variation in grade can be tolerated where the actual capacity of the drain exceeds the required capacity. The constructed grade should be such that the drain will provide the capacity required for the drainage area. Constructed grade should not deviate from design grade by more than 10% of the internal diameter for more than 25m. Grade corrections shall be made gradually over a distance not less than 10m.

### 420.3.5 Installation

At each work stoppage, the exposed end of the tile shall be covered by a tight fitting board or metal plate. No installed tile shall be left exposed overnight. Any tile damaged or plugged during construction shall be replaced or repaired at the Contractor's expense.

Topsoil over the trench shall be stripped, stockpiled separately and replaced after the trench is backfilled. Where installation is across a residential lawn, existing sod over the trench shall be cut, lifted and replaced in a workmanlike manner or new sod laid to match pre-construction conditions.

#### *420.3.5.1 Installation of Concrete Tile*

Concrete tile shall be installed by a wheel trencher unless an alternate method of construction is noted on the Drawings.

Digging of the trench shall start at the outlet end and proceed upstream. The location and grade shall be as shown on Drawings but shall be liable to adjustment or change by the Engineer on site with no additional payment allowed except where the change involves increased depth of cut beyond the limitation of the wheel trencher in use at the time of the change. The trench width measured at the top of the tile should be at least 150mm greater than the tile diameter.

The bottom of the trench is to be cut accurately to grade and shaped so that the tile will be embedded in undisturbed soil or in a compacted bed at least for 10% of its overall height. Where hard shale, boulders or other unsuitable bedding material is encountered, the trench shall be excavated to 75mm below grade and backfilled with granular material compacted to a shaped, firm foundation. If the trench is overcut below the proposed grade, it is to be backfilled with granular material to the correct grade and compacted to a shaped, firm foundation.

Where the depth for the tile installation exceeds the depth capacity of the wheel trencher the Contractor shall excavate a trench of sufficient depth so that the wheel trencher can install the tile at the correct depth

and grade. The tender price shall include the cost of the additional excavation and backfilling and stripping and replacing topsoil over the trench.

The inside of the tile is to be kept clean during installation. All soil and debris should be removed before the next tile is laid. Maximum spacing at joints between tiles should be about 3mm. Directional changes can be made without fittings or structures provided the centre-line radius of the bend is not less than 15m radius. The tiles are to be beveled, if necessary, to ensure close joints on all bends.

All tile joints and connections with other pipe materials are to be fully and tightly wrapped with a minimum 300mm width of geotextile drain wrap. A 150mm overlap on top is required. No additional payment will be made for joint wrapping.

*420.3.5.2 Installation of Corrugated Plastic Tubing*

Corrugated plastic tubing shall be installed by a drainage plow or wheel trencher unless an alternate method of construction is specified on the Drawings. For other installation methods, proper bedding and backfill is required to maintain the structural integrity of the plastic tubing so that surface and earth loads do not deflect the tubing by more than 20% of its nominal diameter.

For all installation methods:

- the plastic tubing should not be stretched by more than 7% of its normal length
- protect tubing from floating off grade when installing in saturated soil conditions
- directional changes can be made without fittings provided the centre-line radius of the bend is not less than five times the tubing diameter

Drainage plow equipment should construct a smooth bottomed opening in the soil and maintain the opening until the tubing is properly installed. The size of the opening in the soil should conform closely to the outside diameter of the tubing.

*420.3.5.3 Installation of Concrete Sewer Pipe or Plastic Pipe*

The Contractor may install pipe using a wheel trencher. For concrete sewer pipe, the bells must be recessed.

The Contractor may install pipe using an excavator by shaping the bottom of the trench to receive and support the pipe over 10% of its diameter if the trench is backfilled with native material. Shaping the trench bottom is not required where 150mm of granular bedding is placed to the satisfaction of the engineer.

### 420.3.6 Backfilling

All tile should be blinded by the end of the day's work to protect and hold them in place against disturbances. After tile is inspected, it shall initially be backfilled with a minimum cover of 300mm.

For blinding and initial backfilling use clean native soil with no organic matter. Initial backfill shall be tamped around the pipe by backhoe bucket or similar if directed by the Engineer.

The tile shall be backfilled with native material such that there is a minimum cover of 600mm. In addition, a sufficient mound must be placed over the trench to ensure that no depression occurs after settling along the trench.

### 420.3.7 Tile Connections

All lateral drains encountered along the route of the new tile drain are to be connected to the new drain if the intercepted tile are clean and do not contain polluted water. Lateral drains that are full of sediments or contain polluted waters will be addressed by the Engineer at the time of construction. All lateral drains are to be connected to the new tile using a pipe material and size that will provide the same flow capacity as the existing lateral drain unless a different connection is described in the Special Provisions. Corrugated plastic tubing can be used for all tile connections. Tubing can be solid or perforated, filter sock is not required.

Contractor is responsible for installation and backfilling in a manner than maintains the structural integrity of the connection. Manufactured fittings should be used to ensure tight connections. Where an opening must be made in the new tile drain for a connection, the opening shall be field cut or cored. After the opening is cut in the new tile any gaps or voids around the connection shall be sealed with mortar, low-expanding spray foam or geotextile. Lateral tubing shall not protrude more than 25mm beyond the inside wall of the new tile drain. The Contractor shall ensure than any material used to seal the connection does not protrude beyond the inside wall of the new tile drain.

All connections that are described in the Special Provisions are considered to be part of the original Contract price. For all other connections the Contractor will be paid in accordance with the price established in the Schedule of Tender Prices. The Contractor must list all connections on the Lateral Connection Summary sheet, if included in the Special Provisions, in order to qualify for payment. The Lateral Connection Summary sheet describes all tile encountered based on location (station), side of trench, size and type of tile and approximate length and type of material used for the connection.

### 420.3.8 Stones and Rock

The Contractor shall immediately contact the Engineer if bedrock or stones of sufficient size and number are encountered such that installation by wheel trencher cannot continue. The Engineer may direct the Contractor to use some other method of excavation to install the tile. The basis of payment for such extra work shall be determined by the Engineer. Stones greater than 300mm in diameter that are removed during excavation shall be disposed of by the Contractor at an offsite location. No additional payment for excavating or hauling these stones will be provided.

### 420.3.9 Brush, Trees and Debris

Unless stated otherwise in the Special Provisions, the following requirements shall apply for installation of a tile drain in a wooded area. The Contractor will clear and grub a minimum corridor width of 30m centered on the tile drain alignment. The resulting debris shall be placed in a windrow along the edge of the working area. No additional payment will be made for such work.

### 420.3.10 Subsoil Instability

If poor subsoil conditions are encountered during tile installation by wheel trencher an attempt shall be made to install the tile with a continuous geotextile underlay in the trench bottom. The cost of the underlay, if approved by the Engineer, will be paid as an extra. If the continuous geotextile underlay is not sufficient then the tile will be installed by backhoe or excavator on a bedding of 19mm clear crushed stone (300mm depth) to achieve trench bottom stability for the new tile. If approved, the above work will be paid based on the unit price provided on the Form of Tender. The unit price shall include the cost to supply and place the stone. If more than 300mm depth of stone is required for bottom stability, additional payment will be allowed for the additional depth of stone. The additional quantity of stone shall be supported by weigh tickets and the suppliers invoice.

If poor subsoil conditions are encountered during tile installation by backhoe or excavator, the tile shall be installed on stone bedding as noted above. For this installation only the material cost of the stone will be paid as an extra. Supply of stone and cost to be supported by weigh tickets and supplier's invoice.

If the subsoil is a fine grained soil it may necessary to place the stone on a geotextile with the geotextile wrapped over the stone before laying the tile. Additional payment will be allowed to supply and install the geotextile.

### 420.3.11 Broken or Damaged Tile

The Contractor shall dispose of all damaged or broken tile and broken tile pieces off-site.

### 420.3.12 Excess Tile

All excess tile shall be removed from the job site.

### 420.3.13 Catchbasins

*420.3.13.1 General*

All catchbasins shall have minimum inside dimensions matching the dimensions shown on the Drawings. Contractor is responsible for ordering catchbasins to match the inlet and outlet connections and top elevations required by the Special Provisions and the Drawings.

*420.3.13.2 Materials*

Requirements in this section apply to catchbasins in non-travelled locations. Where catchbasins are proposed for travelled locations, refer to the Special Provisions and the Drawings for applicable OPSD information.

Precast concrete catchbasins shall be manufactured by as Coldstream Concrete or approved equal. Minimum wall thickness for catchbasins without reinforcement is 150mm and with reinforcement 100mm. The joints between precast catchbasin sections shall be protected with geotextile to prevent soil material from entering into the catchbasin. Joint protection using mortar or water tight barrier is also acceptable. Grates are to be birdcage grates as manufactured by Coldstream Concrete or approved equal unless specified otherwise on the Drawings. All grates to be secured with corrosion resistant hardware.

HDPE catchbasins shall be as fabricated by ADS, Armtec, Hancor or approved equal. Steel catchbasins shall be the Heavy Duty Steel Catch Basin as manufactured by AgriDrain or approved equal. PVC catchbasins shall be Nyloplast as manufactured by ADS or approved equal. HDPE, steel and PVC catchbasins shall be supplied with integral stubouts fabricated by the manufacturer and sized according to the pipe connections shown on the Drawings. Grates for HDPE, steel or PVC catchbasins shall be in accordance with the Special Provisions and manufacturer recommendations.

Marker stakes as supplied by Coldstream Concrete or equal are to be placed beside each catchbasin unless specified otherwise on the Drawings.

*420.3.13.3 Installation*

All tile or pipe connected to concrete catchbasins shall be mortared or secured in place so that no gaps remain at the connection. Mortar is to be applied on both the inside and outside wall surfaces.

Backfill around all new catchbasins is recommended to be 19mm clear crushed stone to avoid future settlements. The Contractor shall be responsible for backfilling all settlement areas around catchbasins during the contract warranty period. No additional payment will be provided for adding backfill to settlement areas around catchbasins.

All catchbasin sumps to be fully cleaned by the Contractor after completion of drain installation and backfilling.

### 420.3.14 Junction Boxes

Junction boxes shall be precast concrete to the same specification as above for catchbasins except that the junction box shall have a solid lid. The lid shall be a minimum of 125mm thick with wire mesh reinforcement and 2 lifting handles. The top of the junction box should have a minimum ground cover of 450mm.


THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL BE INFORMED OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

**BENCHMARKS**

**BM#1**
NAIL IN E/FACE OF HP #CDTQOP W/SIDE 10th LINE, 25m NORTH OF BRANCH B ROAD CROSSING.
N 4,785,287.454
E 512,791.478
ELEV. 356.029m

**BM#2**
NAIL IN N/SIDE H.P. ON SW CORNER OXFORD ROAD 8 & 10th LINE.
N 4,785,899.733
E 512,547.275
ELEV. 343.631m

**BM#3**
SPIKE IN N/W SIDE OF H.P. WITH YELLOW BELL SIGN S/SIDE LANE ENTRANCE APPROX. 100m EAST OF LANE CULVERT @ BOTTOM END
N 4,783,743.517
E 513,290.649
ELEV. 338.788m

## PLAN LEGEND

- — MAJOR WATERSHED
- — EXTERNAL/SUB WATERSHEDS
- — PROPOSED WORK OR INCORPORATION
- — EXISTING DRAIN
- — DITCH OR WATERCOURSE
- — DENOTES PROPERTY OWNERSHIP ON BOTH SIDES OF LOT LINE
- (2.9) — APPROXIMATE HECTARES IN WATERSHED
- (10.6*) — APPROXIMATE SUBSURFACE HECTARES TO BRANCH B
- 5.2 ha. — HECTARES OWNED
- (040-02000) — ASSESSMENT ROLL NUMBER
- — THIS AREA ASSESSED AT HALF RATE. SURFACE WATER TO PARKER DRAIN, SUBSURFACE WATER TO BALKEMA DRAIN
- — BUSH
- BM#3 — BENCHMARK LOCATION AND NO.
- ..... — ACCESS
- —— P —— — ENBRIDGE PIPELINES INC.
- —— G —— — ENBRIDGE GAS INC.

**GEOGRAPHIC TOWNSHIP OF EAST ZORRA (WARD 2)**

| | |
|---|---|
| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER — C. J. MACINTYRE 100507574 — FEB 3, 2022 — PROVINCE OF ONTARIO

SCALE
0 150 300m
(1:15,000 ON 11"x17")

# PARKER DRAIN 2022

COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA-TAVISTOCK

**WATERSHED PLAN** — FEB. 3, 2022

K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS AND PLANNERS
KITCHENER — SUDBURY

REVISED:
JOB NUMBER: 20-150
DRAWING 1 OF 21

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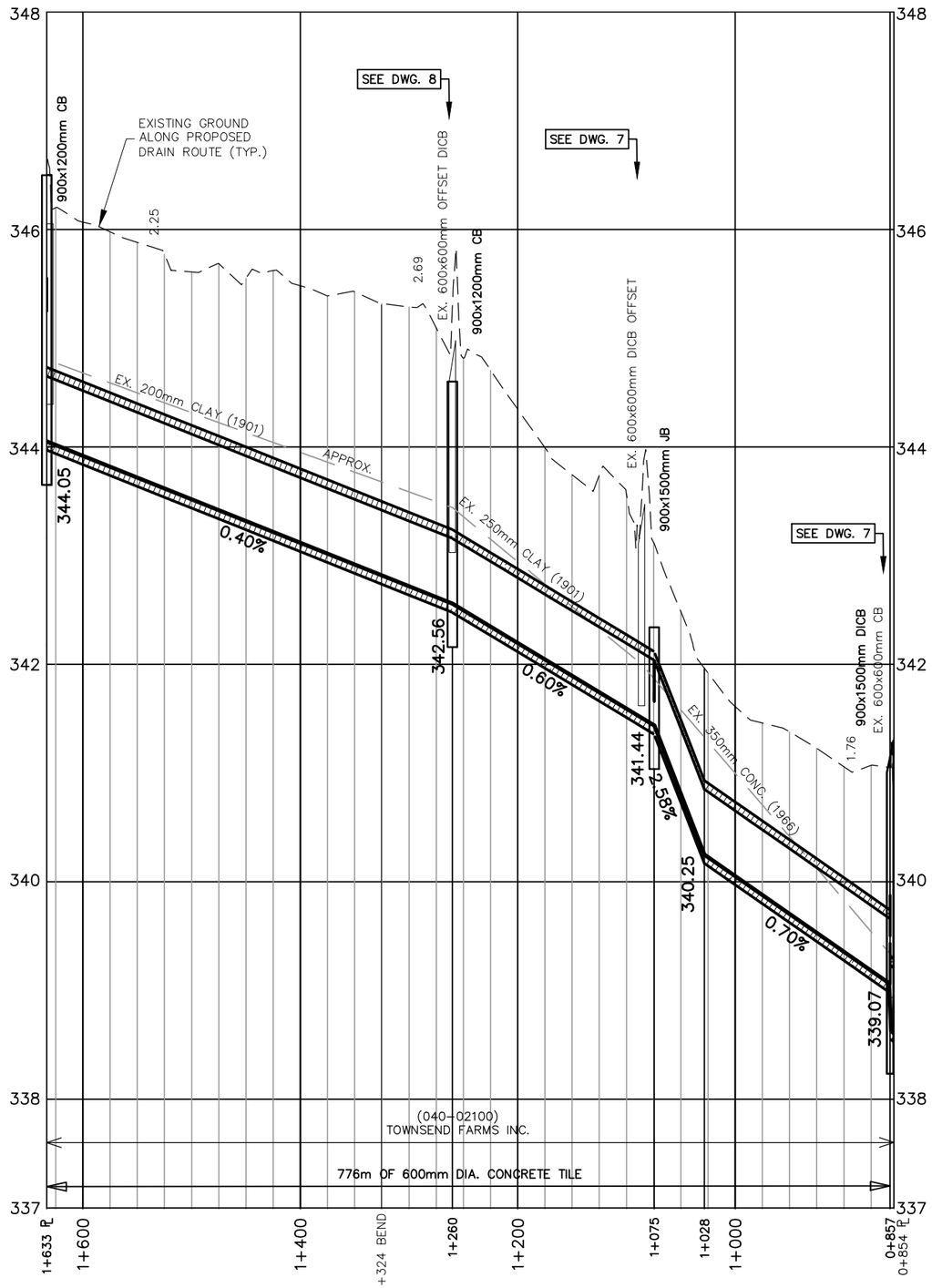


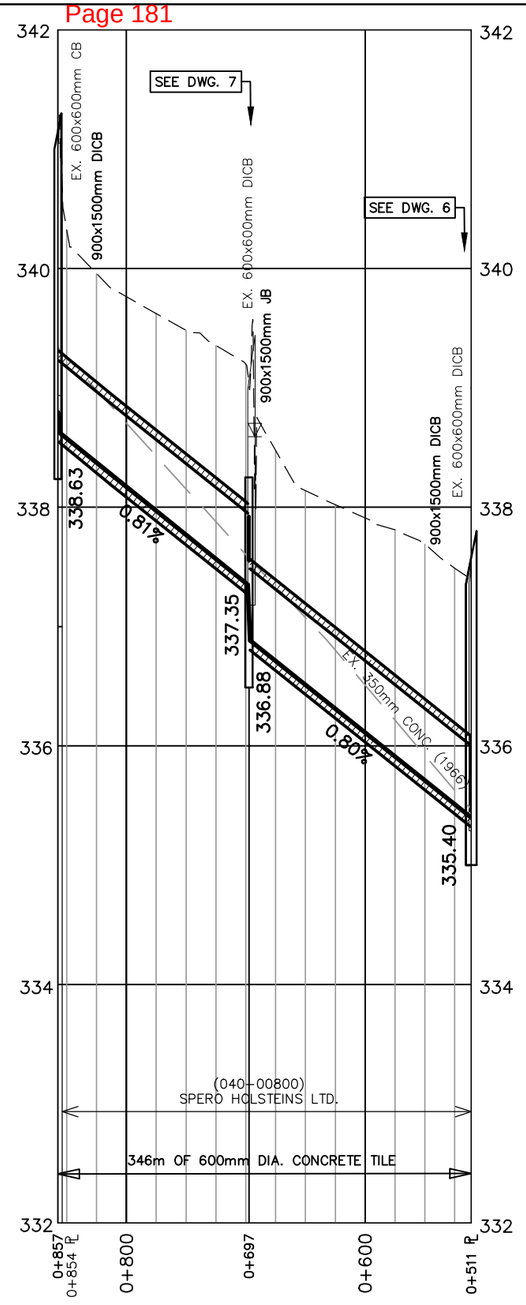


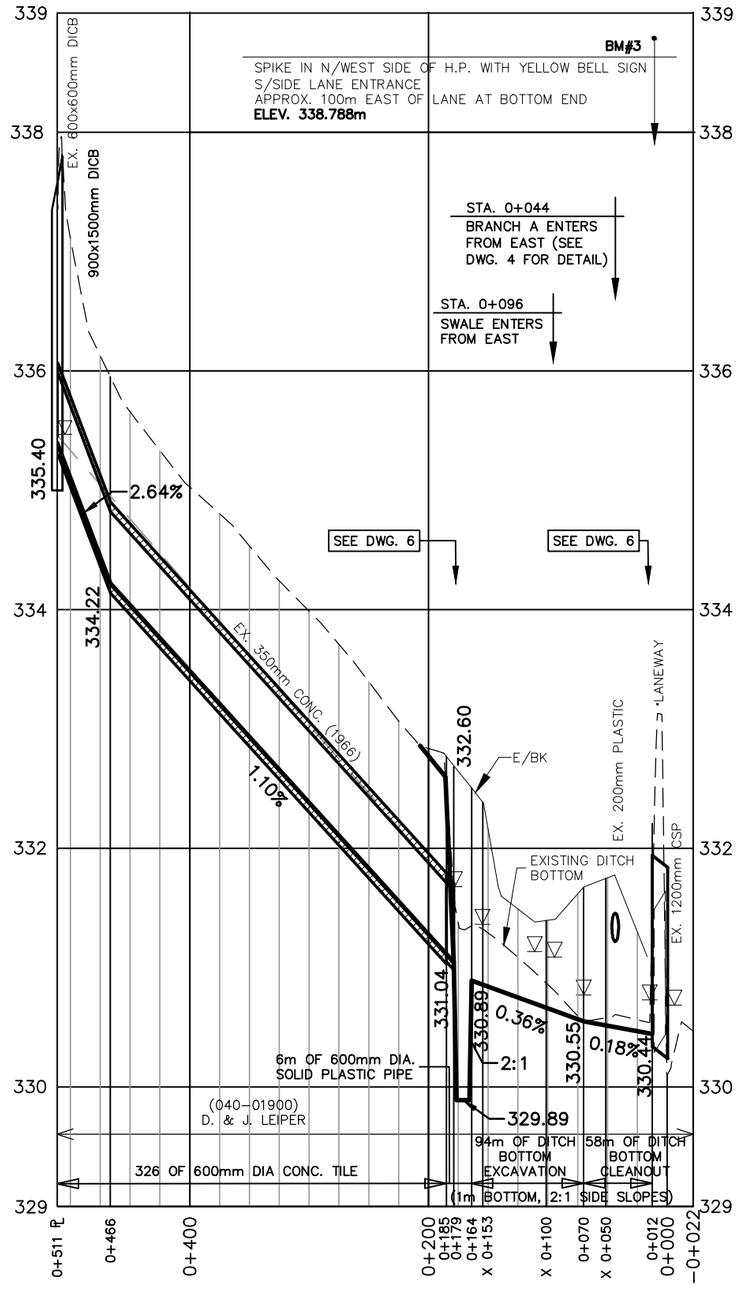


# PARKER DRAIN 2022

COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA-TAVISTOCK

## MAIN DRAIN PROFILE (1)

FEB. 3, 2022

| | |
|---|---|
| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER — C. J. MACINTYRE — 100507574 — FEB 3, 2022 — PROVINCE OF ONTARIO

0 50 100m (SCALE 1 : 5000) HORZ.

0 0.5 1m (SCALE 1 : 50) VERT.

SCALE (ON 11x17)

**K. SMART ASSOCIATES LIMITED**
CONSULTING ENGINEERS AND PLANNERS
KITCHENER SUDBURY

REVISED:
JOB NUMBER: **20-150**
DRAWING 2 OF 21

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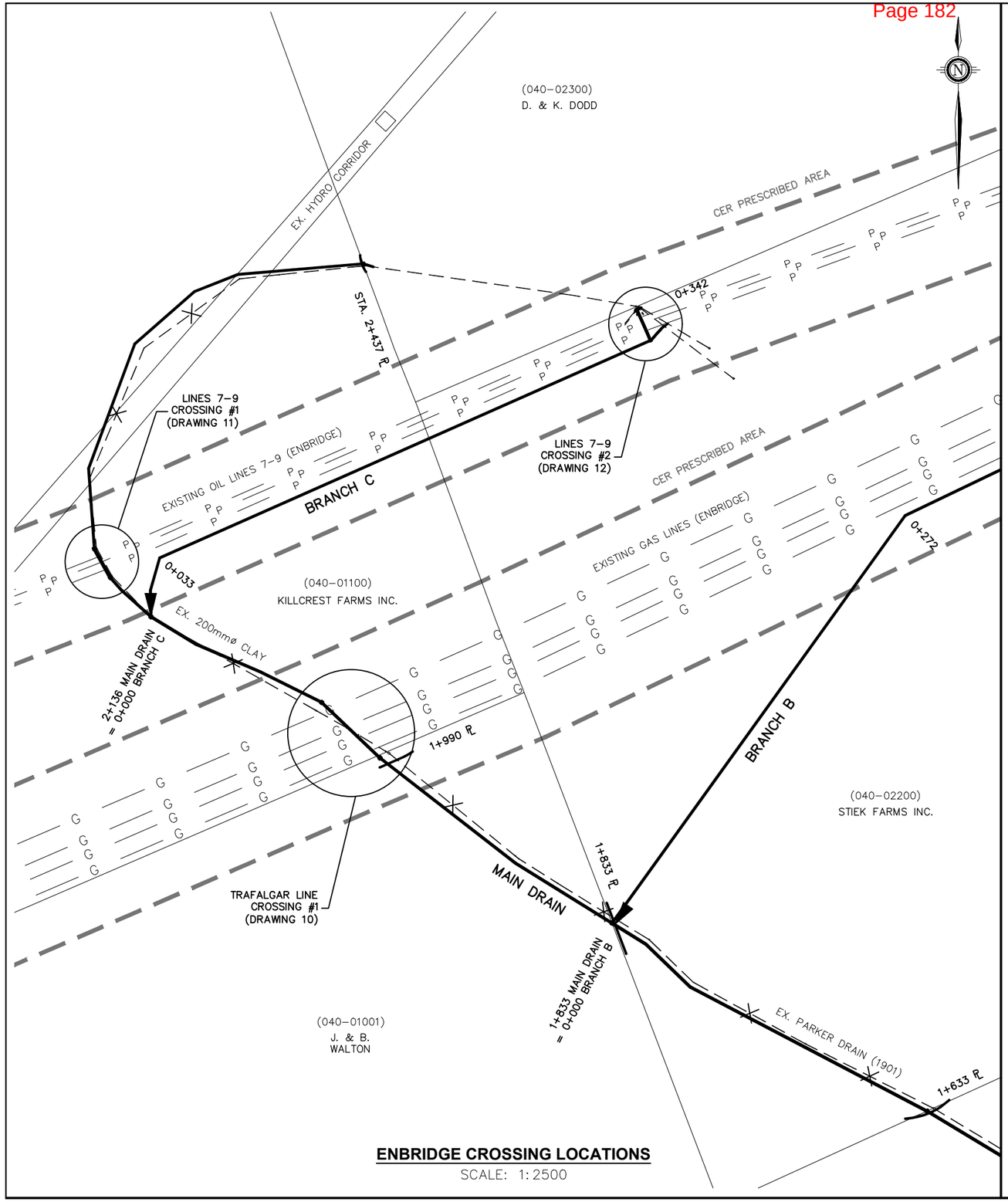


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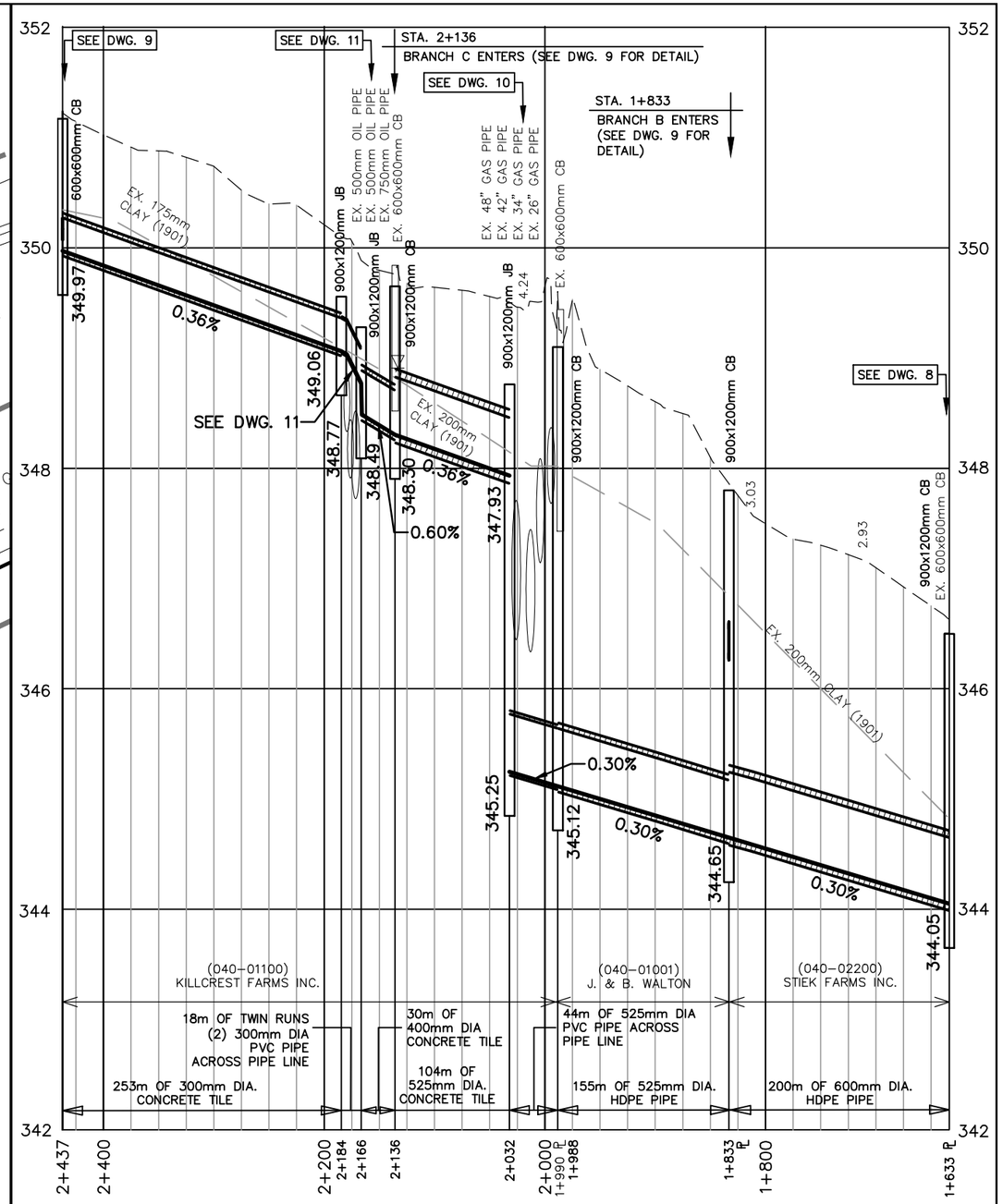


## MAIN DRAIN

# PARKER DRAIN 2022

COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA–TAVISTOCK

**MAIN DRAIN PROFILE (2)**

FEB. 3, 2022

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|---|---|
| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER — C. J. MACINTYRE — 100507574 — FEB 3, 2022 — PROVINCE OF ONTARIO

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0 0.5 1m (SCALE 1 : 50) VERT.

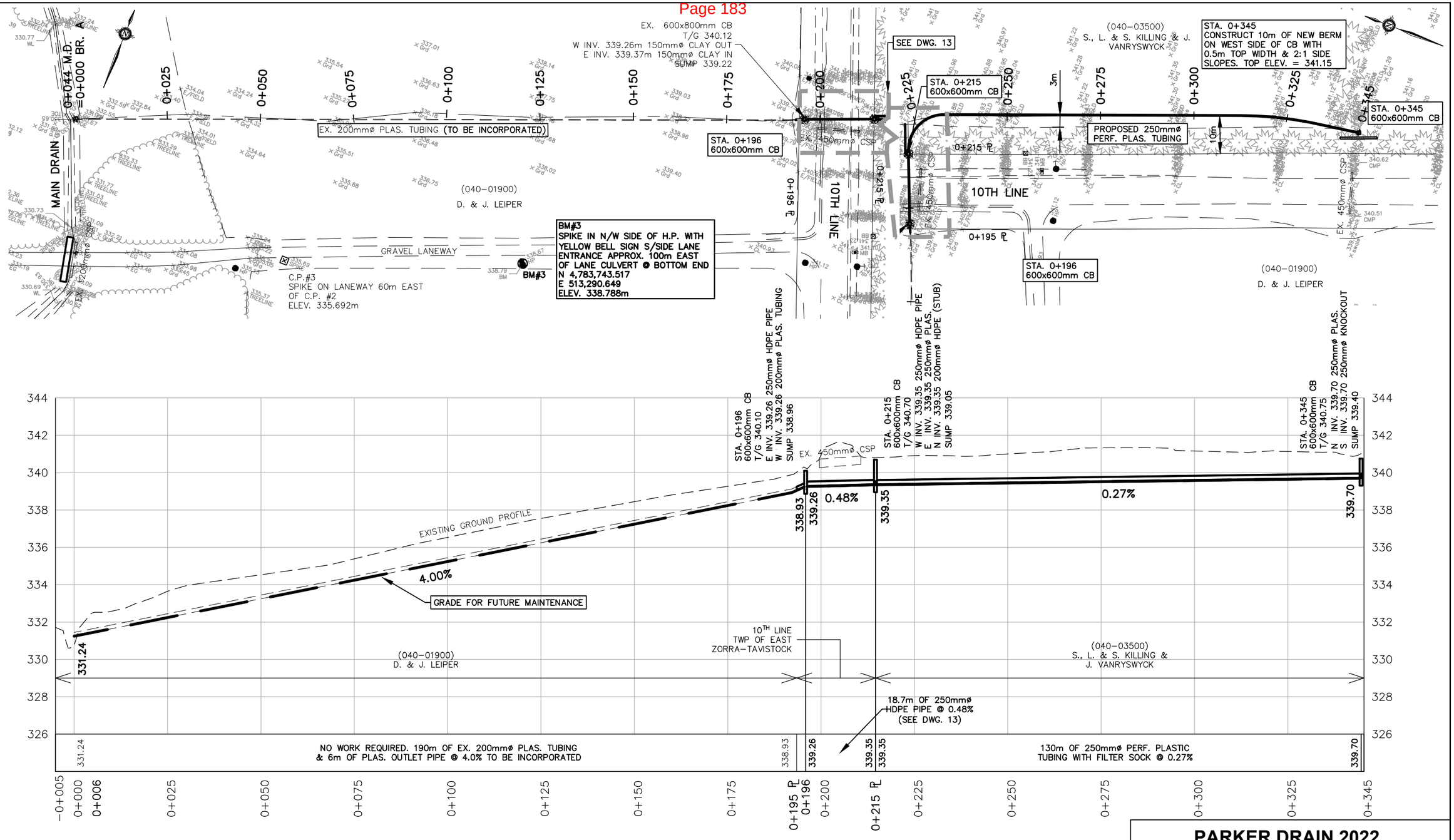
SCALE (ON 11x17)

K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS AND PLANNERS
KITCHENER — SUDBURY

REVISED:

JOB NUMBER: 20–150

DRAWING 3 OF 21







# PARKER DRAIN 2022

COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA-TAVISTOCK

## BRANCH A - PLAN & PROFILE

FEB. 3, 2022

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|---|---|
| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER
C. J. MACINTYRE
100507574
FEB 3, 2022
PROVINCE OF ONTARIO

SCALE
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( SCALE 1 : 1000 ) HORZ.
0 2 4m
( SCALE 1 : 200 ) VERT.

K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS AND PLANNERS
KITCHENER SUDBURY

REVISED:
JOB NUMBER: 20-150
DRAWING 4 OF 21

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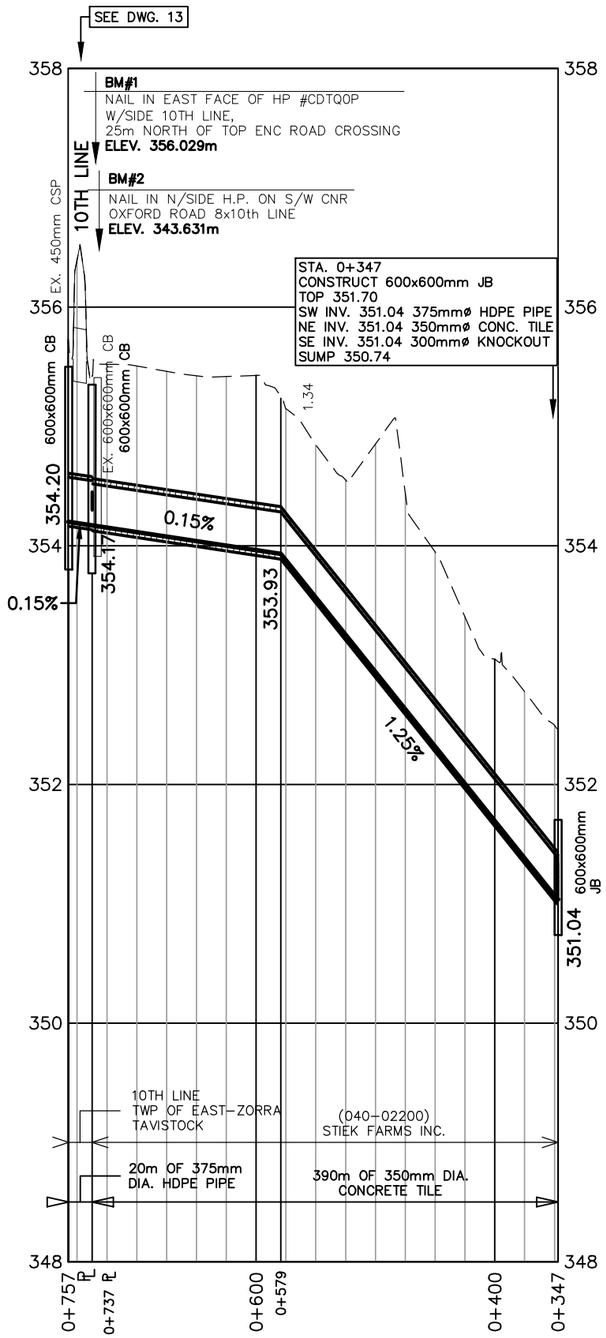


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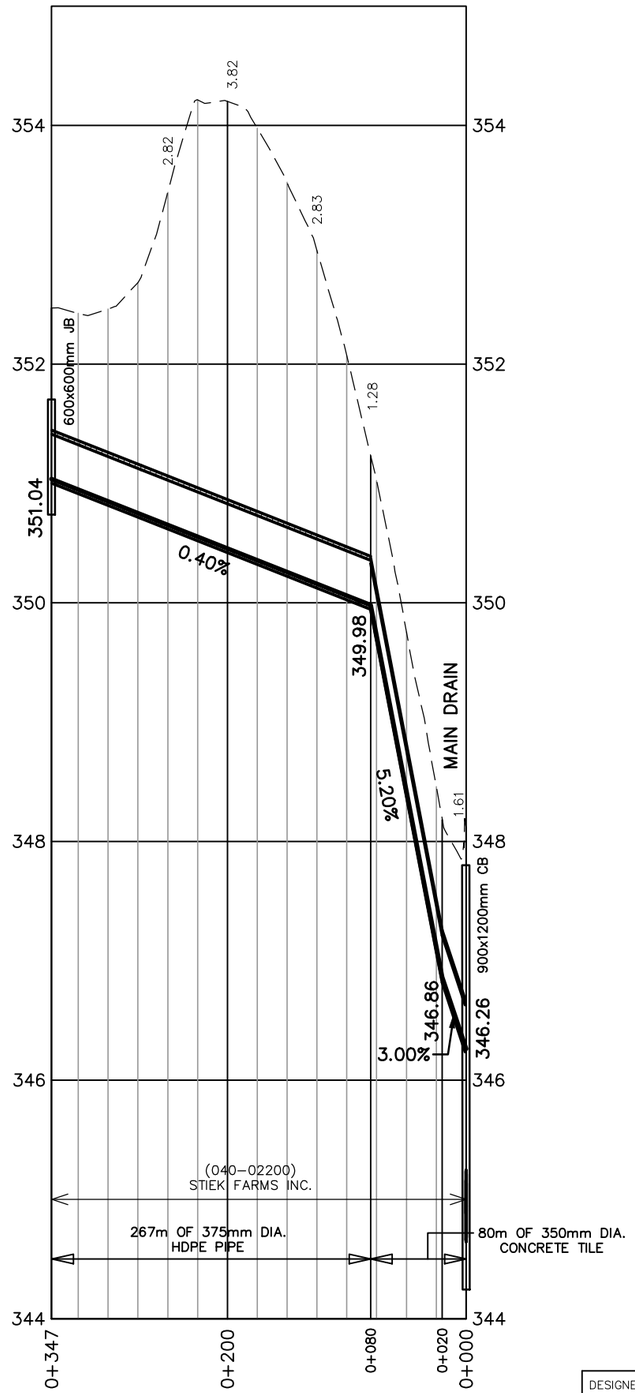


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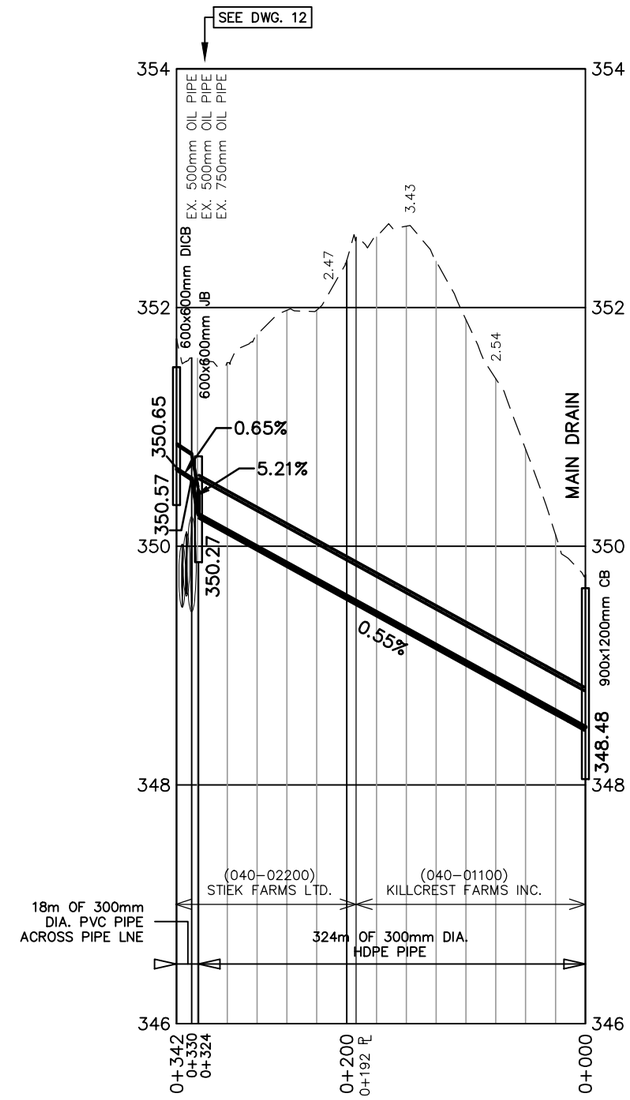


**BRANCH C**

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| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER
C. J. MACINTYRE
100507574
FEB 3, 2022
PROVINCE OF ONTARIO

0 50 100m
( SCALE 1 : 5000 )
HORZ.
0 0.5 1m
( SCALE 1 : 50 )
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SCALE (ON 11x17)

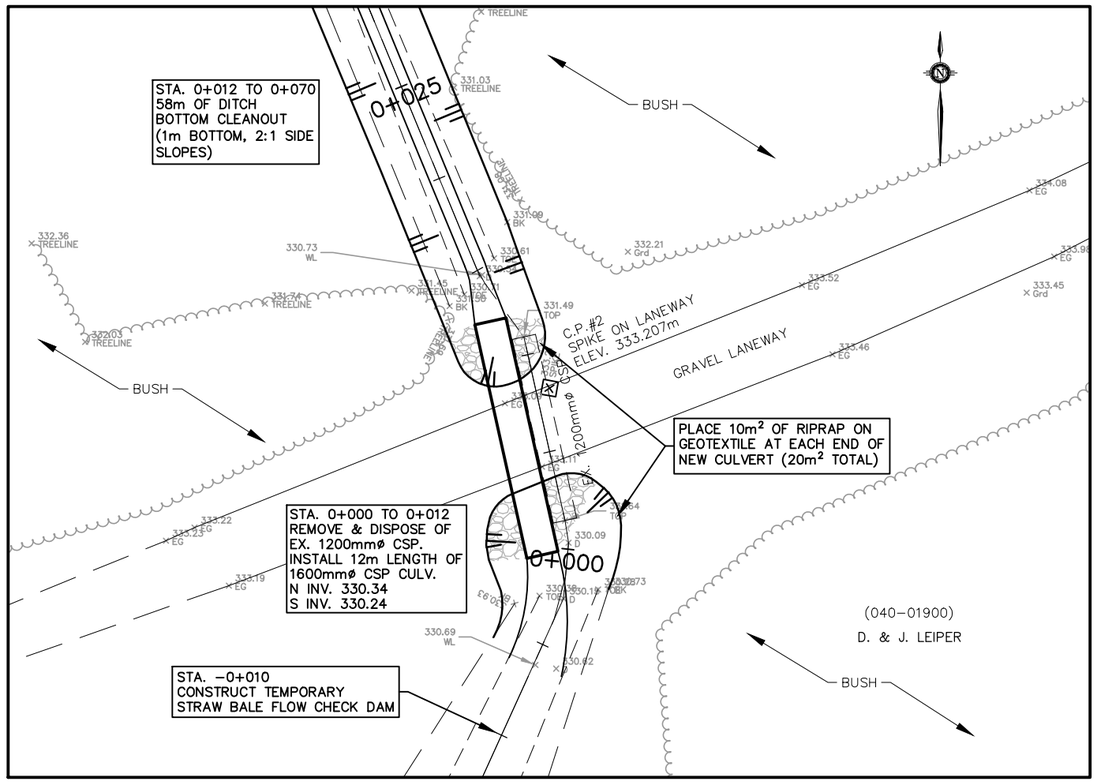
# PARKER DRAIN 2022

COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA-TAVISTOCK

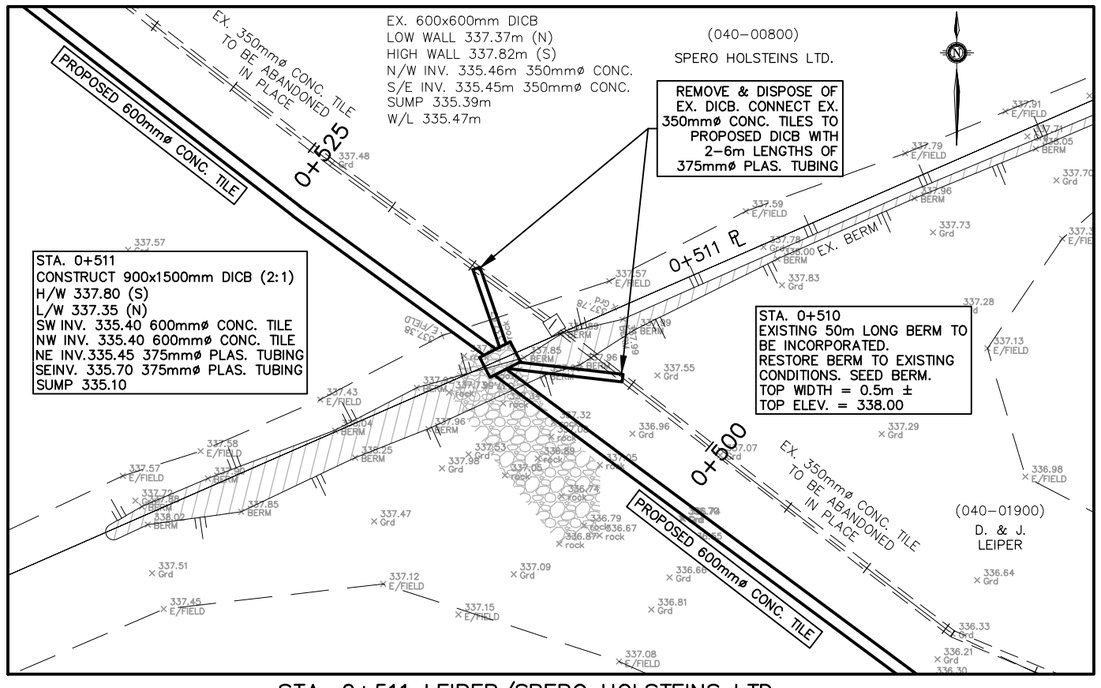
**BRANCH DRAIN B & C PROFILES** — FEB. 3, 2022

K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS AND PLANNERS
KITCHENER SUDBURY

REVISED:
JOB NUMBER: 20-150
DRAWING 5 OF 21




STA. 0+000 LEIPER LANEWAY

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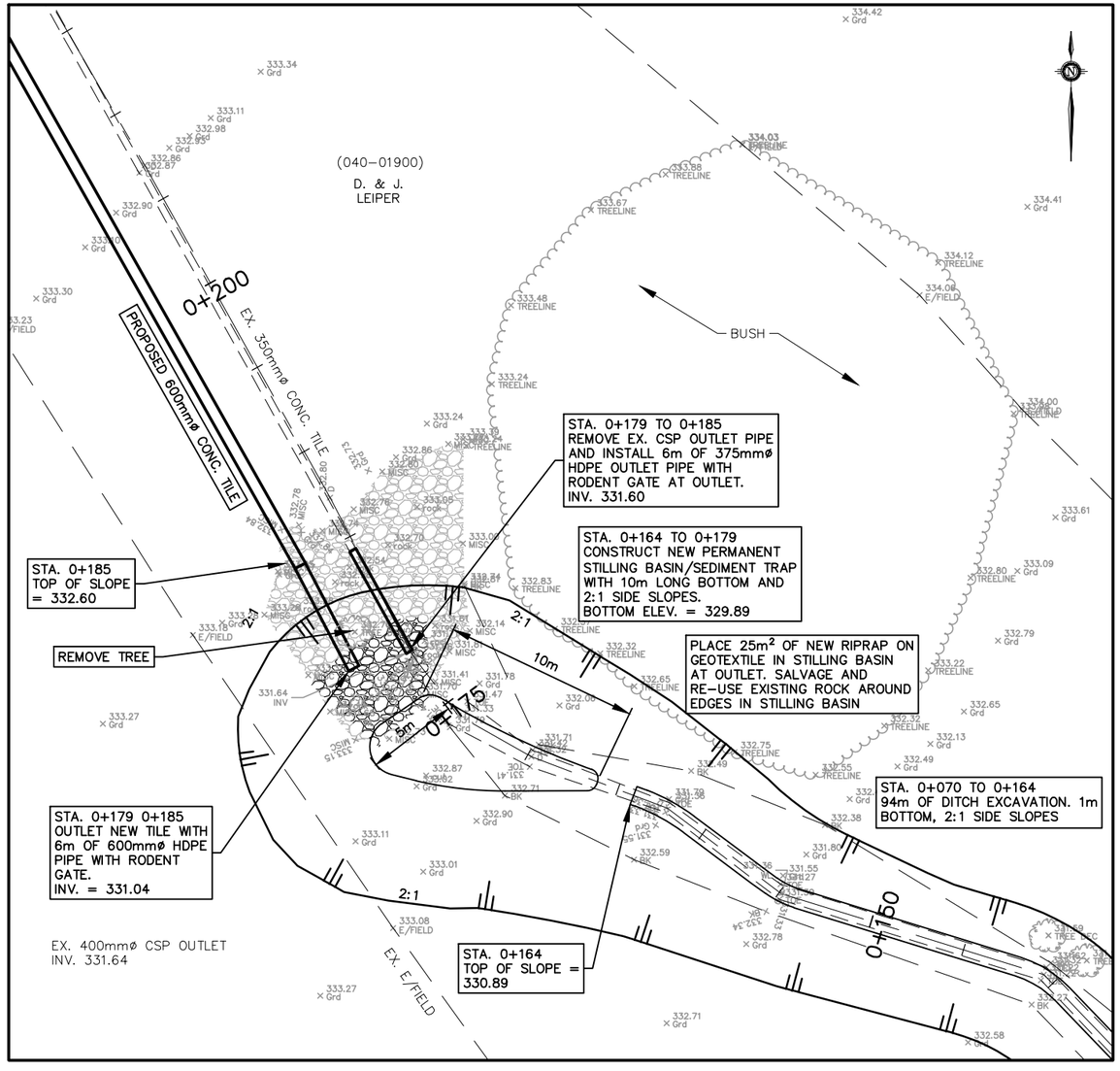


STA. 0+179 MAIN DRAIN TILE OUTLET

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| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER
C. J. MACINTYRE
100507574
FEB 3, 2022
PROVINCE OF ONTARIO

SCALE
0 3 6m
(1:300 ON 11x17)

# PARKER DRAIN 2022

COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA-TAVISTOCK

STA. 0+000 LEIPER LANEWAY CROSSING
STA 0+179 MAIN DRAIN TILE OUTLET
STA. 0+511 LEIPER/SPERO HOLSTEINS LTD.

FEB. 3, 2022

K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS AND PLANNERS
KITCHENER SUDBURY

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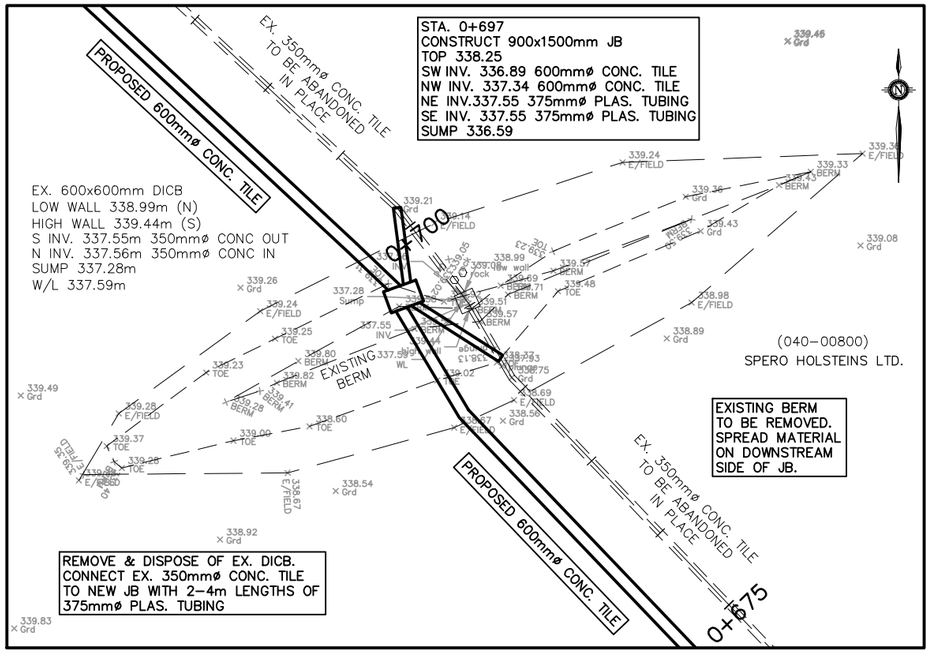
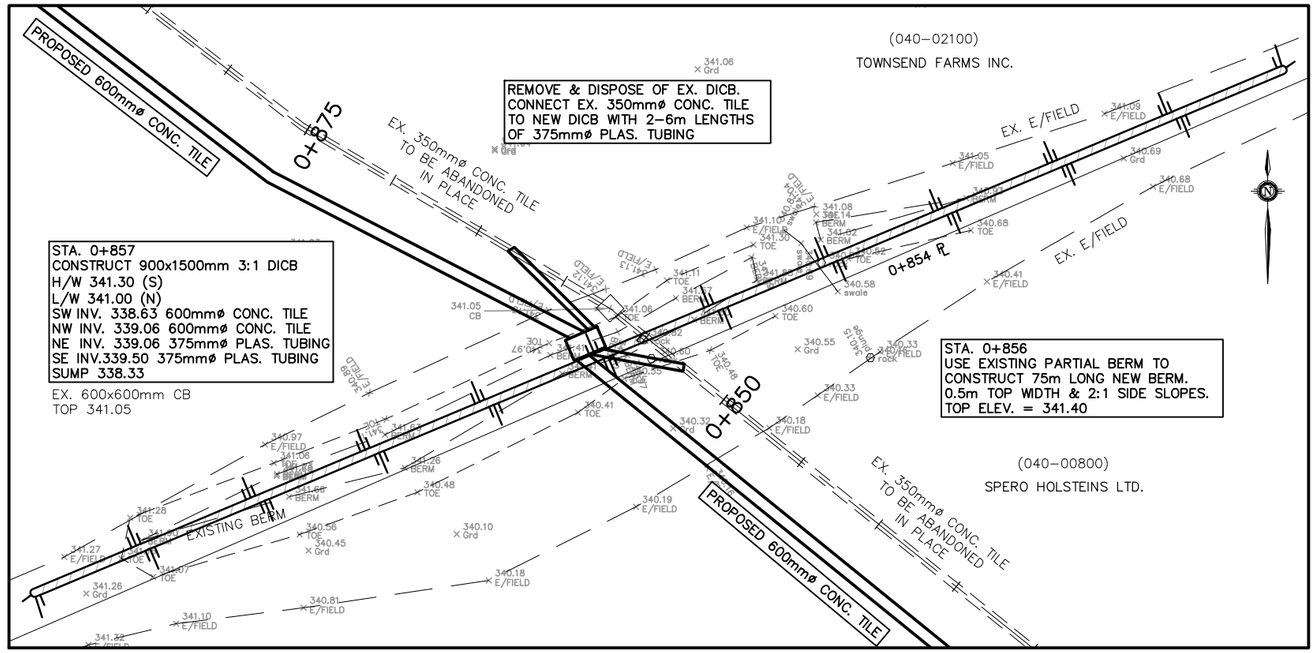
DRAWING 6 OF 21




STA. 0+697 SPERO HOLSTEINS LTD.

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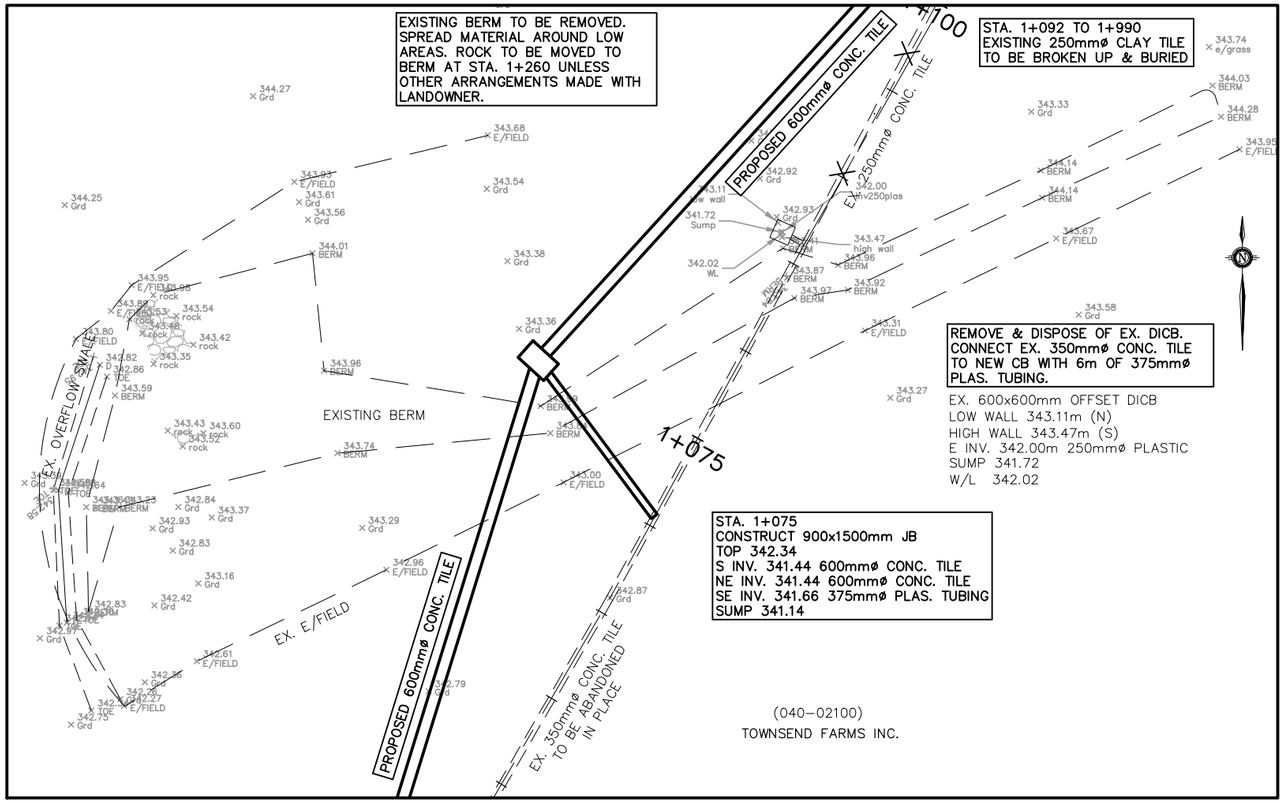


STA. 1+075 TOWNSEND FARMS INC.

# PARKER DRAIN 2022

COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA-TAVISTOCK

**STA. 0+697 SPERO HOLSTEINS LTD.**
**STA. 0+859 S.H. LTD./ T.F. INC.**
**STA. 1+075 TOWNSEND FARMS INC.**

FEB. 3, 2022

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| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER — C. J. MACINTYRE — 100507574 — FEB 3, 2022 — PROVINCE OF ONTARIO

SCALE
0 3 6m
(1:300 ON 11x17)

**K. SMART ASSOCIATES LIMITED**
CONSULTING ENGINEERS AND PLANNERS
KITCHENER SUDBURY

REVISED:
JOB NUMBER: **20-150**
DRAWING 7 OF 21

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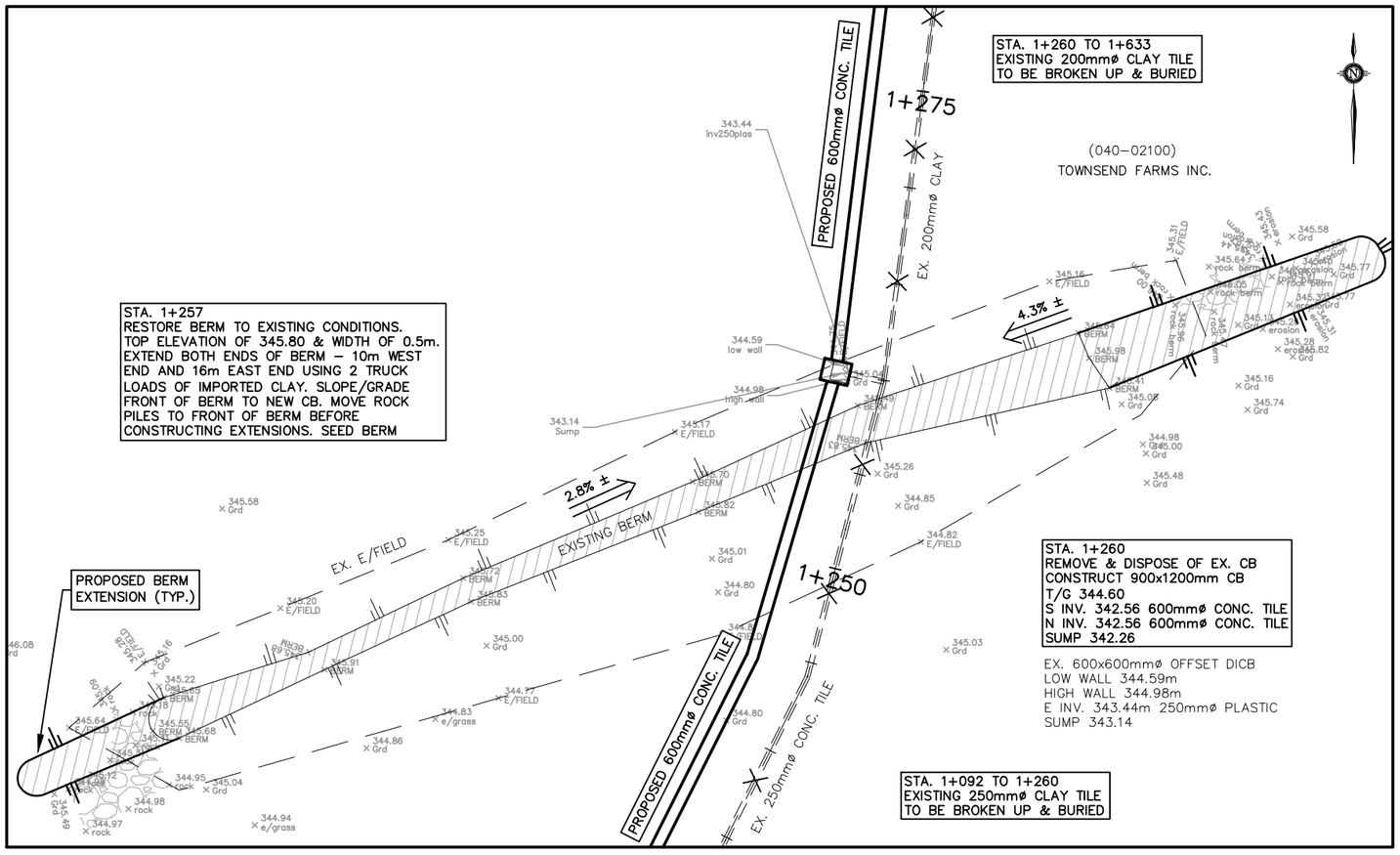
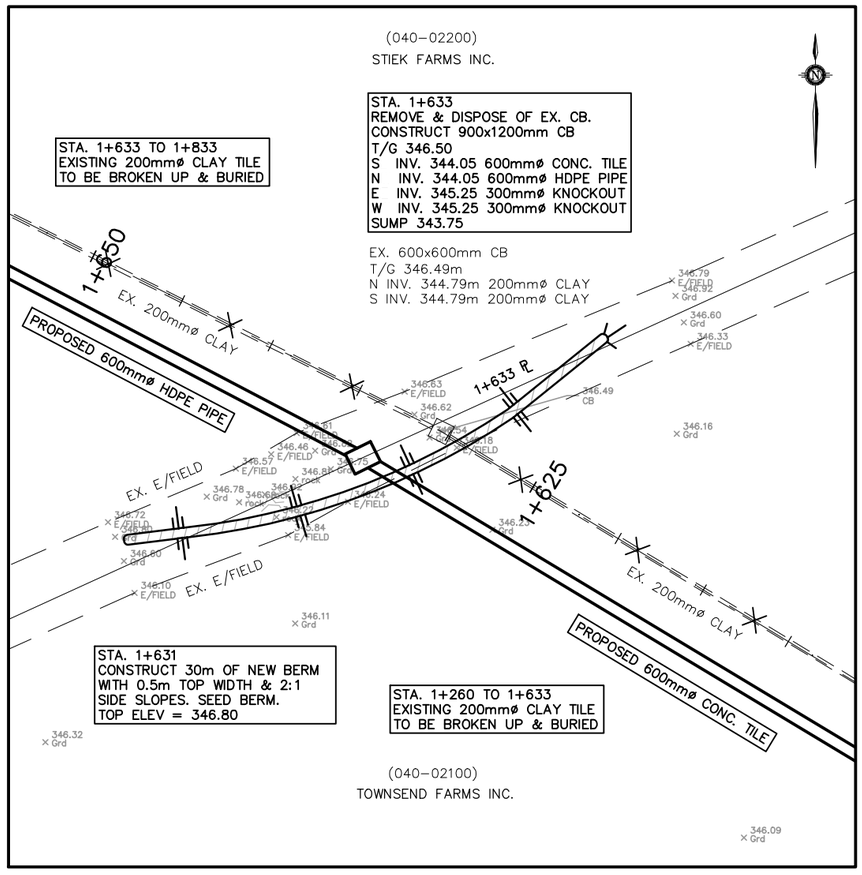



STA. 1+260 TOWNSEND FARMS INC.




STA. 1+633 TOWNSEND FARMS INC./STIEK FARMS INC.

# PARKER DRAIN 2022

COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA–TAVISTOCK

**STA 1+260 TOWNSEND FARMS INC.**
**STA. 1+633 TOWNSEND FARMS INC./ STIEK FARMS INC.**

FEB. 3, 2022

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| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER — C. J. MACINTYRE — 100507574 — FEB 3, 2022 — PROVINCE OF ONTARIO

SCALE
0 3 6m
(1:300 ON 11x17)

**K. SMART ASSOCIATES LIMITED**
CONSULTING ENGINEERS AND PLANNERS
KITCHENER SUDBURY

REVISED:
JOB NUMBER: **20–150**
DRAWING 8 OF 21

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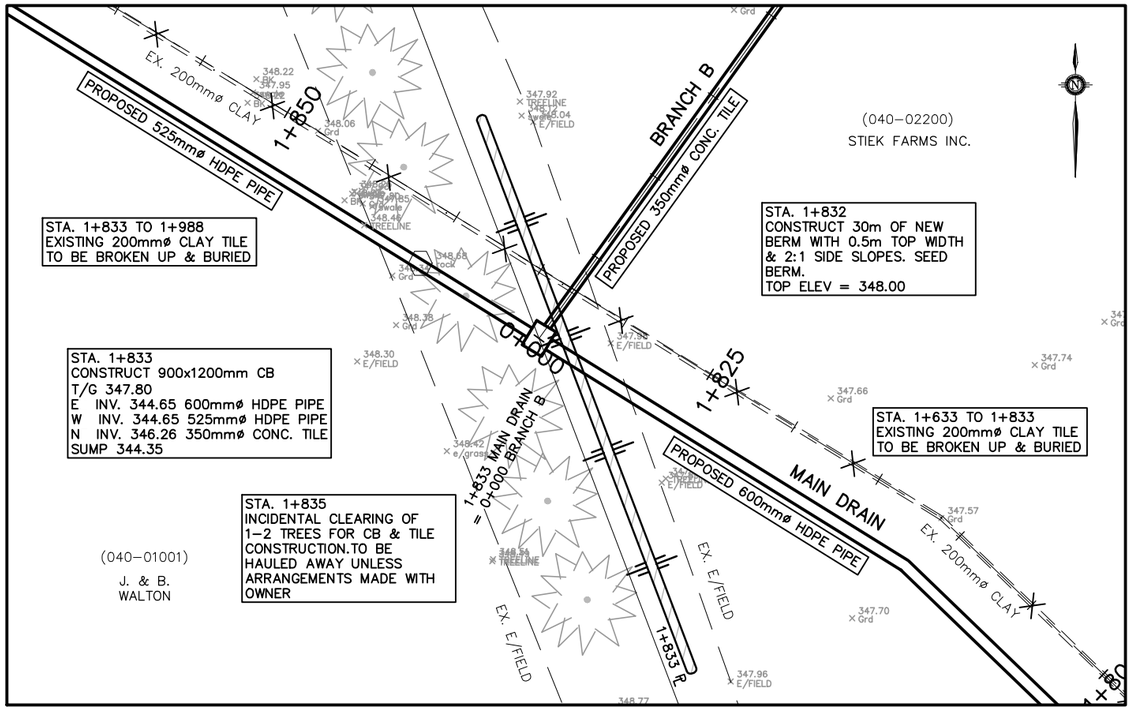
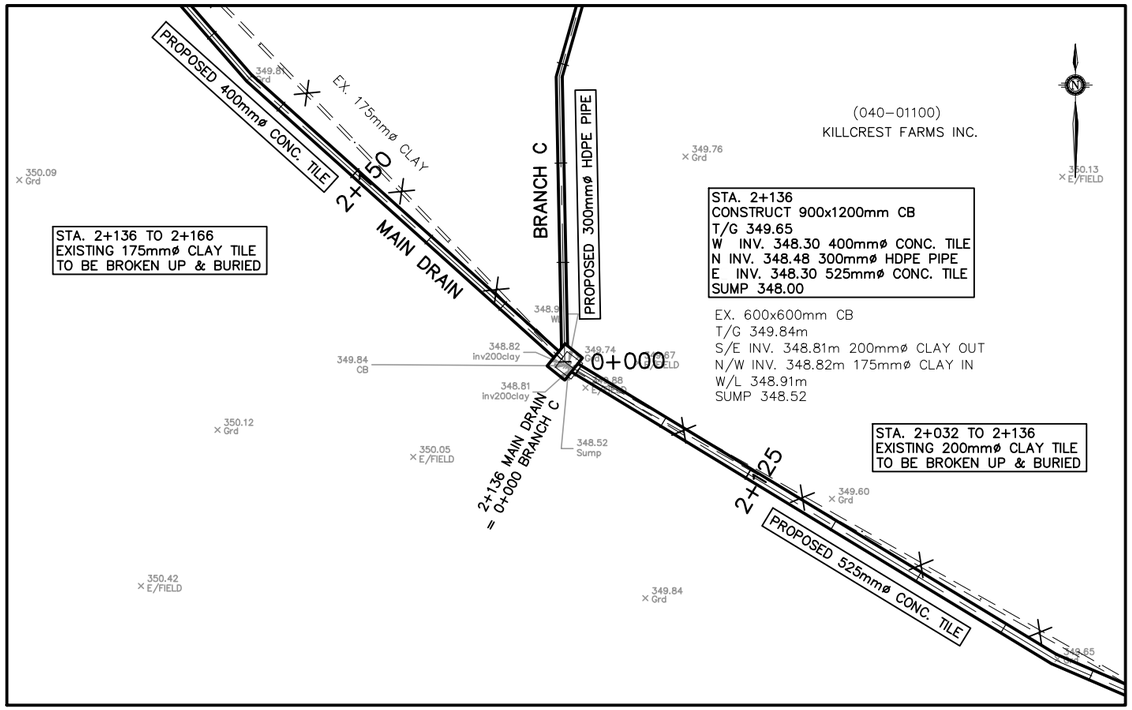
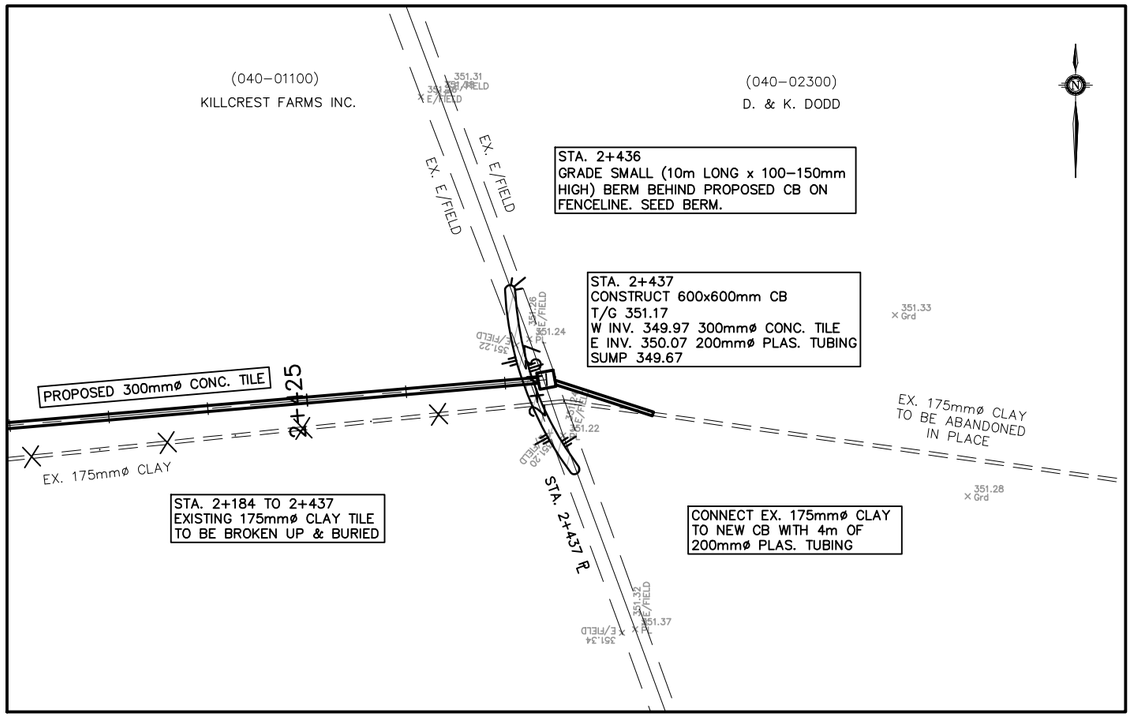



STA. 1+833 STIEK FARMS INC./J. & B. WALTON




STA. 2+136 KILLCREST FARMS INC.




STA. 2+437 KILLCREST FARMS INC./D. & K. DODD

NOTE: SEE DRAWINGS 10 & 11 FOR PROPOSED WORK BETWEEN STA. 1+988 TO 2+032 AND BETWEEN STA. 2+166 TO 2+184 (PIPELINE CROSSINGS)

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|---|---|
| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER
C. J. MACINTYRE
100507574
FEB 3, 2022
PROVINCE OF ONTARIO

SCALE
0 3 6m
(1:300 ON 11x17)

# PARKER DRAIN 2022

COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA–TAVISTOCK

STA. 1+833 STEIK FARMS INC./J.&B. WALTON
STA. 2+136 KILLCREST FAMS INC.
STA. 2+437 K.F. INC./D. & K. DODD

FEB. 3, 2022

K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS AND PLANNERS
KITCHENER — SUDBURY

REVISED:
JOB NUMBER: 20–150
DRAWING 9 OF 21

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(040–01100)
KILLCREST FARMS INC.

STA. 1+988
REMOVE & DISPOSE
OF EX. CB

EX. 600x600mm CB
T/G 349.44m
N/W INV. 348.02m 200mmø CLAY
S/E INV. 347.99m 200mmø CLAY
SUMP 347.79m

STA. 1+260 TO 1+988
EXISTING 200mmø
CLAY TILE TO BE
BROKEN UP & BURIED

STA. 2+032
1200x900mm JB

PROPOSED 525mmø PVC
UNDER PIPELINES BY OPEN CUT

PROPOSED 525mmø CONC. TILE

EX. 200mmø CLAY
TO BE ABANDONED
IN PLACE

SEE NOTE 3

STA. 2+032 TO 2+136
EXISTING 200mmø CLAY TILE
TO BE BROKEN UP & BURIED

EX. 48"ø GAS LINE
EX. 42"ø GAS LINE
EX. 34"ø GAS LINE
EX. 26"ø GAS LINE

CAP

67°

1+990 R

EX. 200mm CLAY

PROPOSED 525mmø
HDPE PIPE

STA. 1+988
900x1200mm CB

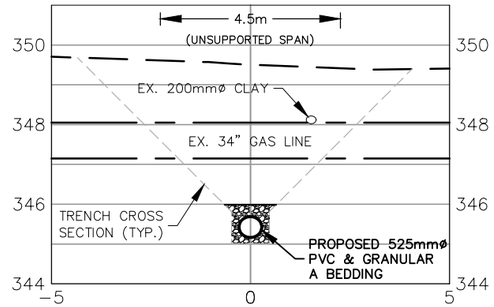
(040–01001)
J. & B.
WALTON

STA. 1+988
INCIDENTAL CLEARING OF
1–2 TREES FOR CB & TILE
CONSTRUCTION.TO BE
HAULED AWAY UNLESS
ARRANGEMENTS MADE WITH
OWNER

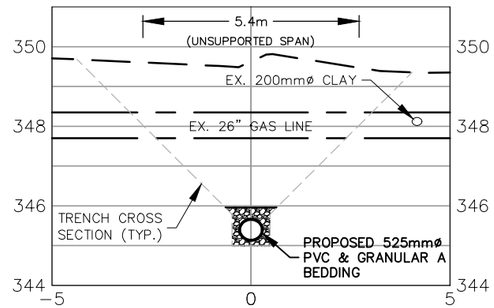
STA. 1+984
CONSTRUCT 20m OF NEW
BERM WITH 0.5m TOP WIDTH
& 2:1 SIDE SLOPES.
TOP ELEV/ = 349.60

NOTES

1. MECHANICAL EXCAVATION IS NOT PERMITTED WITHIN 3m OF THE PIPELINES, UNLESS VERIFIED VISUALLY. AFTER THE EXACT LOCATION OF THE PIPELINE IS VERIFIED VISUALLY, MECHANICAL EXCAVATION IS ALLOWED UP TO 1m FROM THE PIPELINE. WITHIN 1m, ONLY HAND DIGGING OR HYDRO–EXCAVATION IS ALLOWED.
2. PVC PIPE FOR PIPELINE CROSSING TO BE DR35, CSA B182.2
3. EXISTING PARKER DRAIN TO BE ABANDONED IN PLACE FROM STA. 1+988 to 2+032. TILE TO BE CAPPED ON BOTH ENDS AND AT 2+011± WHERE NEW DRAIN WILL CROSS THROUGH.
4. NEW PARKER DRAIN BETWEEN STA. 1+988 TO 2+032 (UNDERNEATH) TO BE INSTALLED AS PER OPSD 802.030. PARKER DRAIN PIPE BEDDING AND COVER MATERIAL TO BE GRANULAR A. IN THIS SECTION, BACKFILL MATERIAL UNDERNEATH ENBRIDGE GAS PIPES TO BE COMPACTED TO 95% STANDARD PROCTOR DENSITY. SAND PADDING MUST BE PLACED TO A LEVEL 150mm ABOVE AND BELOW THE GAS PIPE.
5. BACKFILL MATERIAL ABOVE PIPES TO BE NATIVE, ENSURING NO LARGE ROCKS ARE PLACED NEAR THE PIPELINE.
6. SEE CROSS SECTIONS THIS DRAWING FOR LOCATIONS OF DRAIN TO BE CROSSED UNDERNEATH ENBRIDGE 26" & 36" GAS LINES.

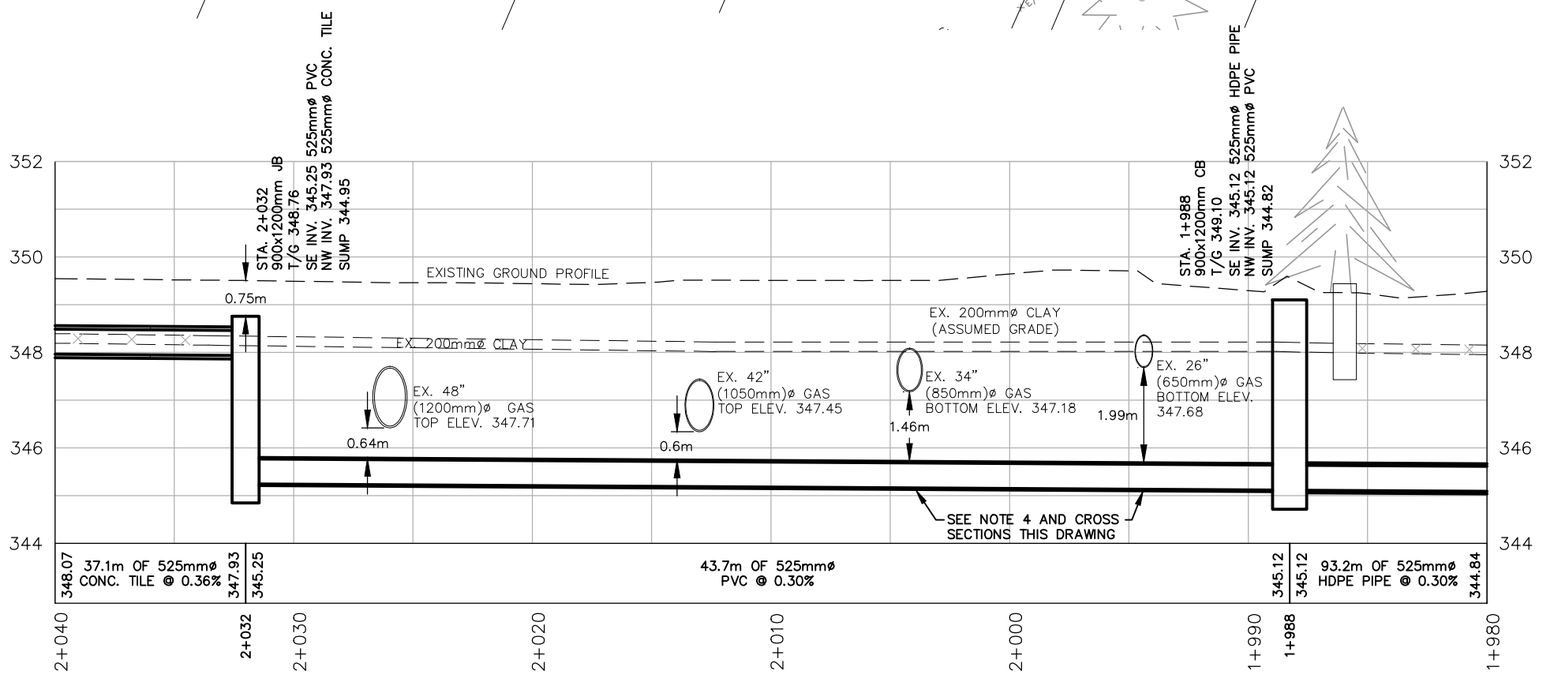



STA. 2+004 (34" CROSSING)




STA. 1+994 (26" CROSSING)

0 1.5 3m
SCALE 1 : 150 (FOR SECTIONS ONLY)




| | |
|---|---|
| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER
C. J. MACINTYRE
100507574
FEB 3, 2022
PROVINCE OF ONTARIO

0 2.5 5m
( SCALE 1 : 250 )
HORZ.
0 1.25 2.5m
( SCALE 1 : 125 )
VERT.
SCALE (ON 11x17)

# PARKER DRAIN 2022

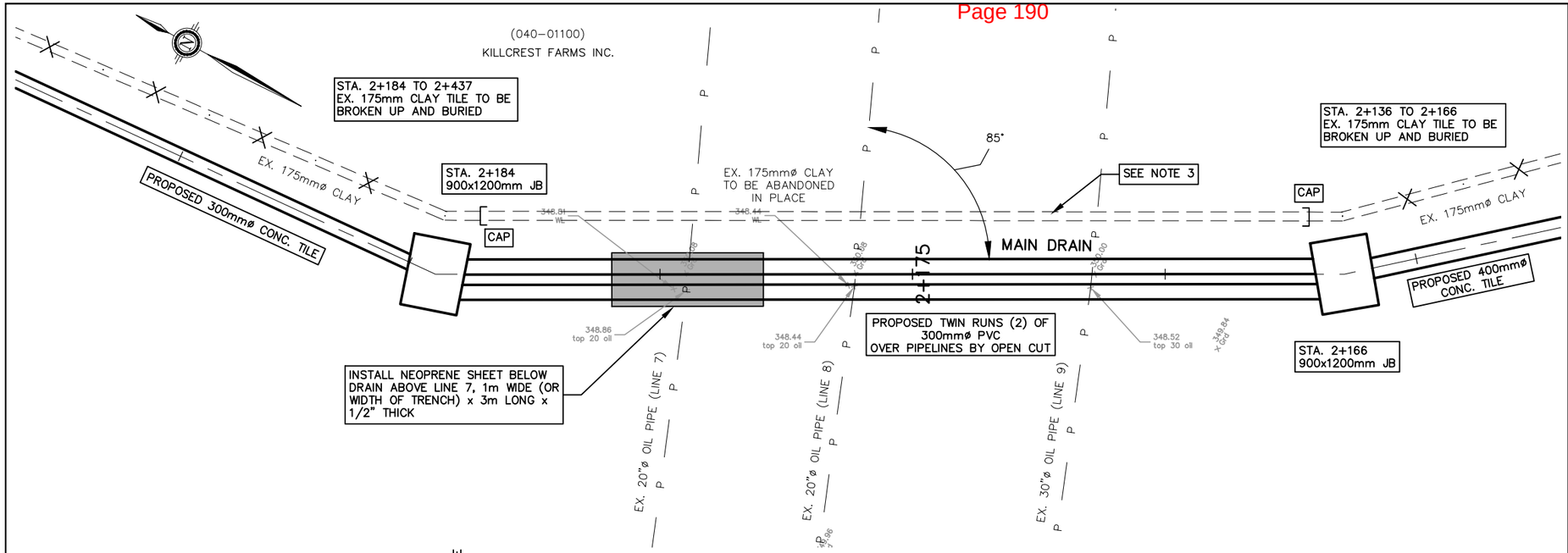
COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA–TAVISTOCK

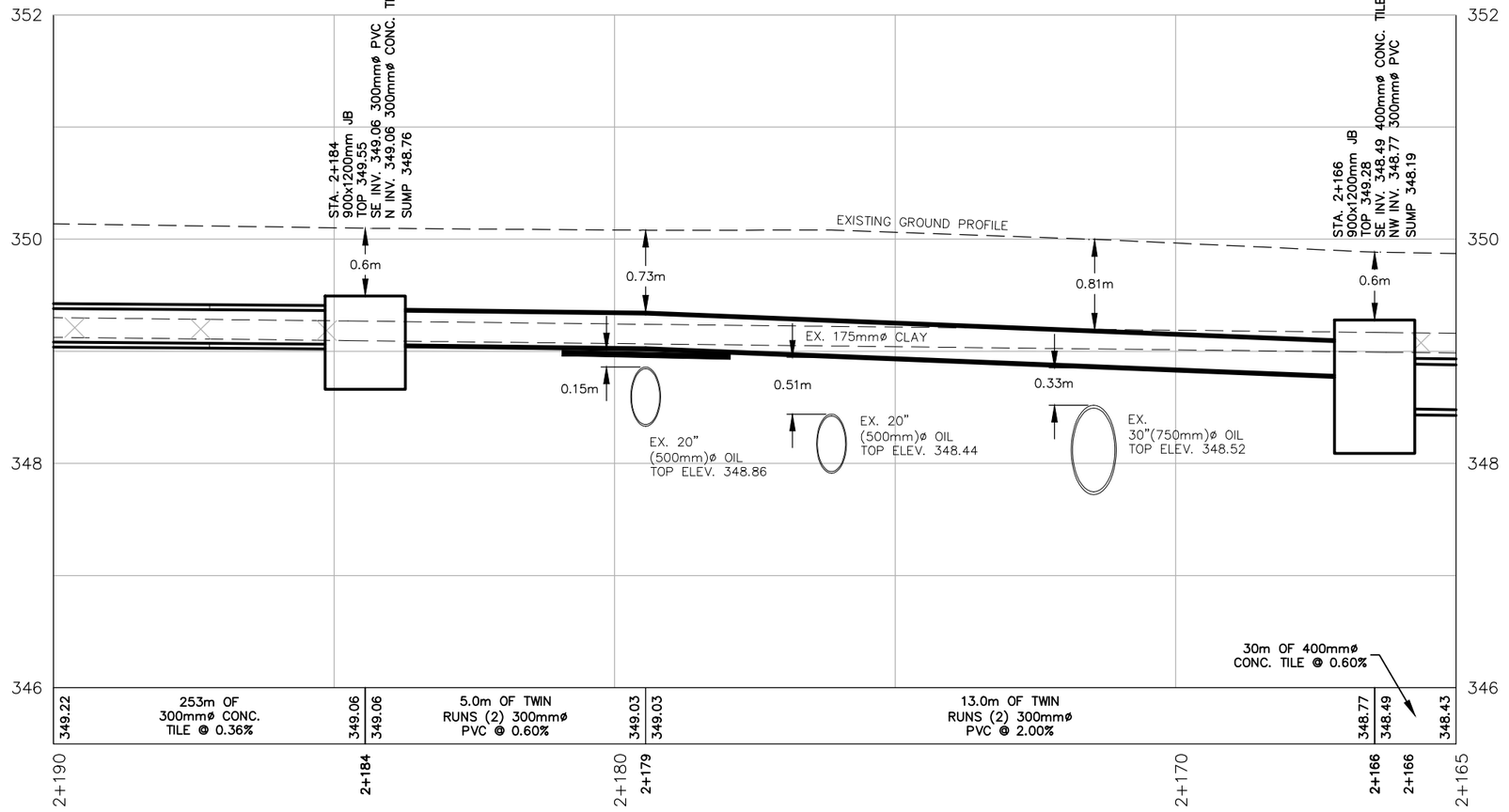
**ENBRIDGE GAS INC.**
**TRAFALGAR LINE**
**CROSSING #1 OF 1**

FEB. 3, 2022

**K. SMART ASSOCIATES LIMITED**
CONSULTING ENGINEERS AND PLANNERS
KITCHENER SUDBURY

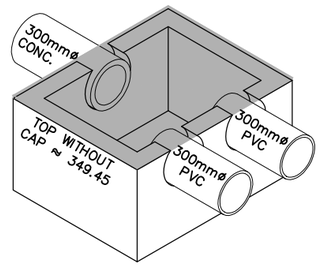
REVISED:
JOB NUMBER: **20–150**
DRAWING
10 OF 21




## NOTES

1. MECHANICAL EXCAVATION IS NOT PERMITTED WITHIN 3m OF THE PIPELINES, UNLESS VERIFIED VISUALLY. AFTER THE EXACT LOCATION OF THE PIPELINE IS VERIFIED VISUALLY, MECHANICAL EXCAVATION IS ALLOWED UP TO 1m FROM THE PIPELINE. WITHIN 1m, ONLY HAND DIGGING OR HYDRO-EXCAVATION IS ALLOWED.
2. PVC PIPE FOR PIPELINE CROSSING TO BE DR35, CSA B182.2
3. LOCATION OF EXISTING PARKER DRAIN (175mm CLAY TILE) UNKNOWN. EXISTING TILE TO BE LOCATED OUTSIDE PIPELINES, CAPPED AT EACH END AND ABANDONED IN PLACE FROM STA. 2+166 to 2+184, OR REMOVED IF IN LOCATION OF PROPOSED DRAIN.
4. NEW PARKER DRAIN BETWEEN STA. 2+166 TO 2+184 (ABOVE) TO BE INSTALLED ON 100mm OF GRANULAR A BEDDING.
5. BACKFILL MATERIAL ABOVE PIPES TO BE NATIVE, ENSURING NO LARGE ROCKS ARE PLACED NEAR THE PIPELINE.
6. SUPPLIER OF SUCCESSFUL BIDDER IS TO PROVIDE SHOP DRAWINGS FOR STRUCTURES AT STA. 2+166 AND 2+184 THAT PROVIDE A MINIMUM OF 0.5m OF COVER. IF CONFIGURATION WITH CONCRETE LID AS DEPICTED BELOW DOES NOT PROVIDE SUFFICIENT COVER THEN AN ALTERNATIVE LID USING 1" THICK A36 STEEL PLATE COULD BE DISCUSSED (CONTINGENCY). STEEL PLATE WOULD REQUIRE ANGLE IRONS (300mm± IN LENGTH) WELDED TO THE BOTTOM SIDE TO AVOID SHIFTING ON CATCHBASIN AND HOOKS WELDED ONTO END OF PLATE FOR LIFTING




**STA. 2+184: 900x1200mm JB**
NOT TO SCALE

| | |
|---|---|
| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER
C. J. MACINTYRE
100507574
FEB 3, 2022
PROVINCE OF ONTARIO

0 1 2m
( SCALE 1 : 100 ) HORZ.
0 0.5 1m
( SCALE 1 : 50 ) VERT.
SCALE (ON 11x17)

# PARKER DRAIN 2022

COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA-TAVISTOCK

**ENBRIDGE PIPELINES INC.**
**LINES 7-9**
**CROSSING #1 OF 2**

FEB. 3, 2022

**K. SMART ASSOCIATES LIMITED**
CONSULTING ENGINEERS AND PLANNERS
KITCHENER SUDBURY

REVISED:
JOB NUMBER: **20-150**
DRAWING
11 OF 21

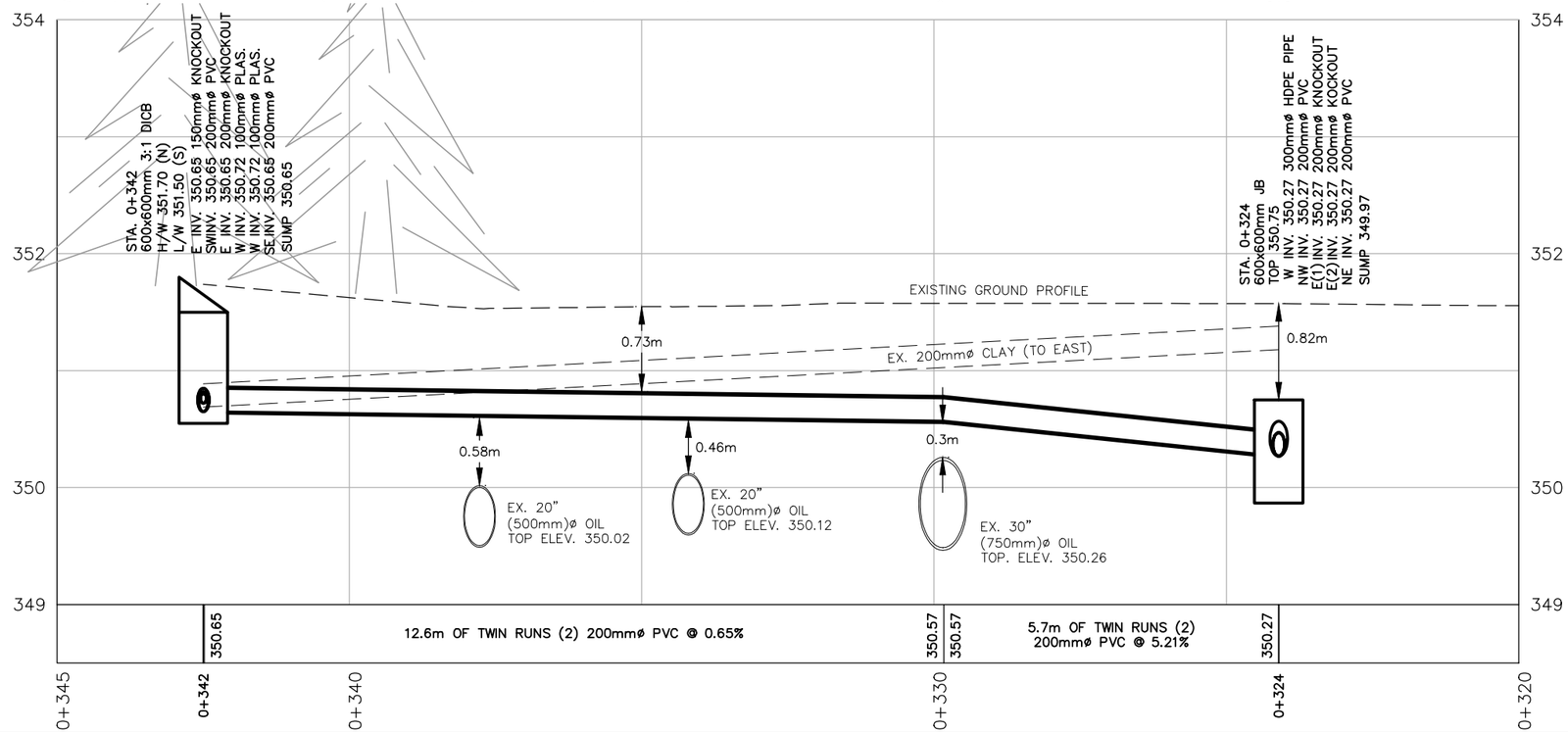
S:\2020\20-150\Drafting\PROFILE 20-150.dwg Enbridge Pipelines Line 7-9 (1) 3-Feb-22 2:01:52 PM

STA. 0+342
REMOVE & DISPOSE OF EX. CB, CAP EX. 175mmø CLAY TILE TO NORTH AND CONSTRUCT NEW 600x600mm DICB. GRADE AREA SOUTH OF DICB FROM E/FIELD TO LOW WALL. CONNECT TWO (2) EX. 100mmø PLAS. PIPES ON W. SIDE OF NEW DICB WITH 2–4m LENGTHS OF 100mmø PLAS. TUBING

STA. 0+342 – CONTINGENCY:
CONNECT EX. 200mmø & 150mmø CLAY TO E. SIDE OF NEW DICB WITH 4m 150mmø & 200mmø PLAS. TUBING IF NOT LOCATED AND CONNECTED AT 0+324

STA. 0+324
LOCATE EXISTING 200mmø AND 150mmø CLAY TILES SOUTH SIDE OF PIPELINES AND CONNECT EACH TO 600x600mm JB WITH APPROXIMATELY 12m OF 200mmø PLASTIC TUBING (TOTAL 24m).

EX. 200mmø CLAY (PRIVATE)
EX. 150mmø CLAY (PRIVATE)
90°
350.26 top 30 oil
350.12 top 20 oil
STA. 0+342 600x600mm DICB
(040–02300)
D. & K. DODD
CAP
BRANCH C
STA. 0+324 600x600mm JB
0+342
0+325
PROPOSED TWIN RUNS (2) OF 200mmø PVC OVER PIPELINES BY OPEN CUT
EX. 175mmø CLAY TO BE ABANDONED IN PLACE (PARKER DRAIN 1901)
E/FIELD
APPROX. P/L
EX. 100mmø PLAS. (PRIVATE)
EX. 100mmø PLAS. (PRIVATE)
EX. 600x600mm CB
T/G 352.14m
N/W INV. 350.65m 200mmø CLAY OUT
S/E INV. 350.68m 200mmø CLAY IN
S/E INV. 350.74m 150mmø CLAY IN
S/W INV. 350.79m 100mmø PLASTIC OUT
S/W INV. 350.74m 100mmø PLASTIC OUT
TOP SEDIMENT 350.60m
W/L 350.73m
EX. 20"ø OIL PIPE (LINE 7)
EX. 20"ø OIL PIPE (LINE 8)
EX. 30"ø OIL PIPE (LINE 9)
351.54 x TREELINE
STA. 0+339
INCIDENTAL CLEARING OF 1 TREE FOR DICB & TILE CONSTRUCTION. TO BE HAULED AWAY UNLESS OTHER ARRANGEMENTS MADE WITH LANDOWNER
PROPOSED 300mmø HDPE PIPE
(040–02200)
STIEK FARMS INC.




NOTES

1. MECHANICAL EXCAVATION IS NOT PERMITTED WITHIN 3m OF THE PIPELINES, UNLESS VERIFIED VISUALLY. AFTER THE EXACT LOCATION OF THE PIPELINE IS VERIFIED VISUALLY, MECHANICAL EXCAVATION IS ALLOWED UP TO 1m FROM THE PIPELINE. WITHIN 1m, ONLY HAND DIGGING OR HYDRO–EXCAVATION IS ALLOWED.
2. PVC PIPE FOR PIPELINE CROSSING TO BE DR35, CSA B182.2
3. NEW PARKER DRAIN BETWEEN STA. 0+324 TO 0+342 (ABOVE) TO BE INSTALLED ON 100mm OF GRANULAR A BEDDING.
4. BACKFILL MATERIAL ABOVE PIPES TO BE NATIVE, ENSURING NO LARGE ROCKS ARE PLACED NEAR THE PIPELINE.

| | |
|---|---|
| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER
C. J. MACINTYRE
100507574
FEB. 3, 2022
PROVINCE OF ONTARIO

0 1 2m
( SCALE 1 : 100 ) HORZ.
0 0.5 1m
( SCALE 1 : 50 ) VERT.
SCALE (ON 11x17)

# PARKER DRAIN 2022

COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA–TAVISTOCK

**ENBRIDGE PIPELINES INC.**
**LINES 7-9**
**CROSSING #2 OF 2**

FEB. 3, 2022

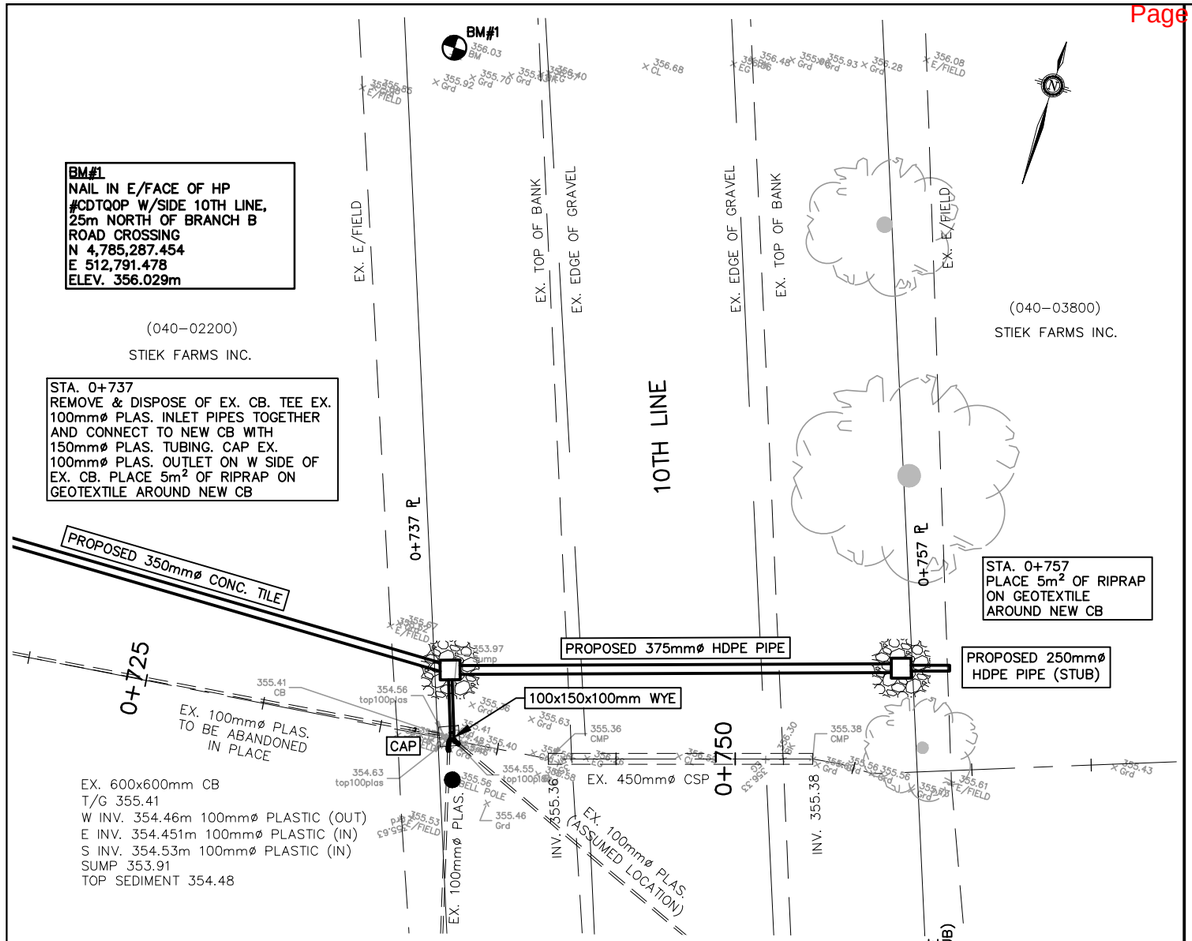
REVISED:

**K. SMART ASSOCIATES LIMITED**
CONSULTING ENGINEERS AND PLANNERS
KITCHENER — SUDBURY

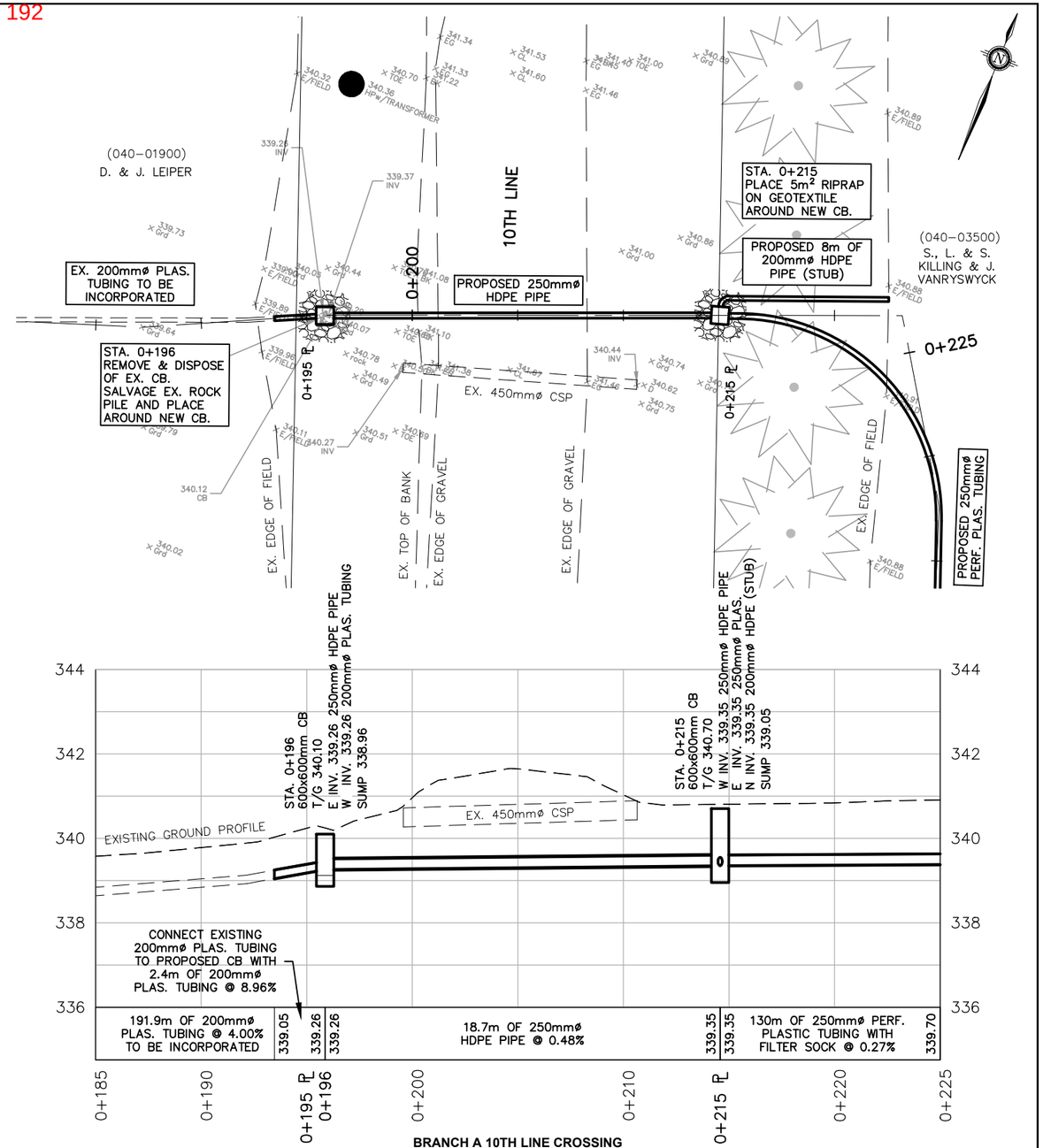
JOB NUMBER: **20–150**

DRAWING
12 OF 21

S:\2020\20–150\Drafting\PROFILE 20–150.dwg Enbridge Pipelines Line 7–9 (2) 3–Feb–22 2:02:14 PM




BRANCH B 10TH LINE CROSSING




BRANCH A 10TH LINE CROSSING

# PARKER DRAIN 2022

COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA-TAVISTOCK

**BRANCH B 10TH LINE CROSSING & BRANCH A 10TH LINE CROSSING**

FEB. 3, 2022

| | |
|---|---|
| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER — C. J. MACINTYRE — 100507574 — FEB 3, 2022 — PROVINCE OF ONTARIO

0 2.5 5m (SCALE 1 : 250) HORZ.

0 1.25 2.5m (SCALE 1 : 125) VERT.

SCALE (ON 11x17)

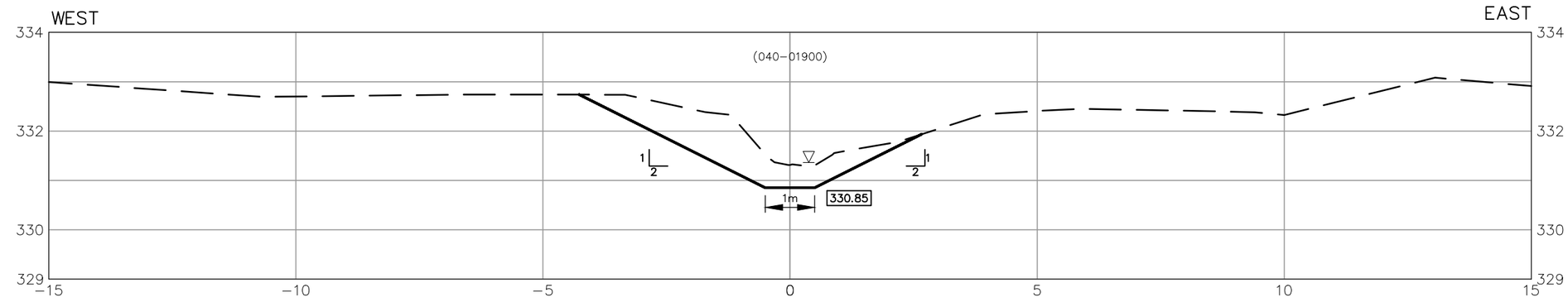
K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS AND PLANNERS
KITCHENER SUDBURY

REVISED:

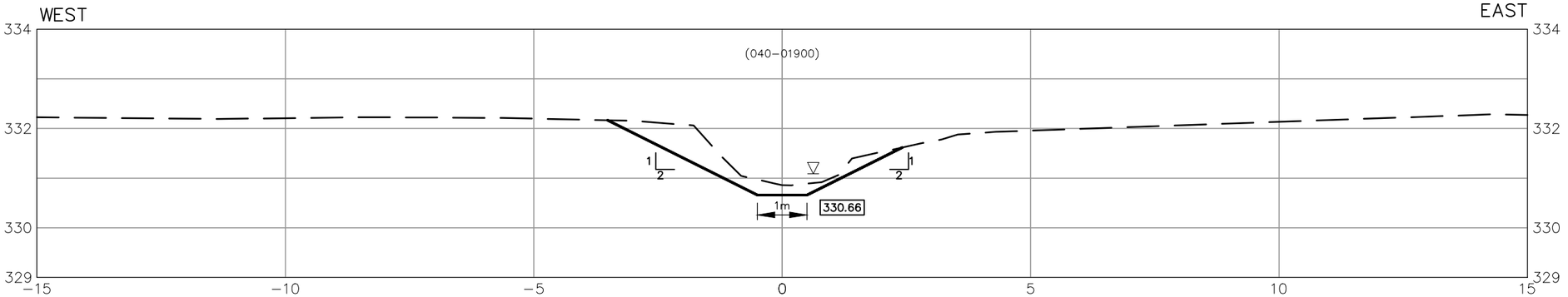
JOB NUMBER: 20-150

DRAWING 13 OF 21

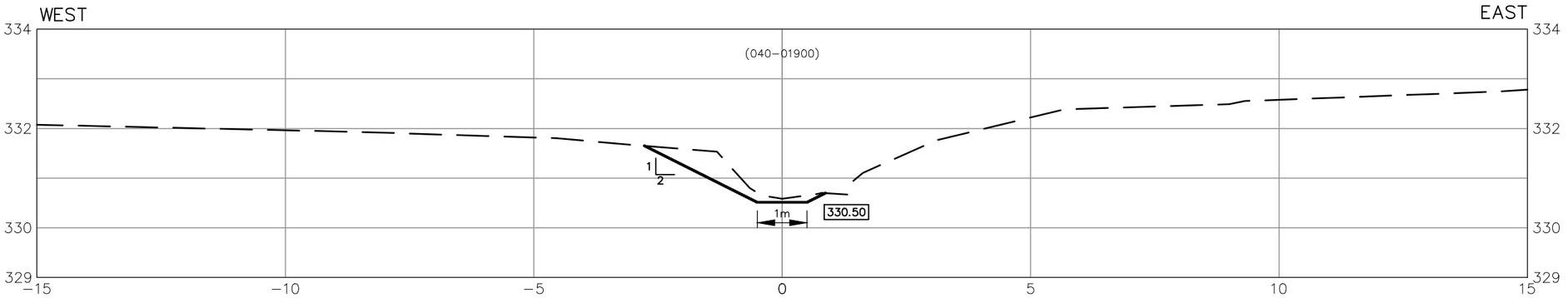
S:\2020\20-150\Drafting\PROFILE 20-150.dwg ROAD CROSSING DETAILS 3-Feb-22 2:02:54 PM




STA. 0+153




STA. 0+100




STA. 0+050

| | |
|---|---|
| DESIGNED BY: | C.J.M. |
| CHECKED BY: | C.J.M. |
| DRAWN BY: | A.M.P. |
| CHECKED BY: | C.J.M. |

LICENSED PROFESSIONAL ENGINEER
C. J. MACINTYRE
100507574
FEB 3, 2022
PROVINCE OF ONTARIO

SCALE
0 1 2m
( SCALE 1 : 100 )
HORZ.
(ON 11x17)

# PARKER DRAIN 2022

COUNTY OF OXFORD — TOWNSHIP OF EAST ZORRA–TAVISTOCK

**MAIN DRAIN CROSS SECTIONS** — FEB. 3, 2022

K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS AND PLANNERS
KITCHENER — SUDBURY

REVISED:
JOB NUMBER: 20–150
DRAWING 14 OF 21

S:\2020\20–150\Drafting\PROFILE 20–150.dwg CROSS SECTIONS 3–Feb–22 2:03:07 PM

## 300) CONSTRUCTION NOTES (SPECIAL PROVISIONS)

### 300.1) CONSTRUCTION SPECIFICATIONS - SPECIFIC NOTES

***i) MAIN DRAIN***

*D. & J. Leiper (Roll No. 040-01900)*

0+000 to 0+012
- Remove and dispose of existing 1200mm dia. CSP. Install 12m length of 1600mm dia. galvanized CSP, 2.8mm thickness, 125x25mm corrugations (see Drawing 6).
- Bedding & Backfill for this crossing:
  - Bedding to be 150mm granular A, shaped for pipe.
  - Pipe to be backfilled with 150mm granular A to ½ diameter of the culvert, compacted under haunches.
  - Remaining backfill to be native material.
- Restore gravel laneway to existing conditions, including any damages made to the portion of the laneway from the road used for construction access.
- Place 10m$^2$ of riprap on geotextile at each end of new culvert (20m$^2$ total).

0+012 to 0+070
- 58m of ditch cleanout (1.0m bottom, 2:1 side slopes).
- Verify side for levelling with landowner (applies to next note).

0+070 to 0+164
- 94m of ditch excavation (1.0m bottom, 2:1 side slopes).

0+164 to 0+179
- Construct permanent stilling pool (350m³) (see Drawing 6).
- Place 25m² of new riprap on geotextile around outlet pipes (Sta. 0+179). Salvage and re-use existing rock around edges in stilling basin.
- Seed banks of stilling basin.

0+179 to 0+185
- Install 6m of 600mm dia. solid plastic pipe (HDPE) with rodent gate at outlet.
- Remove existing CSP outlet pipe and install 6m of 375mm dia. solid plastic pipe (HDPE) pipe with rodent gate at outlet.

0+185 to 0+511
- Install 326m of 600mm (24") dia. concrete tile with joint wrap.
- Existing 350mm (14") dia. concrete tile (1966) to remain in place, but abandoned of status under the Act.

0+510
- Repair existing berm to existing conditions. Existing 50m long berm to be incorporated. Seed berm.

0+511
- Construct 900 x 1500mm concrete DICB including connections and birdcage grate. Also includes removal of existing 600 x 600mm DICB (see Drawing 6).

*Spero Holsteins Ltd. (Roll No. 040-00800)*

0+511 to 0+697
- Install 186m of 600mm (24") dia. concrete tile with joint wrap.
- Existing 350mm (14") dia. concrete tile (1966) to remain in place, but abandoned of status under the Act.

0+697
- Construct 900 x 1500mm concrete JB, including connections and concrete top. Also includes removal of existing 600 x 600mm DICB (see Drawing 7).
- Existing berm to be removed. Spread material on downstream side of new JB.

0+697 to 0+857
- Install 160m of 600mm (24") dia. concrete tile with joint wrap
- Existing 350mm (14") dia. concrete tile (1966) to remain in place, but abandoned of status under the Act.

0+856
- Use existing partial berm to construct 75m long new berm (0.5m top width, 2:1 side slopes). Height of existing berm at proposed CB is at design elevation. Some existing sections above design elevation can be cut down to extend berm to design length. Seed berm.

0+857
- Construct 900 x 1500mm concrete DICB, including connections and birdcage grate. Also includes removal of existing 600 x 600mm CB (see Drawing 7).

*Townsend Farms Inc. (Roll No. 040-02100)*

0+857 to 1+075
- Install 218m of 600mm (24") dia. concrete tile with joint wrap
- Existing 350mm (14") dia. concrete tile (1966) to remain in place, but abandoned of status under the Act.

1+075
- Construct 900 x 1500mm concrete JB, including connections and concrete top. Also includes removal of existing 600 x 600mm DICB (see Drawing 7).
- Existing berm to be removed. Spread material around low areas. Rocks to be moved to berm at Sta. 1+260 unless other arrangements made with owner.

1+075 to 1+260
- Install 185m of 600mm (24") dia. concrete tile with joint wrap. Includes breaking up and burying existing 250mm dia. concrete tile (1901).

1+257
- Repair berm to existing conditions. Extend both ends of berm, 10m of west end and 16m on east end using 2 truckloads of imported clay material as per detail on Drawing 8. Seed berm.

1+260
- Construct 900 x 1200mm concrete CB including connections and birdcage grate. Also includes removal of existing 600 x 600mm DICB (see Drawing 8).

1+260 to 1+633
- Install 373m of 600mm (24") dia. concrete tile with joint wrap. Includes breaking up and burying existing 200/250mm dia. concrete tile (1901).

1+631
- Construct 30m of new berm as per detail (0.5m top width, 2:1 side slopes) (see Drawing 8). Seed berm.

1+633
- Construct 900 x 1200mm concrete CB including connections and birdcage grate. Also includes removal of existing 600 x 600mm CB (see Drawing 8).

*Stiek Farms Inc. (Roll No. 040-02200)*

1+633 to 1+833
- Install 200m of 600mm (24") dia. solid plastic pipe (HDPE). Includes breaking up and burying existing 200mm dia. clay tile (1901).

1+832
- Construct 30m of new berm as per detail (0.5m top width, 2:1 side slopes) (see Drawing 9). Seed berm.

1+833
- Construct 900 x 1200mm concrete CB, including connections and birdcage grate (see Drawing 9).

*J. & B. Walton (Roll No. 040-01001)*

1+835
- Incidental clearing of 1-2 trees for tile and CB installation. To be hauled away unless other arrangements made with owner

1+833 to 1+988
- Install 155m of 525mm (21") dia. solid plastic pipe (HDPE). Includes breaking up and burying existing 200mm dia. clay tile (1901).

1+984
- Construct 20m of new berm as per detail (0.5m top width, 2:1 side slopes) (see Drawing 10). Seed berm.

1+988
- Construct 900 x 1200mm concrete CB, including connections and birdcage grate. Also includes removal of existing 600 x 600mm CB (see Drawing 10).
- Incidental clearing of 1-2 trees for tile and CB installation. To be hauled away unless other arrangements made with owner.

*Killcrest Farms Inc. (Roll No. 040-01100)*

1+988 to 2+032
- Existing 200mm dia. clay tile (1901) to be abandoned in place. Tile to be capped on both ends and at 2+011 where new drain will cross through (see Drawing 10).
- Locate, expose and protect 4 Enbridge natural gas pipelines with extreme caution. Drain construction to proceed underneath of pipelines, consult Enbridge representative on site and additional notes on Drawing 10.
- Install 44m of 525mm dia. PVC pipe crossing beneath four (4) Enbridge Natural Gas Pipelines by open cut. See additional notes on Drawing 10 for bedding and backfill around drain and pipelines.
- Bedding & Backfill for this crossing as per OPSD 802.030. See additional notes on Drawing 10.

2+032
- Construct 900 x 1200mm concrete JB, including connections and concrete top.

2+032 to 2+136
- Install 104m of 525mm (21") dia. concrete tile with joint wrap. Includes breaking up and burying existing 200mm dia. clay tile (1901).

2+136
- Construct 900 x 1200mm concrete CB, including connections and birdcage grate. Also includes removal of existing 600x600mm CB (see Drawing 9).

2+136 to 2+166
- Install 30m of 400mm (16") dia. concrete tile with joint wrap. Includes breaking up and burying existing 175mm dia. clay tile (1901).

2+166
- Construct 900 x 1200mm concrete JB, including connections and concrete top – subject to shop drawings prepared by supplier (see Drawing 11). Contingency for steel lid may apply.

2+166 to 2+184
- Location of existing 175mm dia. clay tile unknown. Existing tile to be located outside pipelines, capped at each end and abandoned in place. If existing tile is in the location of the proposed drain then the tile is to be removed.
- Locate/daylight and protect three (3) Enbridge Pipelines Inc. (oil) pipelines with extreme caution as required by Enbridge

representative on site for drain to be constructed overtop. See Additional notes on Drawing 11.
- 18m of twin runs (2) of 300mm dia. PVC pipe crossing above three (3) Enbridge Oil Pipelines by open cut.
- Bedding to be 100mm granular A, backfill to be native material. See additional notes on Drawing 11.

2+184 - Construct 900 x 1200mm concrete JB, including connections and concrete top – subject to shop drawings prepared by supplier (see Drawing 11). Contingency for steel lid may apply.

2+184 to 2+437 - Install 253m of 300mm (12") dia. concrete tile with joint wrap. Includes breaking up and burying existing 175mm dia. clay tile (1901).

2+436 - Grade small (10m long x 100-150mm high) berm as per detail. Seed berm.

2+437 - Construct 600 x 600mm concrete CB, including connections and birdcage grate (see Drawing 9).
- Existing 175mm dia. clay tile to be abandoned in place upstream.

***ii) BRANCH A***

*0+000 to 0+345 - See Drawing 4 and 13.*

*D. & J. Leiper (Roll No. 040-01900)*

0+000 to 0+196 - No work required. Existing 190m of 200mm (8") dia. perforated plastic tubing and 6m of plastic outlet pipe to remain and to be incorporated as part of the Drain.

*10th Line (Township of East Zorra-Tavistock)*

0+196 - Construct 600 x 600mm concrete CB including placing salvaged existing rock, connections and birdcage grate, on west side of the road. Also includes removal of existing 600 x 600mm CB (see Drawing 13).
- Connect existing 200mm tile to new CB with 2m of 200mm dia. plastic tubing.

0+196 to 0+215 - Install 19m of 250mm (10") dia. solid plastic pipe (HDPE) across 10th Line by open cut including full granular backfill and road restoration (see Drawing 13 & detail on Drawing 17).
- Bedding & Backfill for this crossing:
  - Bedding to be 150mm granular A, shaped for pipe.
  - Pipe and excavation to be fully backfilled with granular B, compacted under haunches.
  - 150mm of granular A at road surface (see detail on Drawing 17).

0+215 - Construct 600 x 600mm concrete CB including 5m$^2$ riprap on geotextile, 8m stub of 200mm dia. HDPE, birdcage grate and connections on east side of road

*S., L. & S. Killing and J. Vanryswick (Roll No. 040-03500)*

0+215 to 0+345 - Install 130m of 250mm (10") dia. perforated plastic tubing

0+345 - Construct 600 x 600mm CB including birdcage grate and connections.
- Construct 10m of new berm as per detail (0.5m top width, 2:1 side slopes) (see Drawing 4). Seed berm.

***iii) BRANCH B***

*Stiek Farms Inc. (Roll No. 040-02200)*

0+000 to 0+080 - Install 80m of 350mm (14") dia. concrete tile with joint wrap.

0+080 to 0+347 - Install 267m of 375mm (15") dia. solid plastic pipe (HDPE).

0+347 - Construct 600 x 600mm JB including connections and concrete top.

0+347 to 0+737 - Install 390m of 350mm (14") dia. concrete tile with joint wrap.

0+390 & 0+478 - Remove two (2) existing tree stumps on drain alignment for installation of drain.

*10th Line (Township of East Zorra-Tavistock)*

0+737 - Construct 600 x 600mm concrete CB including 5m$^2$ riprap on geotextile, connections and birdcage grate, on west side of the road. Also includes removal of existing 600 x 600mm CB (see Drawing 13).
- Connect existing 100mm tiles (2) to new 100x100x150mm tee and connect to south wall of new CB with 150mm plastic tubing.

0+737 to 0+757 - Install 20m of 375mm (15") dia. solid plastic pipe (HDPE) across 10th Line by open cut including full granular backfill and road restoration (see Drawing 13 & detail on Drawing 17).
- Bedding & Backfill for this crossing:
  - Bedding to be 150mm granular A, shaped for pipe.
  - Pipe and excavation to be fully backfilled with granular B, compacted under haunches.
  - 150mm of granular A at road surface (see detail on Drawing 17).

0+757 - Construct 600 x 600mm concrete CB including 5m$^2$ riprap on geotextile, 2m stub of 250mm dia. HDPE, connections and birdcage grate, on east side of the road.

***iv) BRANCH C***

*Killcrest Farms Inc. (Roll No. 040-01100)*

0+000 to 0+192 - Install 192m of 300mm (12") dia. solid plastic pipe (HDPE).

*Stiek Farms Inc. (Roll No. 040-02200)*

0+192 to 0+324 - Install 132m of 300mm (12") dia. solid plastic pipe (HDPE).

0+324 - Construct 600 x 600mm concrete JB including connections and concrete top.

0+324 to 0+342 - Locate/daylight and protect three (3) Enbridge Pipelines Inc. (oil) pipelines with extreme caution as required by Enbridge representative on site for drain to be constructed overtop. See Additional notes on Drawing 12.
- Install 18m of twin runs (2) of 200mm PVC pipe crossing above three (3) Enbridge Oil Pipelines by open cut.
- Bedding to be 100mm granular A, backfill to be native material. See additional notes on Drawing 12.

0+342 - Construct 600 x 600mm concrete DICB, including birdcage grate and connections. Also includes removal of existing 600 x 600mm CB.
- Incidental clearing of 1 tree for tile and DICB installation. To be hauled away unless other arrangements made with owner.

**300.2) CONSTRUCTION SPECIFICATIONS – GENERAL NOTES**

**1. Working Area**

For a closed drain up to 2.5m deep the working area shall be a 12.5m width on either side of the trench or any combination not exceeding 25m.
For closed drains deeper than 2.5m the working area shall be increased to 30m.
Specifically, this includes the HDPE/PVC pipe installation in the following areas:

- Main Drain: Stiek Farms Inc. (Sta. 1+633 to 1+832)
- Main Drain: J. & B. Walton (Sta. 1+832 to 1+988)
- Main Drain: Killcrest Farms Inc. (Trafalgar Line Crossing)
- Branch B: Stiek farms Inc. (Sta. 0+125± to 0+250±)
- Branch C: Killcrest Farms Inc. (Sta. 0+075 to 0+192 ±)

**2. Access**

Access to the working area shall be from road allowances and as designated on the drawings and/or specific notes. No other access routes shall be used unless first approved by the Engineer and the affected landowner. Specifications related to construction will apply to the access routes. Contractor shall make good any damages caused by using the designated access routes. The Contractor shall contact each owner prior to commencing construction on each property.

| Roll No. | Owner | Phone No. |
|---|---|---|
| 040-00800 | Spero Holsteins Ltd. | |
| 040-01001 | J. & B. Walton | **To Be** |
| 040-01100 | Killcrest Farms Inc. | **Provided at** |
| 040-01900 | D. & J. Leiper | **Pre-Construction** |
| 040-02100 | Townsend Farms Inc. | **Meeting** |
| 040-02200 & 040-03800 | Stiek Farms Inc. | |
| 040-02300 | D. & K. Dodd | |
| 040-03500 | S., L. & S. Killing and J. VanRyswyck | |
| | Enbridge Gas Inc. | 519-683-4468 |
| | Enbridge Pipelines Inc. | 519-332-4707 |
| | Twp of East Zorra-Tavistock | 519-462-2697 |
| Engineer | Curtis MacIntyre, P.Eng. (KSAL) | office and cellphone: 519-748-1199 x252 |

**3. Pre and Post Construction Meetings**

The Contractor may be required to attend pre-and post-construction site meetings with the Engineer and landowners before starting and after finishing the work if requested.

**4. Pre-locates**

Cross trenches to be dug along entire length of Main Drain route at 100 to 200m intervals (minimum) prior to commencing construction so that true alignment of new drain may be established alongside existing drain without cutting off private lateral tiles. The frequency of pre-locating will depend on the alignment of the existing drains. More pre-locates will be necessary in a meandering route than in a route that is consistently straight.

**5. Tile Drain Work**

Refer to Specific Notes and 420 – Standard Specifications for Tile Drains.

**TYPICAL NOTES FOR EACH NEW TILE LENGTH**

1. Maintain all existing headers. Locate as part of *"4. Pre-locates"*

2. Ensure any connections to the old drain are connected/outletted to the new drain. All intercepted lateral tile are to be flagged so the Engineer can GPS.
3. On straight runs, ensure tile joints are parallel (maximum 12mm (½") gap), and tile wrap is flat, covers joint evenly and has overlap.
4. On curved runs, ensure tile joints are touching on one side with maximum gap of 12mm (½") on opposite side. Bevel cut tile or use elbow sections where curves are greater. Tile wrap to be flat, cover joints evenly and have overlap.
5. Test holes completed during design indicate very few stones will be encountered and that trench bottom conditions should be generally good throughout. As a result, tender prices for new tile are to be submitted for installation by tiling machine, except for portions of proposed HDPE/PVC pipe.
6. If stones however are found after doing the tile locate work and/or at the time of installation, of such size and or at such depths, or if soft or unstable soils are found at invert grade, that make backhoe methods necessary vs tiling machine usage, the contingency rates (either with or without stone bedding) will be applied.

**6. Concrete Tile Installation**

New tile to be installed by tiling (wheel) machine with joints tightly wrapped and topsoils to be separately stripped and replaced to width of machine plus width of spoil pile. For further materials information, refer to Standard Specification for Construction of Drains, Section 400.15.1. For information regarding installation procedure of concrete tile, refer to Standard Specification for Tile Drains, Section 420.3.5.1.

If backhoe methods are approved by engineer, the following shall be attended to: additional topsoils may need to be stripped and replaced, a shaped bottom to be provided and careful tamping around the tile is necessary. Final excavation to grade to be by hand and a shaped bottom to be provided. The Engineer may require a thin lift of stone bedding also as part of usage of backhoe if the native ground/shaped bottom is not satisfactory for long term integrity of the tile.

**7. Solid Plastic Pipe or High Density Polyethylene Pipe (HDPE)**

Solid plastic pipe to be high density polyethylene (HDPE) double wall (corrugated on the outside and smooth wall on the inside), such as BOSS 2000 Series 320 kPa or equal. Pipe material shall conform to CSA B182.8. Refer to Standard Specification for Tile Drains, Section 420.3.5.3 for installation on plastic pipe.

**8. Tile Connections**

The Contractor is to verify with each owner prior to starting, any systematic drainage scheme existing on each property and is to make provisions for connecting all headers and laterals.

All subsurface drainage tile encountered along the route of the proposed closed drain are to be connected up to the new drain if the intercepted tile are clean and do not contain polluted water.

All tile connections are to be flagged by the Contractor so the Engineer can GPS the location for future reference. The payment for connections is to be as set out in the tender form.

Refer to Standard Specification of Tile Drains, Section 420.3.7 for further information on tile connections.

**9. Outlet Pipe**

The outlet pipes specified in this report shall have rodent gates secured to them. The rodent gate shall be free moving and as supplied by Coldstream Concrete Products Ltd. or equal. The outlet pipe shall protrude no more than 1.0 metre from the bank and filter fabric and riprap shall be placed around and below the outlet pipe and into the channel bottom, with such riprap being set to be flush with the bank on either side. The discharge from the outlet pipe shall land on the riprap. Outlet pipes are to be a minimum of 6m in length and are to be desirably HDPE plastic pipe Series 210 with equal or larger diameter than the concrete tile.

**10. Catchbasins and Junction Boxes**

Catchbasins shall have secured grates and marker stakes. Grates are to be birdcage grates as manufactured by Coldstream Concrete or approved equal, unless otherwise specified in the Specific Notes. All grates are to be secured with non-corrosive fasteners. Marker stakes as supplied by Coldstream Concrete or equal are to be placed beside each catchbasin.
Backfill around all new catchbasins and junction boxes is recommended to be compacted 19mm clear crushed stone to avoid future settlements and Contractor obligations to repair such and to ensure connected tile has granular backfill.
All catchbasin sumps to be fully cleaned by the Contractor after completion of drain installation and backfilling.

Refer to Standard Specification for Tile Drains, Section 420.3.13 and 420.3.14 for more details.

**11. Utilities**

The Contractor shall arrange with all local utility companies (telephone, gas, hydro) to verify the location of all utilities within road allowances and on private lands. All utilities shall be exposed to the satisfaction of the utility company to verify that their elevations will not conflict with the construction of the drain at the specified elevations. Provisions for protection and relocation of utilities that conflict with the drain as designed will be determined at the time of construction.

Prior to construction, coordination with the engineer will be required to complete the necessary permitting paperwork for Enbridge pipeline crossings and Hydro One transmission line corridor encroachment.

**12. Seeding of Non-Lawn Areas**

For seeding use mechanical (cyclone) spreader (or approved equal) and the following shall apply:
Seed mixture to be applied at 60kg/ha and to be as follows:
i) Ditch banks and roadside ditches
35% Creeping Red Fescue
25% Birdsfoot Trefoil
25% Kentucky Bluegrass
10% Cover Crop (Oats, Rye, Barley, Wheat)
5% White Clover

To provide temporary cover for late fall planting add as additional 10 kg/ha of rye or winter wheat. Areas that remain grassed after excavation may not need to be seeded as directed by the Engineer.
Contractor responsible for additional seeding to provide uniform catch during one year maintenance period.

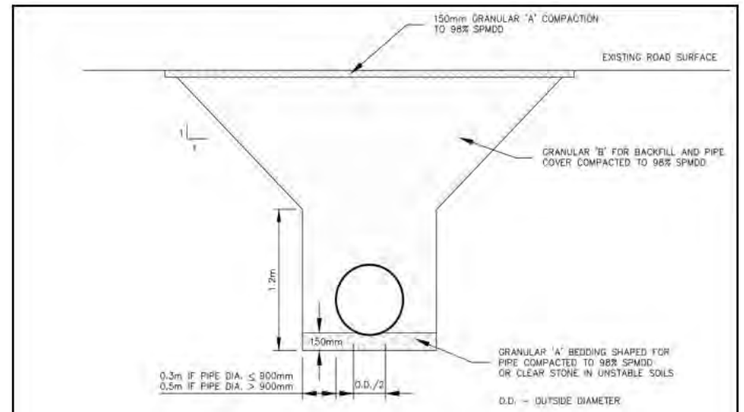
**13. Open Cut Road Crossings (Township Roads)**

The Road Authority is to be given 72 hours' notice of construction within their right-of-way. Proper detour signing in accordance with MTO signing manual to be used where roads are closed or restricted. Contractor is responsible to repair any settlement which occurs within warranty period. The location of the road crossing shall be confirmed with the Engineer and Road Authority prior to excavation. The Trench Detail on this drawing and the special construction notes shall also apply. If the Road Authority requires granular rather than native material backfill where native is allowed on the Trench Detail, additional payment will be allowed. Where granular is shown to be required, such is to be included as part of the tender. All surplus materials are to be hauled away. In the boulevards, topsoils shall be separately stripped and replaced. Seeding is required. All backfill to be compacted to 98% S.P.D. Pipe materials are to be as noted in the specific construction notes. All old crossings are to be located, removed and disposed of. If so noted, some may remain but are to be fully sealed with pumped concrete as part of the tender.

***14. <u>Subsoil Instability</u>***

If poor subsoil conditions are encountered during tile installation by wheel trencher an attempt shall be made to install the tile with a continuous geotextile underlay in the trench bottom. The cost of the underlay, if approved by the engineer, will be paid as an extra.
If the continuous geotextile underlay is not sufficient then the tile will be installed by backhoe or excavator on a bedding of 19mm clear crushed stone (300mm depth to achieve trench bottom stability for the new tile. If approved, the above work will be paid based on the unit price provided on the Form of Tender. The unit price shall include the cost to supply and place the stone. If more than 300mm depth of stone is required for bottom stability, additional payment will be allowed for the additional depth of stone. The additional quantity of stone shall be supported by weight tickets and the suppliers invoice.

*The test hole investigation completed generally did not identify areas of unstable subsoils, with the possible exception of the top end of the Main Drain (Killcrest Farms Inc. property – Testhole #5) & top end of Branch B (Stiek Farms Inc. – Testhole #7). Refer to Drawings 18-21 for photos and descriptions of test holes.*




OPEN CUT ROAD CROSSING DETAIL

NOT TO SCALE

NOTES:
1. BACKFILL AND COMPACTION REQUIREMENTS ALSO APPLY BEYOND THE SHOULDER AT A 1:1 SLOPE DOWN TO THE BOTTOM OF TRENCH EXCAVATION.
2. NEW FROST TAPER NOT REQUIRED UNLESS REQUESTED AT TIME OF CONSTRUCTION. BLEND INTO EXISTING TAPERS. IF REQUIRED, TAPERS TO BE IN ACCORDANCE WITH OPSD 803.03 AND ADDITIONAL PAYMENT WILL BE ALLOWED.
3. ALL SURPLUS EXCAVATED MATERIAL TO BE HAULED AWAY.
4. ASPHALT SHALL COMPLY WITH APPLICABLE OPSS MATERIAL SPECIFICATIONS.

K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS AND PLANNERS
KITCHENER SUDBURY

DETAIL DRAWING NO. SD-13

# PARKER DRAIN - TEST HOLE INVESTIGATION
# TOWNSHIP OF EAST ZORRA-TAVISTOCK

## MAP


**TEST HOLE 1 – LEIPER FARM – NEAR PROPOSED TILE DRAIN OUTLET (STA. 0+215)**

- Topsoil depth ~ 500mm
- 0.5 – 1.1m: silty loam material (brown)
- 1.1 – 1.8m: sandy clay material (grey) – this layer is stoney
- No water
- Trench walls holding well

**PARKER DRAIN 2022**

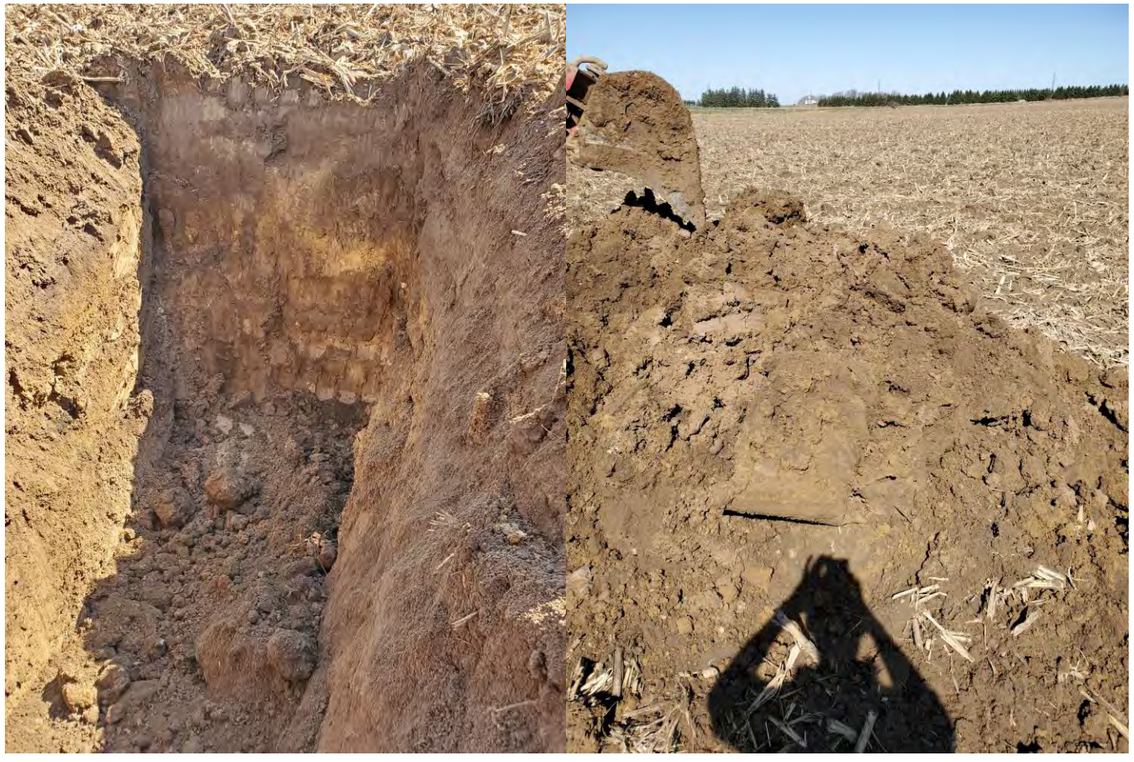
County of Oxford — Township of East Zorra-Tavistock
File No. 20-150 — February 3, 2022
Drawing 18 of 21

**TEST HOLE 2 – SPERO HOLSTEINS LTD. – (~STA. 0+635)**

- Topsoil depth ~ 400mm
- 0.4 – 1.8m: sandy clay material for full trench
- Stoney conditions start at a depth of approx. 0.75m and below
- Relatively dry
- Trench walls holding well

**TEST HOLE 3 – TOWNSEND FARMS INC. #1 – (~STA. 0+870)**

- Topsoil depth ~ 500-600mm
- 0.6 – 1.8m: silty loam material (brown)
- 1.8 – 2.0m: clay
- No water, no stones
- Trench walls holding well



**TEST HOLE 4 – TOWNSEND FARMS INC. #2 – ALONGSIDE BUSH AREA (~STA. 1+525)**

- Topsoil depth ~ 200-250mm
- 0.2 – 1.9m: mix of sandy clay (grey/brown)
- No water, no stones
- Trench walls holding well

**TEST HOLE 5 – KILLCREST FARMS INC. – (~STA. 2+125)**

- Topsoil depth ~ 300mm
- 0.3 – 2.1m: sandy clay material (brown)
- Stoney conditions start at a depth of approx. 1.2m and below
- Soils are damp and some shearing of trench walls occurring
- Trench walls holding okay

**TEST HOLE 6 – STIEK FARMS INC. #1 – (~STA. 0+324 Branch C)**

- Topsoil depth ~ 450-500mm
- 0.45 – 0.9m: silty clay material (grey)
- 0.9 – 1.5m: sandy clay material (brown) – this layer is damp/moist but water not filling in trench
- No stones

**TEST HOLE 7 – STIEK FARMS INC. #2 – (~STA. 0+737 BRANCH B)**

- Topsoil depth ~ 450mm
- 0.45 – 1.5m: mix of grey-brown sandy clay – this layer is saturated
- 1.5m +: wet sand – starting to slump at bottom of trench
- No stones

#5.b

***Community Planning***
*P. O. Box 1614, 21 Reeve Street*
*Woodstock Ontario N4S 7Y3*
*Phone: 519-539-9800 • Fax: 519-421-4712*
*Web site: www.oxfordcounty.ca*

Our File: **A02-22**

## APPLICATION FOR MINOR VARIANCE

**TO:** Township of East Zorra-Tavistock Committee of Adjustment
**MEETING:** April 6, 2022
**REPORT NUMBER:** 2022-125

**OWNERS:** Charmaine & Corey Thoms
86 Lock Street, Innerkip, ON N0J 1M0

**REQUESTED VARIANCES:**

1. Relief from **Section 5.1 - Table 5.1.1.3 - Regulations for Accessory Buildings and Structures**, to permit an accessory structure within an exterior side yard;

2. Relief from **Section 12.2 – R1 Zone Provisions**, to reduce the minimum required exterior side yard width from 6 m (19.7 ft) to 1.2 m (3.9 ft) to facilitate the construction of an accessory structure (above-ground pool); and,

3. Relief from **Section 5.1 - Table 5.1.1.3 – Regulations for Accessory Buildings and Structures**, to reduce the minimum required interior and rear side yard width from 1.2 m (3.9 ft) to 0.7 m (2.2 ft) to facilitate the construction of an accessory structure (shed).

**LOCATION:**

The subject lands are legally described as Lot 12, Plan 41M-325, in the Township of East Zorra-Tavistock. The lands are located on the northwest corner of Lock Street and Jonker Street, and are municipally known as 86 Lock Street in the Village of Innerkip.

**BACKGROUND INFORMATION:**

COUNTY OF OXFORD OFFICIAL PLAN:

| | | |
|---|---|---|
| Schedule ‘C-3’ | County of Oxford Settlement Strategy Plan | Serviced Village |
| Schedule ‘E-1’ | Township of East Zorra-Tavistock Land Use Plan | Settlement |
| Schedule ‘E-3’ | Village of Innerkip Land Use Plan | Low Density Residential |

TOWNSHIP OF EAST ZORRA-TAVISTOCK ZONING BY-LAW 2003-18:

Residential Type 1 Zone (R1)

**COMMENTS:**

(a) Purpose of the Application:

The applicants are requesting relief from the above noted provisions of the Town Zoning By-law to facilitate the construction of an above-ground pool within the required exterior side yard and with a reduced exterior side yard width. The applicants are also requesting a reduced interior side yard width and rear yard depth to permit the construction of an accessory building (shed).

The subject property has an area of 665.6 $m^2$ (7,067.5 $ft^2$) and contains a single detached dwelling, which was built in 2017. The subject lands are surrounded by predominately single detached dwellings to the north, west, and south. Semi-detached dwellings exist to the east of the subject lands.

Plate 1, Existing Zoning & Location Map, illustrates the location of the property and the zoning in the immediate vicinity.

Plate 2, Existing Zoning & Aerial Map, is an aerial view of the property.

Plate 3, Applicants' Sketch, depicts the existing buildings and the proposed setback of the accessory structures.

(b) Agency Comments:

The application was reviewed by a number of public agencies. The following comments were received:

The Township Chief Building Official has indicated that a revised lot grading plan will be required at the building/pool permit application stage. He also indicated that special construction may be required under the Ontario Building Code.

The Township Public Works Manager has indicated that no structure or hard surfacing is permitted within 1.2 m (3.9 ft) of the exterior side yard property line. An additional Public Works sidewalk deposit may be required at the time of the building permit, depending on the location of the construction access.

The Township Fire Chief had no comments or concerns regarding the proposal.

(c) Public Consultation:

Public Notice was provided to surrounding property owners in accordance with the requirements of the Planning Act. As of the writing of this report, no comments or concerns had been received from the public.

(d) Intent and Purpose of the Official Plan:

The subject lands are designated 'Low Density Residential' according to the Official Plan. Within the 'Low Density Residential' designation, permitted land uses consist primarily of low density

housing forms including single detached dwellings, duplexes and street fronting town houses as well as accessory uses thereto.

The use of the lands for a single detached dwelling and accessory uses, such as a shed or above-ground pool, is consistent with the 'Low Density Residential' designation policies of the Official Plan.

(e) Intent and Purpose of the Zoning By-law:

The subject property is currently zoned 'Special Residential Type 1 Zone (R1-10)', according to the Township of East Zorra-Tavistock Zoning By-law. Permitted uses within the R1 zone include a single detached dwelling and home occupation.

The provisions of the R1 zone require a minimum lot area of 540 $m^2$ (5,812.7 $ft^2$), minimum lot depth of 30 m (98.4 ft), front yard depth of 7 m (23 ft), rear yard depth of 7.5 m (24.6 ft), and exterior side yard width of 6 m (19.7 ft). Properties within the R1 zone are permitted a maximum lot coverage of 40%.

Table 5.1.1.4 only permits residential accessory buildings and structures within the rear yard or interior side yard. The 6 m (19.7 ft) setback to an exterior lot line for the R1 zone also applies to accessory buildings and structures. The purpose of the minimum required exterior side yard provision and the general prohibition on accessory structures within exterior side yards is to ensure that there is adequate separation between structures or buildings on the lot and the public road allowance.

Staff note that there is approximately 5 m (16.4 ft) of separation between the exterior lot line of the subject property and the edge of Jonker Street. Within the 5 m (16.4 ft) of separation are a sidewalk and grass boulevard. Planning staff therefore believe that the proposed pool will be adequately setback to not hinder the municipal right-of-way. Further, no concerns were raised by the Township Public Works Manager concerning the proposal's proximity to the right-of-way other than the request for any hard surface to stop 1.2 m (3.9 ft) from the property line, which the proposal would comply with.

Provisions respecting accessory buildings and structures on residentially zoned lots stipulate that a minimum interior and rear yard setback of 1.2 m (3.9 ft) is to be maintained. The purpose of the side yard setback provision is to ensure accessory buildings/structures are setback sufficiently from interior and rear lot lines to provide an adequate buffer from neighbouring properties, and ensure sufficient area is provided for access, drainage and normal property maintenance.

Further, the provisions for permitted projections into required yards and related setbacks from lot lines are to ensure adequate separation is provided between eaves, gutters and similar architectural features and property lines, to avoid impacts on neighbouring properties with respect to drainage and normal property maintenance.

Staff are satisfied that the proposed relief represents a minor deviation from the requirements of the Zoning By-law. In addition, the proposed shed will abut the rear yard of the neighbouring property to the north and west, and staff are satisfied that an adequate buffer will continue to be provided between each property. It would also appear that sufficient area will be available to conduct normal property maintenance.

Planning staff are of the opinion that the requested relief is consistent with the general intent of the Zoning By-Law.

(f) Desirable Development/Use:

It is the opinion of this Office that the applicants' requests can be considered minor and desirable for the development of the subject property, as the proposed relief will facilitate the construction of an above-ground pool and shed within a yard that will be enclosed and fenced. In terms of the proposed relief for the above-ground pool, no impacts to the public right-of-way on Jonker Street are expected, and the proposal would not appear to have adverse impacts on abutting properties. It is further noted that no comments of concern have been received from any of the neighbouring property owners.

In terms of the reduced interior side yard width and rear yard depth, staff believe that the proposed relief will not adversely impact adjacent lands to the north and west. Adjacent yards to the north and west of the proposed location for the shed are rear yards and adjacent dwellings are therefore located considerable distance away from the proposed shed location. Further, a condition is being recommended to ensure that gutters and downspouts are directed away from adjacent properties to ensure drainage issues will not be created or exacerbated.

In light of the foregoing, it is the opinion of this Office that the requested relief is in keeping with the general intent and purpose of the Official Plan and Town Zoning By-law and can be given favourable consideration.

**RECOMMENDATION:**

That the Township of East Zorra-Tavistock Committee of Adjustment **approve** Application File A02-22, submitted by Charmaine & Corey Thoms, for lands described as Lot 12, Plan 41M-325, Township of East Zorra-Tavistock, as it relates to:

1. Relief from **Section 5.1 - Table 5.1.1.3 - Regulations for Accessory Buildings and Structures**, to permit an accessory structure within an exterior side yard;

2. Relief from **Section 12.2 – R1 Zone Provisions**, to reduce the minimum required exterior side yard width from 6 m (19.7 ft) to 1.2 m (3.9 ft) to facilitate the construction of an accessory structure (above-ground pool); and,

3. Relief from **Section 5.1 - Table 5.1.1.3 – Regulations for Accessory Buildings and Structures**, to reduce the minimum required interior and rear side yard width from 1.2 m (3.9 ft) to 0.7 m (2.2 ft) to facilitate the construction of an accessory structure (shed).

Subject to the following conditions:

i. That the proposed relief shall only apply to accessory structures (above-ground pool & shed) of the approximate sizes and locations as depicted on Plate 3 of Report CP 2022-125.

ii. That gutters and downspouts shall be installed and rain water directed to the satisfaction of the Township of East Zorra-Tavistock Building Department.

As the proposed variances are:

(i) deemed to be minor variances from the provisions of the Township of East Zorra-Tavistock Zoning By-law No. 2003-18

(ii) desirable for the appropriate development or use of the land;

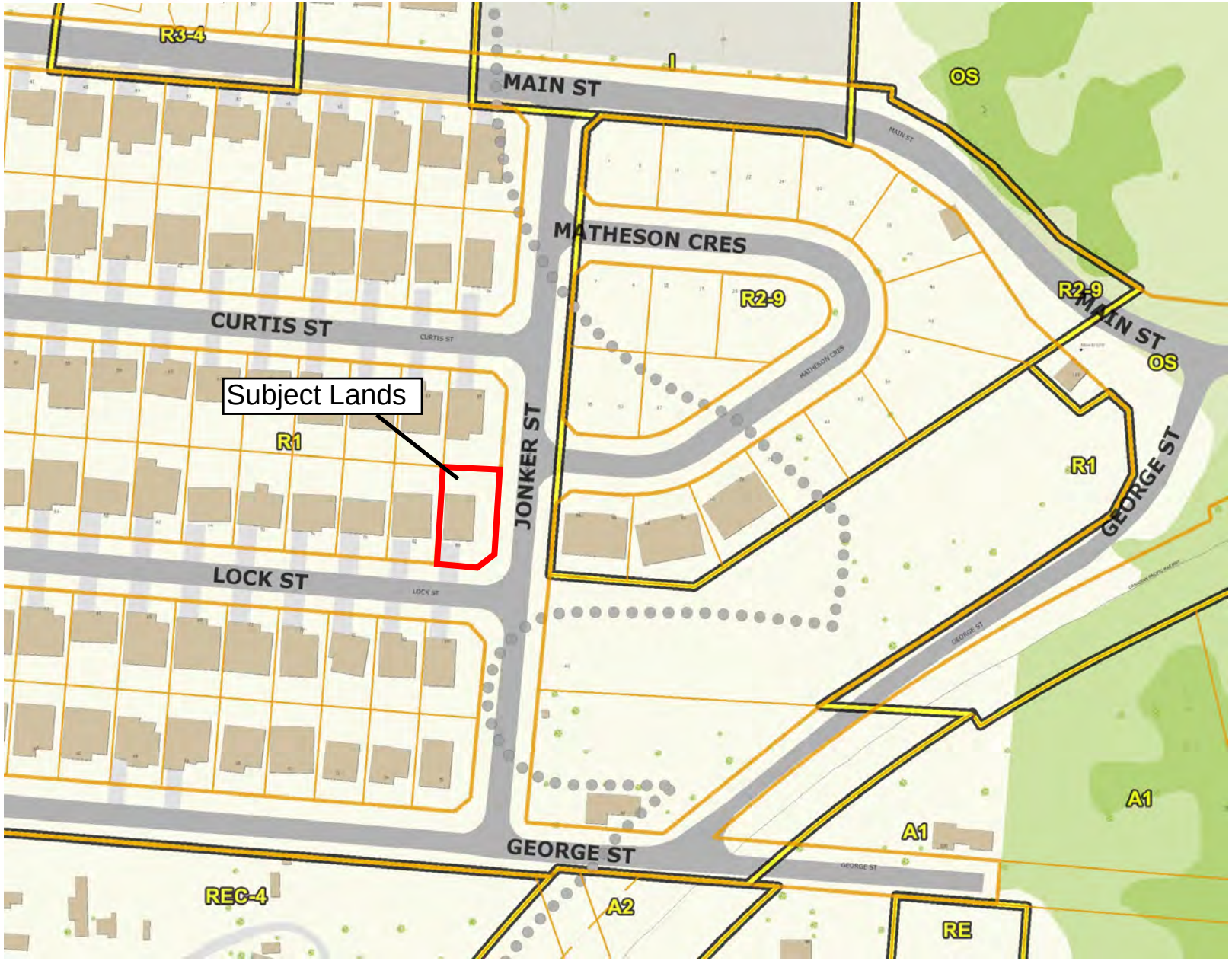
(iii) in-keeping with the general intent and purpose of the Township of East Zorra-Tavistock Zoning By-law No. 2003-18; and,

(iv) in-keeping with the general intent and purpose of the Official Plan.

Authored by: “original signed by” Dustin Robson, MCIP, RPP
Development Planner

Approved for submission by: “original signed by” Eric Gilbert, MCIP, RPP
Senior Planner

**Plate 1: Existing Zoning & Location Map**
**File No.: A02-22 - Thoms**
**Lot 12, Plan 41M325 - 86 Lock Street, Township of East Zorra-Tavistock**




## Legend

Parcel Lines
- Property Boundary
- Assessment Boundary
- Unit
- Road
- Municipal Boundary

Zoning Floodlines Regulation Limit
- 100 Year Flood Line
- 30 Metre Setback
- Conservation Authority Regulation Limit
- Regulatory Flood And Fill Lines

Land Use Zoning (Displays 1:16000 to 1:500)

## Notes

0 51 102 Meters

NAD_1983_UTM_Zone_17N

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. This is not a plan of survey

March 4, 2022

**Plate 2: Existing Zoning & Aerial Map**
**File No.: A02-22 - Thoms**
**Lot 12, Plan 41M325 - 86 Lock Street, Township of East Zorra-Tavistock**


## Legend

Parcel Lines
- Property Boundary
- Assessment Boundary
- Unit
- Road
- Municipal Boundary

Zoning Floodlines Regulation Limit
- 100 Year Flood Line
- 30 Metre Setback
- Conservation Authority Regulation Limit
- Regulatory Flood And Fill Lines

Land Use Zoning (Displays 1:16000 to 1:500)

## Notes

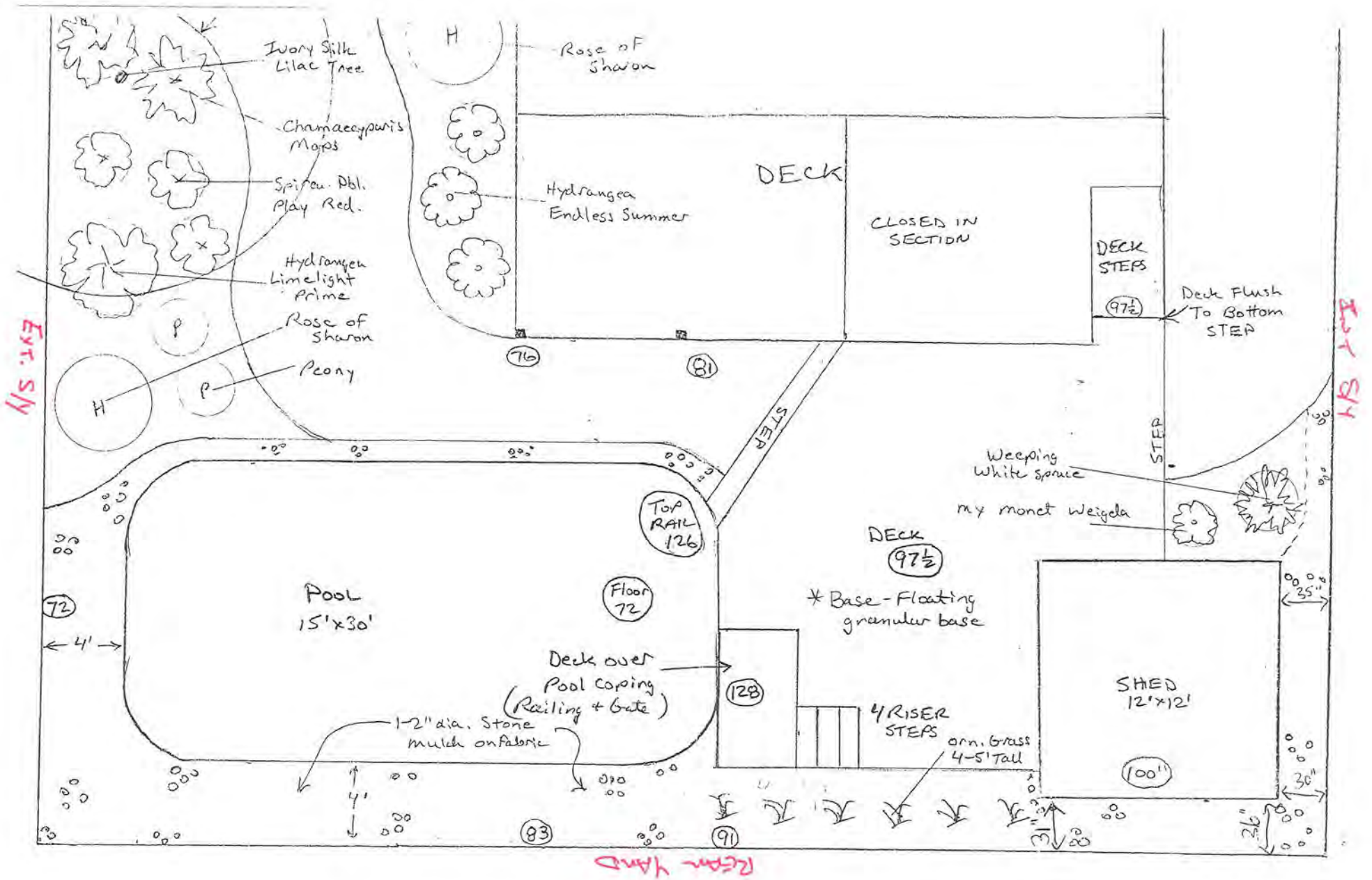
0 13 26 Meters

NAD_1983_UTM_Zone_17N

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. This is not a plan of survey

March 4, 2022

**Plate 3: Applicant's Sketch**
**File No.: A02-22 - Thoms**
**Lot 12, Plan 41M325 - 86 Lock Street, Township of East Zorra-Tavistock**



#6.a

Placeholder page for Agenda Item 6.a – Conferences & Seminars

#6.b

Placeholder page for Agenda Item 6.b - County Council – Update & Questions

#6.c

Placeholder page for Agenda Item 6.c –
Staff Reports and Questions for Staff

#6.d

# EAST ZORRA - TAVISTOCK POLICE SERVICES BOARD

## MINUTES
**of the Meeting held**

## March 16, 2022

The Police Services Board met at the Innerkip Community Centre at 1:15 p.m. on Wednesday March 16, 2022.

| | |
|---|---|
| Present: | Robert Rudy<br>Liam McCreery<br>Matthew Gillespie<br>Tony Hymers, Detachment Commander (Oxford OPP)<br>Will Jaques, Secretary |
| Regrets: | N/A |
| Confirm Agenda | Moved by: Liam McCreery<br>Seconded by: Matthew Gillespie<br>Resolved that the Board approves the agenda for the March 16, 2022 meeting, as printed and circulated. |
| | **CARRIED** |
| Pecuniary Interest | None declared. |
| Confirm Minutes | Moved by: Liam McCreery<br>Seconded by: Matthew Gillespie<br>Resolved that the Board approves the minutes of the January 19, 2022 meeting, as printed and circulated. |
| | **CARRIED** |

**Correspondence**

- OAPSB Zone 4 – October 6, 2021 Minutes
- OAPSB Zone 4 – 2021 Year-End Financial Statement
- OAPSB Zone 4 – March 2, 2022 Minutes

Delegations & Appointments

- N/A

**Reports**

OPP Policing Reports

- January 2022 Police Reports
- February 2022 Police Reports
  - Oxford OPP Detachment Commander Tony Hymers presented the January and February, 2022, policing reports to the Board.

- Verbal Reports from Meetings/Conferences/Seminars etc.
  - N/A

**Other Business**

OAPSB Spring Conference

Moved by: Matthew Gillespie
Seconded by: Liam McCreery
Resolved that Board members be approved to attend the OAPSB Spring Conference to be held May 26-27, 2022, in Toronto.

**CARRIED**

Adjourn

Moved by: Liam McCreery
Seconded by: Matthew Gillespie
Resolved that the Board does now adjourn at 1:45 p.m.

**CARRIED**

_____ _____

Will Jaques, Secretary Robert Rudy, Chairperson

TAVISTOCK & DISTRICT RECREATION CENTRE
1 Adam St., P. O. Box 988,
Tavistock, Ont. N0B 2R0
(519) 655-2102 / Fax (519) 655-3560
e-mail: kwettlaufer@ezt.ca



# MINUTES

for the meeting of the Tavistock & District Recreation Facilities Board held in the Board Room on March 28, 2022 at 7:00pm.

Present:, Margaret Lupton, Phil Schaefer, Don Mckay, Kristen Cook, Brett Zehr, Ron Wiffen, Karen Deprest, Ken Wettlaufer.
Absent:

## CALL TO ORDER AND OPENING REMARKS

- Margaret Lupton called the meeting to order at 7:05 pm.

## APPROVAL OF AGENDA

**1- APPROVE AGENDA**

Moved by – Don Mckay
Seconded by – Phil Schaefer
"resolved that the Agenda for the March 28, 2022 meeting be approved as printed and circulated and further that the following items be added to the Agenda for this meeting."
- Community Gardens
- Queens Park, Parking on grass behind Arena during soccer etc.

CARRIED.

## DISCLOSURE OF PECUNIARY INTERESTS AND GENERAL NATURE THEREOF

- None.

## GENERAL BUSINESS

**2- CONFIRM MINUTES**

Moved by – Brett Zehr
Seconded by – Kristen Cook
"resolved that the Board confirm the Minutes of the February 28, 2022 meeting as printed and circulated." CARRIED.

**Correspondence and Petitions**

- Margaret reported on the 4-H request to install community gardens in Hickson. Volunteers would supply material, plant and maintain the gardens. Root vegetables etc that are grown, are available the general population to harvest and use at no cost. Three locations have been identified. Township staff will further investigate the locations and work with the community contact for the project to move it forward.
- Kristen Cook raised the issue about the volume of cars parking on the grass out back of the Arena during soccer etc. At times when there are many activities going on, there is car traffic and pedestrians all moving about in this space. Was discussion on a solution to encourage more people to make use of the parking lots which have available parking spaces. Most of the people parking are participating in the activities so there may be an opportunity for organizers of the

group to circulate notification requesting people make use of the parking lots. Some additional signage could also be installed. Consideration should be made for accessible / seniors parking. Township staff could also be consulted to discuss some type of temporary / permanent parking controls for this area to try change parking habits.

## DELEGATIONS AND APPOINTMENTS

- None

## REPORTS

A- Manager's Verbal Facilities Report

1- It's been a good run for the ice season in the Pavilion Recreation Hall. However, it has come to an end. Warm weather has helped with a quick melt and staff have been able to remove the rest of the ice. Should be dried up next week and ready for floor activities. Subject to weather and condensation which can make the floor unusable in certain conditions during the spring. We currently have four bookings for use of the pavilion in April.

2- To date the Pavilion roof has not been leaking like it has in the past during spring thaw. Feeling confident that the rubber membrane applied to the problem areas appears to be working well.

3- As the weather changes, we will be starting spring cleanup in the Park. Given the winter we have had there is significant clean up to be done. We have a number of place where cars have drove on the lawn leaving significant ruts and damage to the lawn. In addition, there are more than normal leaves to be cleaned up.

4- Covid-19 protocols have been removed with masks no longer being required as of March 21. We still have signage up for passive health screening. In addition, facility staff have agreed to voluntarily continue wearing masks when we are active in the Arena and there are public in the facility. Staff are still seeing lots of people wearing masks.

5- Rentals have started again at the Memorial Hall with 4 booking in the last 10 days of March. There are currently 8 dates at the Main Hall book in April and May.

6- World Crokinole Championship has been put off for another year. Fiddle and Step is running a scaled down event with camping and Jamboree type event making use of the Pavilion. They will not be running the full-scale competition in the Arena this year. Minor Ball is discussing tournaments etc for the summer however those dates have not been confirmed at this point. Hopefully renter confidence in summer type events is growing and more of those types of events will come to fruition.

7- 2022- 2023 Ice time request letters have been sent out and are to be returned by April 15. To be included in a report for the April 25 TDRFB meeting.

B- Arena Financial Statements were circulated at the meeting by Karen
C- Memorial Hall Financial Statements were circulated at the meeting by Karen
D- Queens & Bender Park Financial Statements were circulated at the meeting by Karen
E- TDRC February Management Contract Summary.

## UNFINISHED AND OTHER BUSINESS

A- The Play space in Queens Park to the east of the Ball Diamond. Consitsts of an Infinity Web installed in 2007, pedestal picnic tables installed in 2009. The main climbing structure with slides etc is estimated to be around 40 years old. Given the age of the climbers it would not be practical to try and upgrade the structure. Therefore, consideration for removal needs to be further discussed. This should include what the future of the entire play space is. The newer equipment in the space could be relocated or possibly protected due the proximity to the Ball Diamond. Initially there could be a site visit with Township staff to identify current condition and possible timeline to address the aging structure and location issues.

## LEGAL AND PERSONNEL:

**3- CLOSED SESSION.**

Moved by – Ron Wiffen
Seconded by – Kristen Cook
"resolved that the Board does now adjourn to a Closed to the Public Session, at 7:52 pm, to consider a matter with regard to the Facilities Management Contract."
CARRIED.

**4- RECONVIENE FROM CLOSED SESSION**

Moved by – Don Mckay
Seconded by – Phil Schaefer
"resolved that the Board does now rise from its Closed to the Public Session, at 8:38pm."
CARRIED.

**5- FACILTIY MANAGEMENT CONTRACT EXPIRY LETTER.**

Moved by – Kristen Cook
Seconded by – Don Mckay
"resolved that the Board accepts Ken's letter not to renew his contract and further that the CAO meet with Ken to discuss the transition period between today, Monday, March 28th and May 31st, 2022."
CARRIED.

## NEXT MEETING AND ADJOURN

- Next meeting is to be Monday April 25th, 2022 @ 7:00pm.

**6- ADJOURN**

Moved by – Ron Wiffen
Seconded by – Brett Zehr
"resolved that the Board does now adjourn at 8:41 pm."
CARRIED.

_____ _____

Margaret Lupton, Chairperson Ken Wettlaufer, Facilities Management Contractor

#6.f

# STAFF REPORT

[redacted]

Report #CBO2022-05

To: His Worship the Mayor and Members of Council

From: John Scherer, Chief Building Official

Re: Building, Development & Drainage – April 2022 Council Report

Date: March 30, 2022

## Departmental Highlights:

- None

## Legislative Updates:

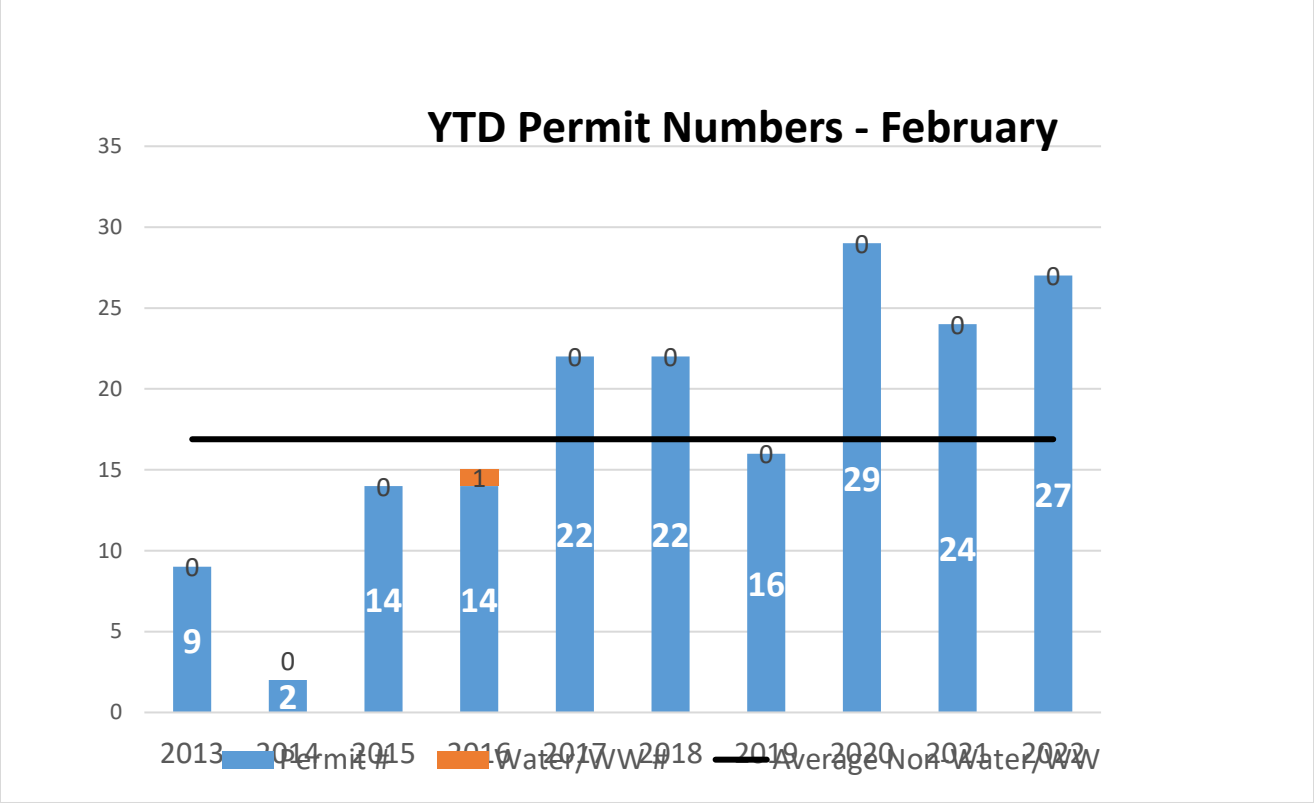
- None

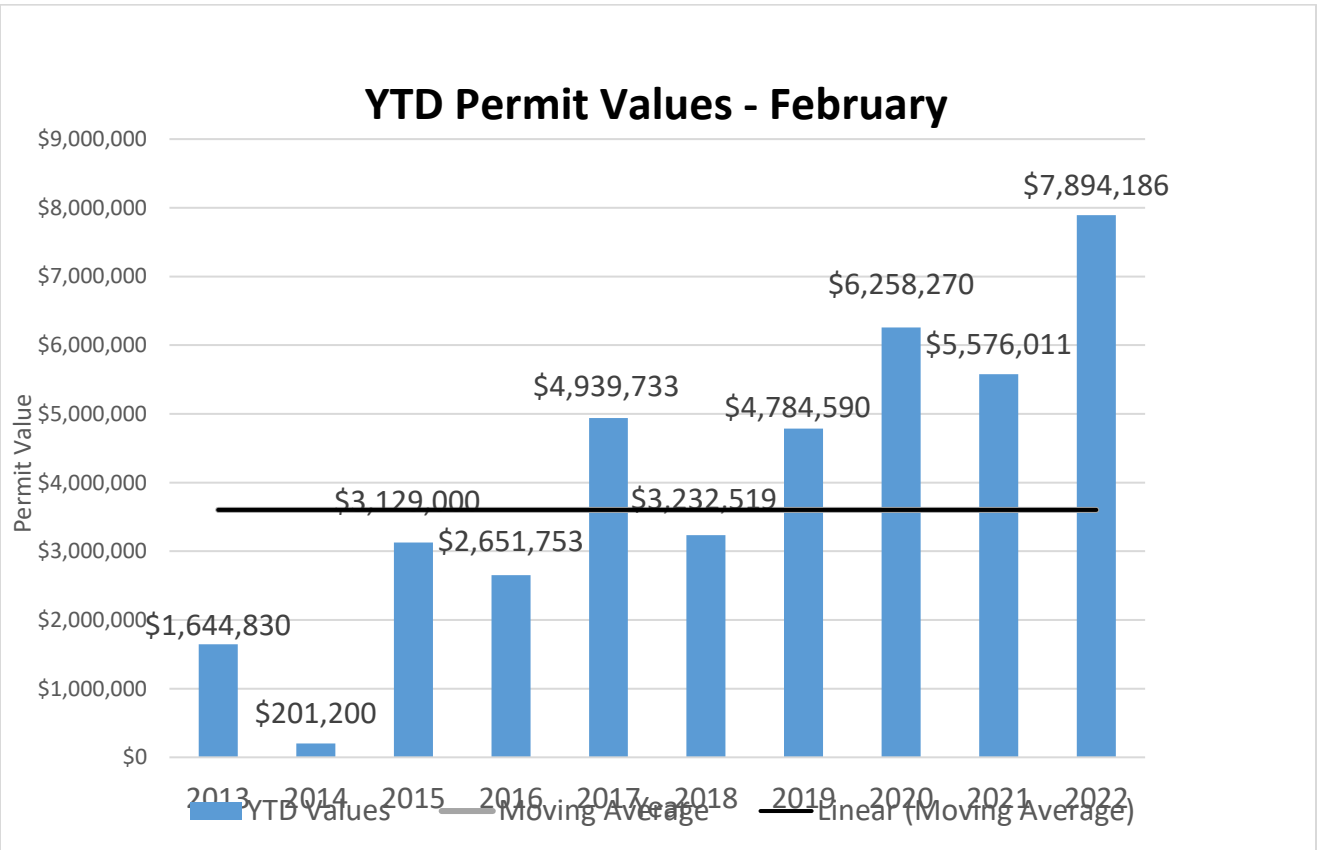
## Monthly Permit Activity:

| | No. of Permits | Permit Value | Permit Fees |
|---|---|---|---|
| February 2022 | 15 | $5,163,536 | $19,795 |
| Year to Date – February 28, 2022 | 27 | $7,894,186 | $34,906 |

Number of Permits and Values

| Project | Project value | Building fees |
|---|---|---|
| Storage shed | 80,000 | 490 |
| HVAC upgrades | 2,249,536 | 2,500 |
| New modular home | 150,000 | 1,476 |
| Reno & covered deck | 150,000 | 550 |
| Finish basement | 15,000 | 300 |
| Septic | 30,000 | 550 |
| Interior Renovation | 175,000 | 4,084 |
| Pool shed | 20,000 | 250 |
| Interior Renovation | 24,000 | 150 |
| Finish basement | 50,000 | 300 |
| Finish basement | 50,000 | 300 |
| Finish basement | 50,000 | 300 |
| New SFD | 420,000 | 2,928 |
| Barn addition | 1,540,000 | 4,868 |
| Manure storage | 160,000 | 750 |
| **Total** | **5,163,536** | **19,795** |


YTD Permit Numbers - February
35
30
25
20
15
10
5
0
9
0
2
14
0
14
1
22
0
22
0
16
0
29
24
0
27
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Permit #
Water/WW #
Average Non-Water/WW


YTD Permit Values - February
$9,000,000
$8,000,000
$7,000,000
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$0
Permit Value
$1,644,830
$201,200
$3,129,000
$2,651,753
$4,939,733
$3,232,519
$4,784,590
$6,258,270
$5,576,011
$7,894,186
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
YTD Values
Moving Average
Linear (Moving Average)

## Status of Development Matters:

### Ward 1 - TAVISTOCK

| | | |
|---|---|---|
| *The Ponds<br>(Phase 3) | 33 SFD | Plan 41M-335<br>Plan 44M-68 |
| The Orchards<br>(Phase 1) | 16 SFD<br>6 Semi Units<br>39 Condo Towns | Plan 41M-321<br>Warranty item identified for developer. |
| The Orchards<br>(Phase 2) | 48 SFD<br>2 Semi Units | Plan 41M-353<br>Construction started on all lots |
| The Orchards<br>(Phase 3) | 52 SFD<br>6 Semi Units | Plan 41M-371<br>Permits Issued. |
| Gateman Homes<br>(Jacob St E) | 13 SFD<br>10 Semi Units | Plan 41M-363<br>Permits Issued. |
| Mill-Gate Homes<br>(Phase 1) | | Subdivision details submitted. |

### Ward 3 - INNERKIP

| | | |
|---|---|---|
| Innerkip Meadows<br>(P3 – Curtis St) | 24 SFD + Semi detached units now proposed. | Plan 41M-313<br>Singles Completed. |
| Innerkip Meadows<br>(P4– Lock St) | 24 SFD | Plan 41M-325 |
| Innerkip Meadows<br>(P5 -Queen/Curtis) | 25 SFD | Plan 41M-339 |
| Innerkip Meadows<br>(P6 - Lock) | 19 SFD | Plan 41M-355 |
| Innerkip Meadows<br>(P7 - Matheson) | 32 Semi detached units<br>1 SDD Unit | Plan 41M-313<br>Permits issued. |
| *Majestic Homes Development<br>(James/Main St) | Condo Block on Main St<br>(25 units) | Plan 41M-322<br>Unit construction underway. |
| Oxford Road Developments 5 Inc. | 29 SFD +<br>1 Block for Future Dev. | Plan 41M - 352<br>Revised Grading Plan approved. |

## Drain & Streetlight Locate Summary:

Updated quarterly – next update April/May

## Status of Drainage Matters:

| Drain Name | Status |
|---|---|
| McLean Drain | Section 78 received, and Section 40 received. Petition restarted – Section 4 Proposed (New Drain). Report and design work underway. |
| Tavistock 1974 & 1979 Drains | Relocation of drains proposed for new residential developments. Tavistock 1974 Completed. Tavistock 1979 awaiting Subdivision Approval. |
| Parker Drain | Court of Revision scheduled for April 6/22. |
| Kuntze Drain | Large cleanout, weather pending. Finished by end of year. |
| Unnamed Drain | Pending. Waiting Report & Design. |
| Oxford Rd #33 | Cleanout completed. Planting still to be completed. |

## Attachments:

- None

## Recommendation:

1. None. For Council information only.

Reviewed by C.A.O.:

Karen DePrest
Chief Administrative Officer

Report prepared and submitted by:

John Scherer
Building, Drainage and Development Manager
(Chief Building Official)

#6.g

# STAFF REPORT

Report #PW2022-05

To: His Worship the Mayor and Members of Council

From: Tom Lightfoot, Public Works Manager

Re: Public Works – April 2022 Council Report

Date: March 30, 2022

## Departmental Highlights:

- Public Works staff have been grading the gravel roads when the weather has permitted. Frost has been coming out of the roads which is causing potholes and soft spots. Staff will continue to grade the roads and plan to use the retriever to remove any high edges at the ditch line ahead of the spring granular application.

- Staff has started preparing for the spring season. Fire hydrant markers have been removed and some sod damage from plows has been repaired. As well, removal of snow fencing has begun and should be completed the first week of April. Lastly, cleaning of the park properties will begin in the coming weeks.

- Public Works has started preparing equipment for the upcoming season. Snow removal equipment has been removed from the graders, and the roller will be installed. Staff has ordered the second roller, in hopes of being able to use it this spring. The Trackless will be getting switched over for grass cutting, and the rest of the mowing equipment will be coming out of storage.

- The annual tree removal tender was released March 16th and closed on March 31st. Staff is reviewing the results and is anticipating awarding the work the first week of April.

- Staff attended the preconstruction meeting for John and Henry Streets on March 29th. The project will commence the week of April 11, 2022. These streets will be closed during the construction, but all those residing on the street will have continued access. The project is scheduled for completion early in July. Staff will be attending the site on a daily basis during construction, and a representative from K Smart and Associates will be on site throughout construction.

- Concrete crushing at the 89 Loveys Street property is expected to be completed in April. Darren Neil and Sons Excavating will be completing the work.

- Public Works staff will be attending training sessions in April. All public Works staff will be attending trench training. Operators will be attending Book 7 Traffic Control training. Two operators will also be completing classroom and practical training on graders at the end of April.

- The reduced load period remains in effect and continues until April 30th. The reduced load period is in place to protect the roads during the spring thaw and the hardening of the road base.

## Status of Significant Capital Projects:

| Capital Project | Current Status |
|---|---|
| Box Culvert #2012 replacement | Tender awarded March 2, 2022. |
| Zorra/EZT Bridge Rehabilitation | Tender awarded |
| John/Henry Streets re-construction in Tavistock | Tender awarded March 2, 2022. |

## Recommendation:

1. None. For Council information only.

Reviewed by C.A.O.:

Karen DePrest
Chief Administrative Officer

Report prepared and submitted by:

Tom Lightfoot
Public Works Manager

#6.h

# STAFF REPORT

[redacted]

Report #FC2022-04

To: His Worship the Mayor and Members of Council

From: Scott Alexander, Township Fire Chief

Re: Fire & Protective Services – April 2022 Council Report

Date: March 30, 2022

## Departmental Highlights:

Fire Department:

- The 2022 Recruit class completed the following subjects during their March training: communications, ropes & knots, ground ladders, overhaul & scene conservation, portable fire extinguishers, ventilation, fire hose and hose streams. East Zorra-Tavistock firefighters, along with assistance from the Blandford-Blenheim Fire Department, will be hosting recruit training in Hickson on May 14th.

- The homeowner of a proposed full-scale live burn training session has advised us that the property is now ready for the exercise. It is expected that a full day training session will be held either late April, or early May.

- Hickson's pumper arrived in Woodstock on March 30th and is due to be delivered to the station by April 8th. Members of the Hickson Station will be attending the supplier for a vehicle inspection on April 4th.

- The RFP for the Innerkip Rescue Van has been amended and was re-issued on March 30th, with a closing date of April 26th.

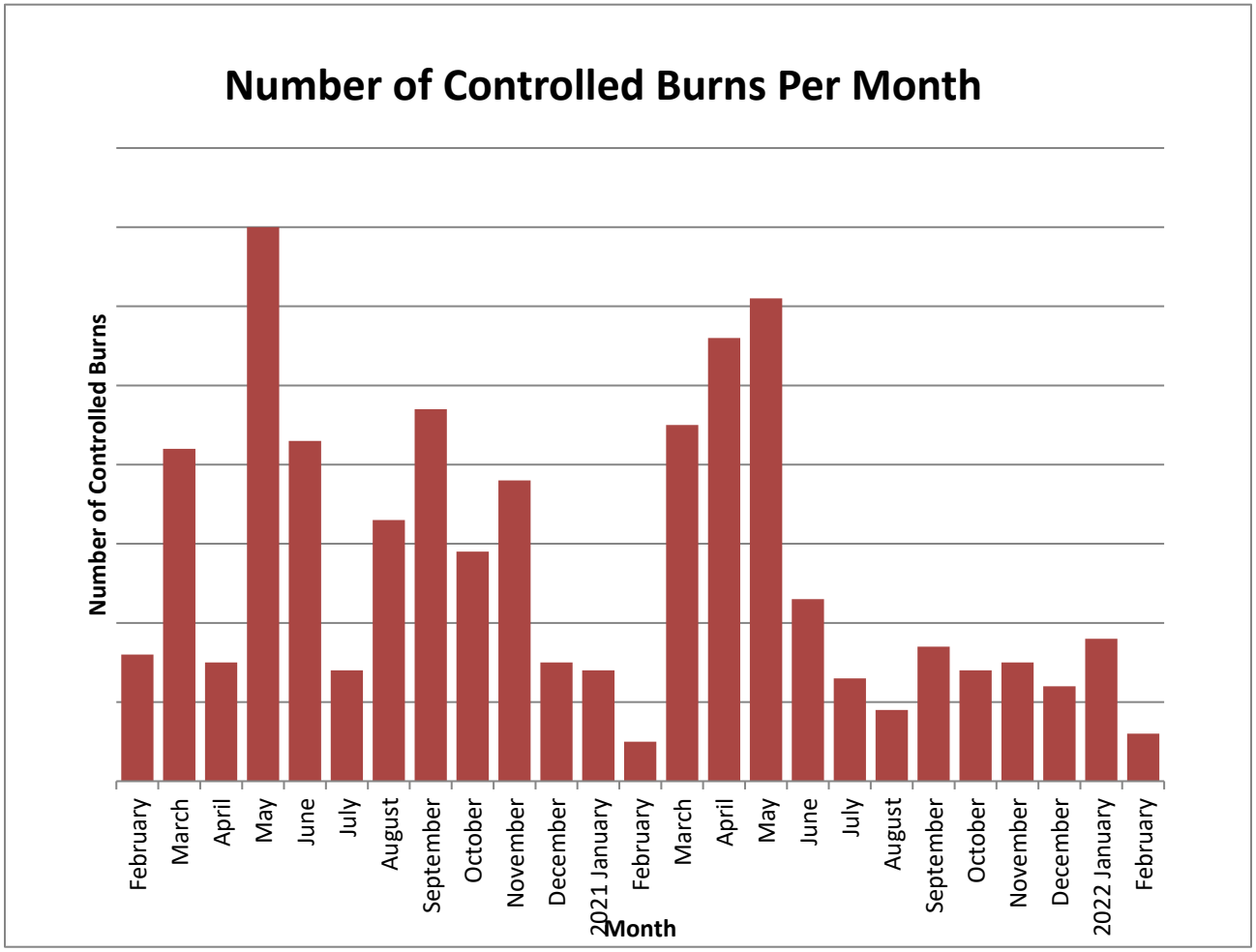
- Officer selection within the Township is now complete as Innerkip station has chosen Jarrett Bissett as their latest captain.

- Staff received an invitation from Enbridge to submit a request for funds for equipment or training resources. Staff submitted a proposal to add two propane/natural gas monitors, per station.

- The 2021 East Zorra-Tavistock Fire Call Verification Report has been received, reviewed and returned back to the OFMEM.

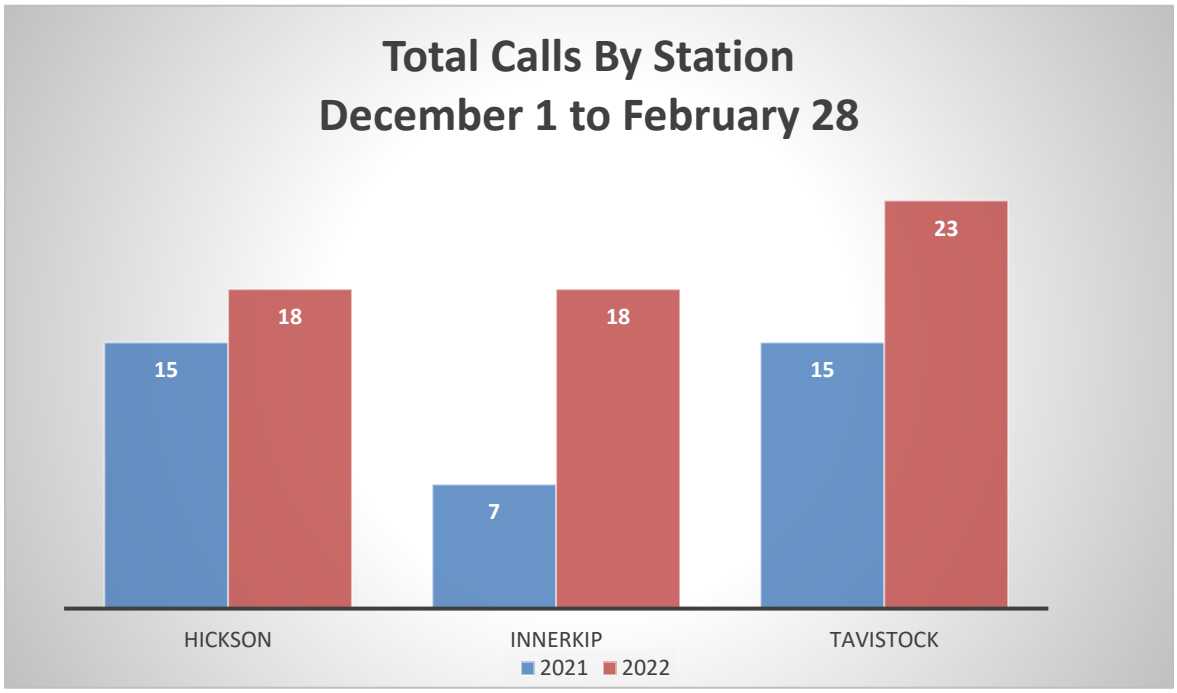
- Considering a recent event in Tavistock, staff approached Oxford EMS regarding the status of the former Public Access Defibrillator program. Both parties agreed to work together to determine the status of public access defibrillators within the Township and develop a plan for ongoing maintenance, education and awareness in the community.

Controlled Burn Approvals:

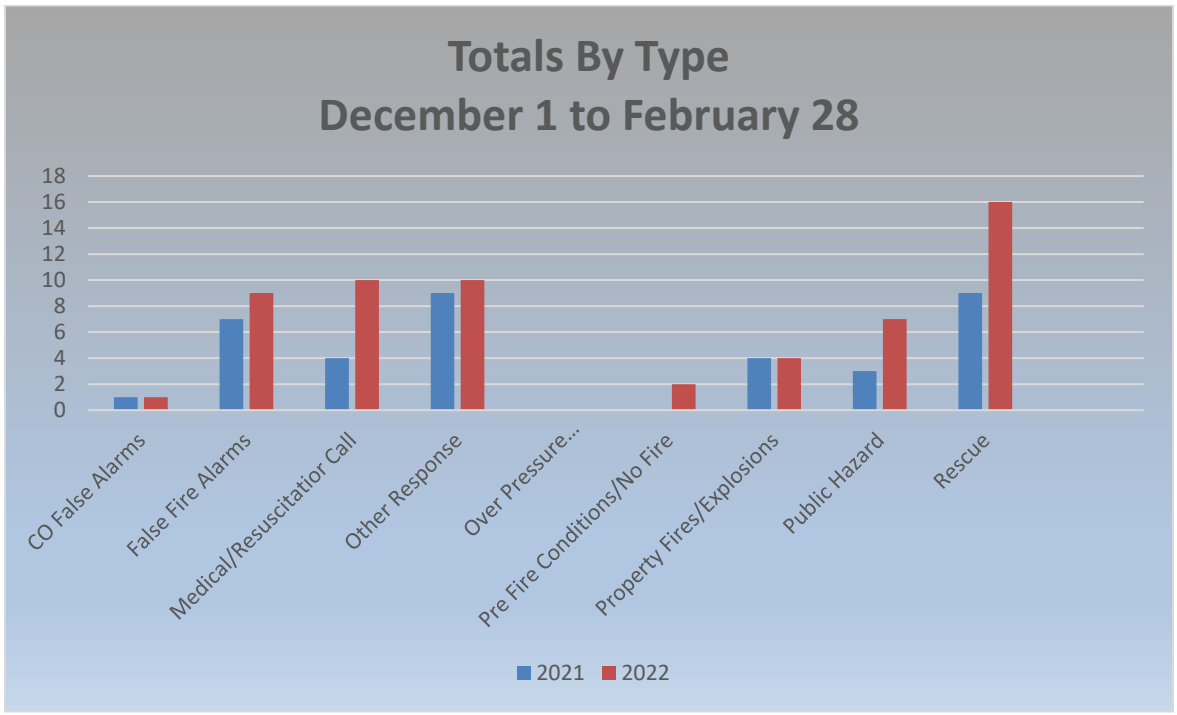



- February (2022): 6
- Year to Date (2022: 24

TOTAL FIRE CALLS FOR 2022 (December 1/21 to February 28/22)




TOTALS BY TYPE-2 YEAR COMPARISON (Dec. 1/21 to Feb.28/22)



Emergency Management:

- In response to the recent avian flu announcement, Township fire stations have been supplied with disinfectant and spray equipment in case they should be required to attend an affected property within the quarantine zone.

- Emergency Preparedness Week has been announced from May 1st to 7th. This year's theme is "Emergency Preparedness: Be Ready for Anything". Staff will be providing information via social media will and attend events as they are able.

- Staff recently received notice that the Township has achieved compliance for EMCPA 2021.

Legislation

- The Ministry of Municipal Affairs and Housing has made amendments to the Ontario Building Code to require identification of new and renovated buildings constructed using truss and lightweight construction systems on a go forward basis, beginning on July 1, 2022. The program requires municipal building departments to notify fire departments, or the clerk of a municipality that does not have a fire department, that a building, other than a house, will be constructed or renovated using a truss and lightweight system.

  Please see more details at the following link:
  https://london.ctvnews.ca/tragedy-sparks-building-code-changes-to-improve-firefighter-safety-1.5823290#:~:text=Tragedy%20sparks%20changes%20to%20Ontario's%20building%20code&text=Ontario's%20Chief%20building%20officials%20must,are%20built%20in%20their%20communities.

## Recommendation:

1. None. For Council information only.

Reviewed by C.A.O.:

Karen DePrest
Chief Administrative Officer

Report prepared and submitted by:

Scott Alexander
Township Fire Chief

#6.i

# STAFF REPORT

[redacted]

Report #BCO2022-03

To: His Worship the Mayor and Members of Council

From: Melanie Shiell, By-law Compliance Officer

Re: By-law Compliance – April 2022 Council Report

Date: March 30, 2022

## Departmental Highlights:

- None to report

## Legislative Updates:

- None to report

## By-law Compliance Activity for February 2022

| OCCURRENCE TYPE | NUMBER OF NEW OCCURRENCES (Commenced this Month) | | NUMBER OF ON-GOING OCCURRENCES (Commenced prior to this Month) | YEAR TO DATE OCCURRENCES | |
|---|---|---|---|---|---|
| | Open | Closed | Open | Open | Closed |
| Property Standards | | | 3 | 3 | |
| Clean Yard | | | | | |
| Animal Control | 1 | | | 1 | |
| Parking | 1 | 1 | | | 4 |
| Noise | | | | | |
| Zoning | | | 2 | 2 | |
| Illegal Dumping | | | | | |
| Inquiry | | | | | 1 |
| Canine | 1 | 1 | | | 2 |
| Other (Pool) | | | | | |
| TOTAL | 3 | 2 | 5 | 6 | 7 |

## Attachments:

- None

## Recommendation:

1. None. For Council information only.

Reviewed by C.A.O.:

Karen DePrest
Chief Administrative Officer

Report prepared
and submitted by:

Melanie Shiell
By-law Compliance Officer

Department Approval:

Will Jaques
Corporate Services Manager/Clerk

#6.j

# STAFF REPORT

[redacted]

Report #CSM2022-04

To: His Worship the Mayor and Members of Council

From: Will Jaques, Corporate Services Manager

Re: Corporate Services – April 2022 Council Report

Date: March 30, 2022

## Departmental Highlights:

- Continued work on the 2022 election.

## Legislative Updates:

- N/A

## Status of Land Use Planning Matters:

| Applicant | Location | Application Type | Nature of Application | Status of Applications |
|---|---|---|---|---|
| 2796427 Ontario Ltd. | 162 Blandford St., Innerkip | Severance ZBA | Severance of an existing parcel of land, and associated re-zoning, to construct a 5-unit Townhouse. | Severance application approved and conditions being fulfilled. ZBA approved. |
| Musselman | Con. 16, Pt. Lot 30 | ZBA | Rezoning to allow development on undersize ag. parcel, on a lot that does not have road frontage. | Application deferred, pending applicant providing further information. |

| Applicant | Location | Application Type | Nature of Application | Status of Applications |
|---|---|---|---|---|
| Engberts | 21 Burton St., Innerkip | Severance | Severance of an existing parcel of land. | Severance application approved and conditions being fulfilled. |
| Canada Farm Distributors Ltd. | 165 Hope Street W. | Severance OPA ZBA | Severance of an existing parcel of land. | Severance process complete. OPA & ZBA applications have had public meetings. |
| Brenneman | 616595 13th Line | Severance ZBA | Severance of an existing parcel of land, and associated rezoning. | Severance application approved and conditions being fulfilled. ZBA approved in principle. |
| Donron Farms Ltd. | 616583 13th Line | Severance ZBA | Severance of an existing parcel of land, and associated rezoning. | Severance application approved and conditions being fulfilled. ZBA approved in principle. |
| Oxford Road Developments 5 Inc. | Extension of Phase #1 subdivision (Innerkip) | SDA OPA ZBA | OPA and ZBA required as part of the application for subdivision. | Applications received. |
| Lazenby & Shuster | 745393 Oxford Rd. #17 | Severance ZBA | Severance of an existing parcel of land, and associated rezoning. | Severance application approved and conditions being fulfilled. ZBA Public Meeting held Dec. 1/21. |

| Applicant | Location | Application Type | Nature of Application | Status of Applications |
|---|---|---|---|---|
| Shuster | 745349 Oxford Rd. #17 | ZBA | Rezoning to increase the permitted maximum gross floor area for an animal kennel. | Public Meeting held Dec. 1/21. |
| Fieldhouse | 107 Blandford St., Innerkip | Severance MVA | Severance of an existing parcel of land (creation of 2 additional lots) with a reduction in lot frontage. | Process complete. |
| Faircrest Farms Ltd. | 744772 Oxford Rd. #17 | Severance ZBA | Severance of an existing parcel of land, and associated rezoning. | Severance application approved and conditions being fulfilled. |
| Stevenson | 201 Stonegate Rd., Innerkip | Severance | Severance of an existing parcel of land. | Severance application approved and conditions being fulfilled. |
| 2825085 Ontario Inc. | 32 Jacob St. E. Tavistock | Severance | Severance of an existing parcel of land (2 new lots). | Severance application approved and conditions being fulfilled. |
| Zehr (U-turn Ranch) | 537097 Oxford Rd. #34 | ZBA | Amendment to allow for year-round camp and retreat centre. | Application received. |

| Applicant | Location | Application Type | Nature of Application | Status of Applications |
|---|---|---|---|---|
| Wettlaufer | 516930 11th Line | ZBA | Amendment to allow for second permanent dwelling on property (10 year period). | Application received. |
| Reyneveld | 496953 10th Line | MVA | Relief to permit a second dwelling, as well as relief from MDS 1 requirements. | Process complete. |
| Nemeth | 177 Coleman St. Innerkip | Severance | Severance of an existing parcel of land. | Application received. |
| Thoms | 86 Lock St. Innerkip | MVA | Relief to permit an accessory structure within an exterior side yard, as well as relief to reduce the minimum interior and exterior side yard setbacks. | Public Hearing to be held April 6, 2022. |
| Major | 615411 13th Line | ZBA | Rezoning to allow for the construction of a new residence, with in-law suite (converted dwelling). | Application received. |

## Attachments:

- None.

## Recommendation:

1. None. For Council Information.

Reviewed by C.A.O:

Karen DePrest
Chief Administrative Officer

Report prepared and submitted by:

Will Jaques
Corporate Services Manager

#6.k

# STAFF REPORT

[redacted]

Report #CAO2022-03

To: His Worship the Mayor and Members of Council

From: Karen DePrest, CAO/Treasurer

Re: Treasury – April 2022 Council Report

Date: March 30, 2022

## Departmental Highlights:

- No additional feedback from the public has been received by staff to date regarding questions or concerns on the Draft Proposed 2022 Operating and Capital Budgets. Staff have prepared a separate Report #CAO2022-05 to discuss with Council the key areas of consideration, before the by-law would be presented.

- Social media channels and the Township's website have been updated to indicate the change to our office hours with the additional availability of some staff between 12 p.m. and 1 p.m.

- Staff have completed work with the auditor on the ROEDC 2021 year-end, and work continues in preparation for the annual general audit, scheduled for April 19th and 20th. This work includes year-end accruals and closing entries.

- An RFP for audit services for the 2022-2026 5-year period was let on Bids and Tenders on Friday, March 11th, and closed Wednesday, March 30th. Staff will be completing evaluations of the submissions received on Tuesday, April 5th.

- Deputy Treasurer Stephanie Mitchell will be leaving East Zorra-Tavistock officially on Monday, April 18th. Stephanie has decided to begin a new life in the City of Airdrie, Alberta. She has purchased a home there and will be working for the City of Airdrie in their Finance Department. We are sad to see her go but very happy for her as she begins a new chapter in her career and personal life. Staff have begun the difficult task of finding a suitable financial support for the Township. We will be reviewing the structure of the Finance department to determine the correct skillset and level of responsibility we require to continue to be successful in Ms. Mitchell's absence.

## Parks and Recreation Master Plan:

- Staff received an update last week that the current Phase 2 – Service Delivery Staff component of the Parks and Rec Master Plan is in the hands of the Quality Control and Assurance team at Stantec. It is anticipated that this will lead to final compilation of Phase 1 and 2 into the overall Master Plan, for presentation in Spring 2022.

## Legislative Updates:

- None

## Recommendation:

1. None. For Council Information.

Respectfully submitted by:

Karen DePrest
Chief Administrative Officer/Treasurer

#6.I

# STAFF REPORT

[redacted]

Report #CAO2022-04

To: His Worship the Mayor and Members of Council

From: Karen DePrest, CAO/Treasurer

Re: Interim Parks & Recreation Service Delivery

Date: March 30, 2022

## Background:

In 2021, Council hired Stantec Consulting to develop a 10-year Parks and Recreation Master Plan. Stantec immediately identified a need to develop a service delivery strategy for Council to consider, in conjunction with the facility needs focus, which is the key part of most Parks and Recreation Master Plans.

Since the onset of the Plan development, and partially due to the difficulties that the pandemic presented, staff have seen more of the day to day operational and maintenance supports being onboarded to Township stewardship. In addition, external changes have further contributed to these needs. The facility manager at the Innerkip Community Centre retired, as did the cleaning staff for that facility. More recently, the Hickson Trail Committee disbanded and as of May 31st, and the Tavistock Recreation Facility Management Contract will be ending.

To ensure a smooth transition from the previous service delivery model to the future of Recreation within the Township, staff are seeking Council's direction on how to address the interim period.

## Discussion:

Staff are suggesting three viable options for Council's consideration:

### Option 1

Staff could be directed to prepare, issue, and evaluate a Request for Proposal for an external contractor to oversee Recreation and Facility Management for some/all of the Tavistock facilities exclusively, and/or the Township as a whole.

Key highlights to this approach are the experience that the Township has had with this model and the ability to determine for what period this relationship would exist.

Of concern is the extensive amount of work that would need to be completed in an abbreviated period to ensure the proposal document reflects the current needs for management within the Township. Further, the turnaround time for the entire process does not lend itself to allowing any transfer of knowledge to occur between the outgoing contractor in Tavistock, and a new contractor.

Option 2

Staff could be directed to hire a Parks and Recreation Supervisor.

Staff and Council are constantly receiving requests and inquiries about capital, fundraising and operational ideas for recreation and leisure activities, within the Township. Just in the last week alone there has been discussion about community gardens in Hickson, the spray pad and Queen's Park parking issues in Tavistock, staff representation on the Oxford Trails Committee, and facility repair matters at the Innerkip Park, along with the expiration Innerkip Minor Ball agreement as of March 31st. Having a dedicated middle management staff person to address these types of administrative and oversight activities would be beneficial to ratepayers, volunteers, Council, and staff.

At the same time, the timing for this position would pre-date the receipt and review of the Parks and Recreation Master Plan by Council and may not align itself with the recommended service delivery approach suggested by the consultant.

Option 3

Staff could be directed to collaborate with neighbouring municipal partners (Blandford-Blenheim and/or Zorra etc.) to develop a facility management coverage plan for the Township, while the Township awaits the outcome of the Parks & Recreation Master Plan.

Staff have had success on a smaller scale working with Blandford-Blenheim to address coverage for the Innerkip Community Centre, since the retirement of its Facility Manager.

Of concern would be the much more extensive requirements of the entire Township, including the distinct facility management needs of a more complex facility such as the arena in Tavistock.

Regardless of the options noted previously, staff have already approached the outgoing contractor for Tavistock to discuss temporary casual employment for any or all the members of his team to support not only their transition, but to support the facility management option of that Council may choose.

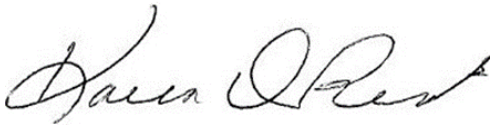
## Financial Implications:

Staff have prepared the current proposed 2022 budget with the equivalent to a full year's funding of the facility management contract, along with funding for the park's maintenance components of the Public Works Department included as part of the Parks and Recreation budget area. At this time staff feel these budget allotments will be more than adequate to address the compensatory requirements under any of the options noted above. Staff will continue to monitor and evaluate the funding requirements of Parks and Recreation throughout the year. Any changes needed would simply be a realignment of costs between functional areas and would maintain the overall 2022 budget funding envelope with no impact on the 2022 tax rate once approved.

## Recommendation:

1. That Council provide staff with direction as to the desired interim recreation service delivery option.

Respectfully submitted by:



Karen DePrest
Chief Administrative Officer/Treasurer

#6.m

# STAFF REPORT

[redacted]

Report #CAO2022-05

To: His Worship the Mayor and Members of Council

From: Karen DePrest, CAO/Treasurer

Re: Updated 2022 Proposed Draft Budgets

Date: March 30, 2022

## Background:

Staff would like to provide Council with a final summary of outstanding items and/or proposed totals for each Department to review, prior to preparing the 2022 Operating and Capital Budget by-law, for possible consideration at the April 20, 2022, meeting of Council.

## Report:

Building, Locates and Drainage + $40,034 (2022-2021)

- No changes since initial presentation on March 2nd.
- Corrected typographical error on the graph on page BLD9 for reduced SWM contribution amount from $204,000 to $180,000.
- *Capital projects are non-tax supported for 2022.*

Corporate Services + $74,383 (2022-2021)

- Minor increase to allocations for cemetery grass cutting. (+$210)
- Added in revenue for Police Records Checks. (-$4,000)
- North Oxford Transit – include budget for 2022?
- *Key capital project for 2022 - Township Office reserve funded.*

Fire Services + $69,678 (2022-2021)

- Reduced Township share of new FPO Officer. (-$2,750)
- *Capital projects primarily reserve funded with SCBA project spanning a 3-year financing strategy 2021-2023*.

Parks and Recreation + $25,431 (2022-2021)

- Addition of a Hickson Trail section for maintenance. ($5,570)
- *Capital projects in Hickson Park $25,000 for discussion, additional project for Innerkip Park contribution of $7,500 toward re-claying of Diamond #1, Tavistock Park $87,000 projects all to be reserve funded in 2022.*

Public Works + $79,850 (2022-2021)

- Additional cost from gravel resurfacing tender. (+$30,163)
- *Capital project adjustments include an additional Public Works pick-up vehicle funded from reserves. John/Henry Streets rehabilitation work to be completed in 2022. Future roads project engineering funding included subject to Council's consideration of the Roads Master Plan recommendations particularly gravel to hardtop works. (Matrix available)*

Treasury Services - $64,051 (2022-2021)

- No changes since initial presentation on March 2nd.
- *No capital budget.*

## Final Draft 2022 Operating and Capital Budget Summary

| Net Budgets By Department | 2021 Approved | 2022 Proposed | Difference (2022 - 2021) | % Change (2022-2021) |
|---|---|---|---|---|
| Building, Locates and Drainage | 388,320 | **428,355** | 40,034 | **0.62%** |
| Corporate Services | 2,128,388 | **2,202,771** | 74,383 | **1.16%** |
| Fire and Protective Services | 1,223,272 | **1,292,950** | 69,678 | **1.08%** |
| Parks and Recreation | 489,751 | **515,182** | 25,431 | **0.40%** |
| Public Works | 3,078,267 | **3,158,117** | 79,850 | **1.24%** |
| Treasury Services | (881,253) | **(945,304)** | (64,051) | **-1.00%** |
| ***Net Tax-Supported Budget Summary*** | **6,426,746** | **6,652,071** | **225,326** | **3.51%** |

| | | | | |
|---|---|---|---|---|
| 2022 Assessment @ 2021 Tax Rates | 6,547,978 | **121,232** | 1.89% | Assessment Increase |
| Tax Levy | 121,232 | **104,094** | 1.62% | Tax Rate |
| | | **225,326** | 3.51% | Total Change |

## Recommendation:

1. That Council direct staff to prepare the 2022 Operating and Capital Budget by-law for consideration at the April 20, 2022, meeting.

Respectfully submitted by:

Karen DePrest
Chief Administrative Officer/Treasurer

#7.a

# THE CORPORATION OF THE

# TOWNSHIP OF EAST ZORRA-TAVISTOCK

# COUNTY OF OXFORD

# BY-LAW # 2022-11

A By-Law to amend Zoning By-Law Number 2003-18, as amended.

WHEREAS the Municipal Council of the Corporation of the Township of East Zorra-Tavistock deems it advisable to amend By-Law Number 2003-18, as amended.

THEREFORE, the Municipal Council of the Corporation of the Township East Zorra-Tavistock, enacts as follows:

1. That Schedule "A" to By-Law Number 2003-18 as amended, is hereby further amended by changing to "RE-1" and the zone symbol of the lands to designated "RE-1" on Schedule "A" attached hereto.

2. That Section 10.5 to By-Law Number 2003-18, as amended, is hereby further amended by deleting subsection 10.5.1 and replacing it with the following:

"10.5.1 **LOCATION: PART LOT 6, CONCESSION 14 (EAST ZORRA), RE-1 (KEY MAP 44)**

10.5.1.1 Notwithstanding any provisions of this Zoning By-Law to the contrary, no *person* shall within any 'RE-1' Zone use any *lot*, or *erect*, *alter* or use any *building* or *structure* for any purpose except the following:

all *uses permitted* in Section 10.2 of this Zoning By-Law;
an *animal kennel*, exclusive of any outdoor runs.

10.5.1.2 Notwithstanding any provision of this Zoning By-Law to the contrary, no *person* shall within any 'RE-1' Zone use any *lot*, or *erect, alter* or use any *building* or *structure* except in accordance with the following provisions:

10.5.1.2.1 SPECIAL PROVISIONS FOR AN ANIMAL KENNEL

10.5.1.2.1.1 An *animal kennel* shall be permitted with an *accessory building*. No outside runs shall be *permitted*.

10.5.1.2.1.2 NUMBER OF ANIMALS *PERMITTED*

A maximum of 10 adult animals shall be *permitted*.

10.5.1.2.2 SPECIAL PROVISIONS FOR AN *ACCESSORY BUILDING*

10.5.1.2.2.1 *GROSS FLOOR AREA*

Maximum **192.4 m²** (2,070.9 ft²)

10.5.1.2.2.2 *ACCESSORY BUILDING* HEIGHT

Maximum **6.7 m** (19.7 ft)

10.5.1. 3 That all provisions of the 'RE' Zone in Section 10.2 to this Zoning By-Law, as amended, shall apply, and further that all other provisions of this Zoning By-Law, as amended, that are consistent with the provisions herein contained shall continue to apply mutatis mutandis."

3. This By-Law comes into force in accordance with Sections 34(21) and (30) of the *Planning Act*, R.S.O. 1990, as amended.

READ a first and second time this 6th day of April, 2022.

READ a third time and finally passed this 6th day of April, 2022.

_____
Don McKay - Mayor

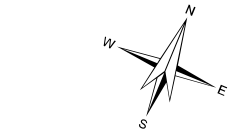
_____
Will Jaques – Clerk

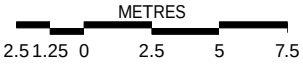
# SCHEDULE "A"

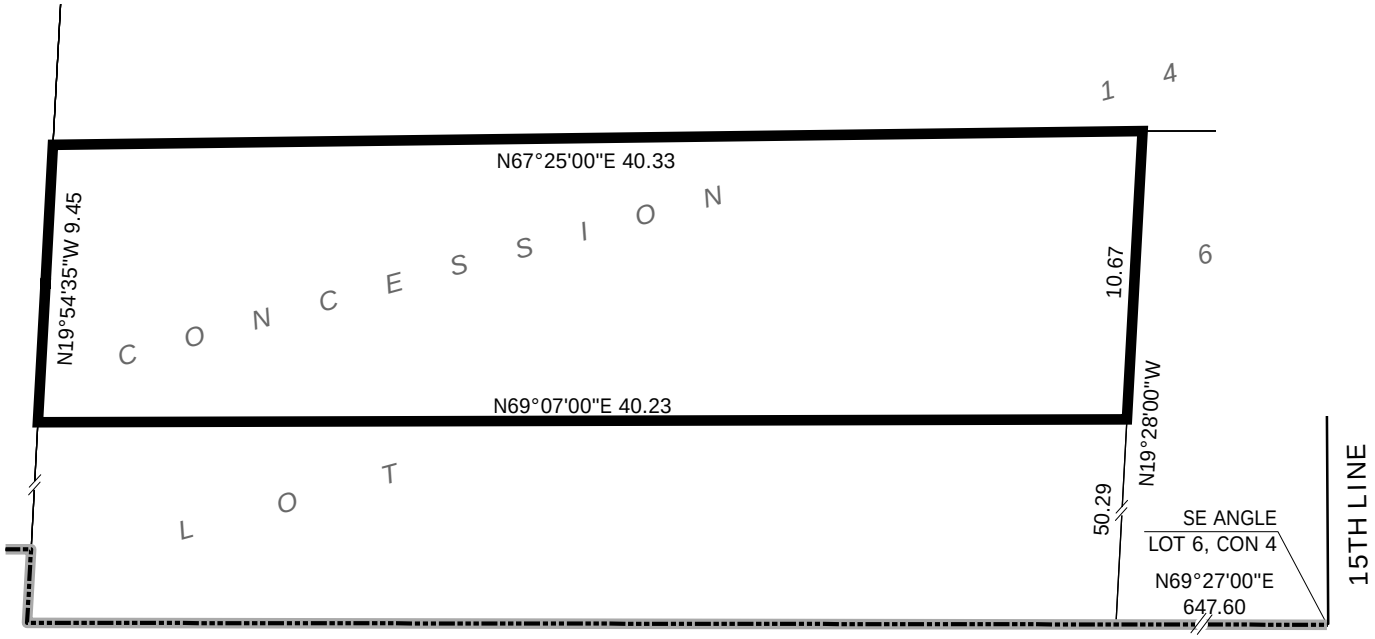
TO BY-LAW No. 2022-11

PT LOT 6, CONCESSION 14 (EAST ZORRA)

TOWNSHIP OF EAST ZORRA-TAVISTOCK




OXFORD ROAD 17

AREA OF ZONE CHANGE TO RE-1

NOTE: ALL DIMENSIONS IN METRES

THIS IS SCHEDULE "A"

TO BY-LAW No. 2022-11, PASSED

THE 6 DAY OF April, 2022

MAYOR

CLERK/ADMINISTRATOR

Oxford County

*Growing stronger together*

Produced By The Department of Corporate Services
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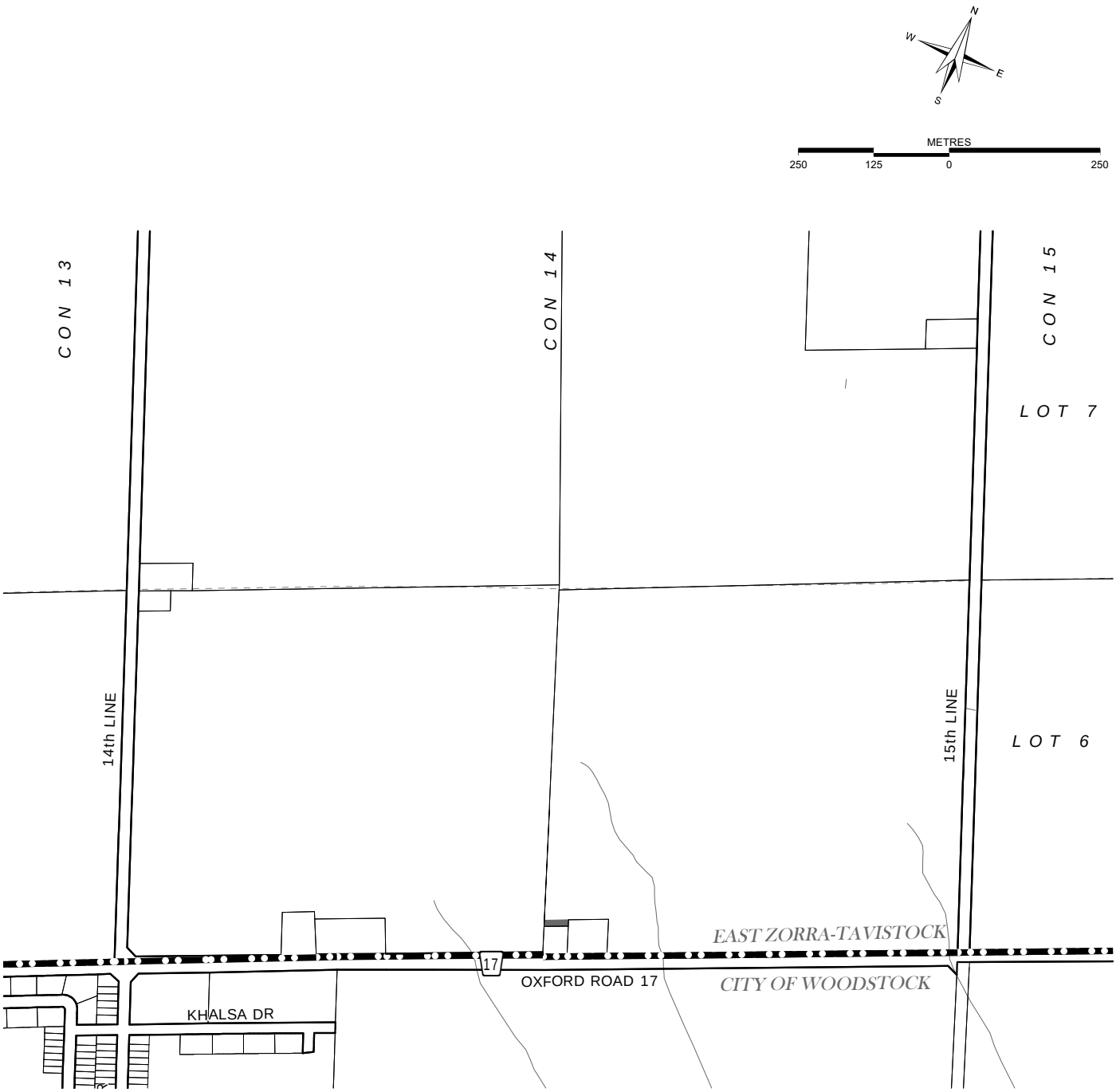
# KEY MAP




LANDS TO WHICH BYLAW __#2022-11__ APPLIES

Oxford County
Growing stronger together

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Information Services ©2022

ZN 2-21-09 & ZN 2-21-10

# TOWNSHIP OF EAST ZORRA-TAVISTOCK

## BY-LAW #2022-11

## EXPLANATORY NOTE

There are two purposes of By-law #2022-11. The first purpose is to rezone the subject property from 'General Agricultural Zone (A2)' to 'Special Residential Existing Lot Zone (RE-1)' to facilitate the construction of a new animal kennel.

The other purpose of By-Law #2022-11 is to amend the existing 'Special Residential Existing Lot Zone (RE-1)' text to permit the construction of a new accessory building to be used as an animal kennel with a maximum gross floor area of 192.4 m² (2,070.9 ft²).

The subject lands are described as Part Lot 6, Concession 14 (East Zorra) in the Township of East Zorra-Tavistock. The lands are located on the north side of Oxford Road 17, lying between 14th Line and 15th Line, and are currently municipally known as 745349 & 745393 Oxford Road 17.

The Township of East Zorra-Tavistock, after conducting the public hearing necessary to consider the application, adopted the amending By-Law #2022-11. The public hearing was held on December 1, 2021. No comments or concern were received from the public.

Any person wishing further information regarding Zoning By-Law #2022-11 may contact the undersigned.

Mr. Will Jaques
Corporate Services Manager/Clerk
Township of East Zorra-Tavistock
90 Loveys Street
Hickson, Ontario
NOJ 1L0

Telephone: 519 462-2697

File: ZN2-21-09 (Donald and Marc Lazenby) &
ZN 2-21-10 (Bess and Teddy Shuster)
Report No: 2021-407

#7.b

# THE CORPORATION OF THE

# TOWNSHIP OF EAST ZORRA-TAVISTOCK

# COUNTY OF OXFORD

# PARKER DRAIN 2022

# BY-LAW #2022 - 07

---

BEING a by-law to provide for drainage works in the Township of East Zorra-Tavistock, in the County of Oxford.

WHEREAS in accordance with the provisions of The Drainage Act, R.S.O. 1990, certain drainage works has been requested on the following lands:

Pt. Lots 17-20, Concessions 9 & 10

AND WHEREAS the Council of the Township of East Zorra-Tavistock in the County of Oxford has procured a report by Mr. Curtis MacIntyre of the firm of K. Smart & Associates Ltd. of Kitchener, Ontario and the report shall be attached hereto and form part of this by-law;

AND WHEREAS the estimated total cost of constructing the drainage works is $725,000.00;

AND WHEREAS the Council is of the opinion that drainage of the area is desirable;

THEREFORE the Council of the Township of East Zorra-Tavistock, pursuant to The Drainage Act, R.S.O. 1990 ENACTS AS FOLLOWS:

1. The report dated February 3, 2022, is hereby adopted and the drainage works as therein set forth is hereby authorized, and shall be completed in accordance therewith.

2. (1) The Corporation of the Township of East Zorra-Tavistock may borrow on the credit of the Corporation the amount of $725,000.00 being the amount necessary for construction of the drainage works.

(2) The Corporation may arrange for the issue of debentures in the name of the County of Oxford for the amount borrowed less the total amount of
(a) grants received under Section 85 of The Act;
(b) commuted payments made in respect of lands and roads assessed within the municipality;
(c) moneys paid under Subsection 61(3) of The Act; and
(d) moneys assessed in and payable by another municipality

and such debentures shall be made payable within five (5) or ten (10) years from the date of the debenture and shall bear interest at the prevailing rates at the time the said debenture is sold by the County of Oxford.

3. For paying the amount of $456,419.00 being
(a) the amount assessed upon the lands and roads in the Township of East Zorra-Tavistock, except the lands and roads belonging to or controlled by the Municipality and
(b) the amount required to pay interest on the portion of the amount borrowed represented by the amount in Clause (a)

Less the total amount of
(c) grants under Section 85 of The Act
(d) commuted payments made in respect of the lands and roads assessed

4. For paying the amount of $34,376.00 being
a) the amount assessed upon the lands and roads belonging to or controlled by the Municipality
b) the amount required to pay interest on the portion of the amount borrowed represented by the amount in Clause (a)

A special rate shall be levied upon lands and roads as set forth in "Schedule of Assessments" to be collected in the same manner and at the same time as other taxes are collected.

The amount of the special rate levied upon each parcel of land or part thereof shall be divided into five (5) or ten (10) equal amounts and one such amount shall be collected in each year for five (5) or ten (10) years after the passing of this by-law.

5. This by-law shall come into force on the passing thereof, and may be cited as the PARKER DRAIN 2022.

**READ A FIRST AND SECOND TIME THIS 2nd DAY OF MARCH, 2022.**

Will Jaques, Clerk

Don McKay, Mayor

**READ A THIRD TIME AND FINALLY PASSED THIS ___ DAY OF _____, 2022.**

_____ _____

Clerk Mayor

# NOTICE OF COURT OF REVISION
# PARKER DRAIN 2022

You are hereby advised that the Drainage Court of Revision for the PARKER DRAIN 2022 will be held on Wednesday, April 6, 2022, at the Innerkip Community Centre, 695566 17th Line, Innerkip, Ontario at 9:15 a.m. Any owner may appeal his/her assessment to the Court of Revision by giving written notice to the undersigned on or before Monday March 28, 2022, at 4:30 p.m.

Will Jaques, Clerk
Township of East Zorra-Tavistock
Hickson, Ontario N0J 1L0

Also take notice that in accordance with The Drainage Act any owner or public utility affected by the drainage works, if dissatisfied with the report of the Engineer on the grounds that:

(a) the benefits to be derived from the drainage work are not commensurate with the estimated cost thereof;

(b) the drainage works should be modified on the grounds to be stated;

(c) the compensation or allowances as provided by the Engineer are inadequate or excessive;

may appeal to the Tribunal. In every case, a written notice of appeal shall be served upon the Council of the initiating municipality within forty (40) days after the mailing of this notice.

**DATED: March 2, 2022**

#10

# THE CORPORATION OF THE

# TOWNSHIP OF EAST ZORRA-TAVISTOCK

# COUNTY OF OXFORD

# BY-LAW # 2022 - 12

---

Being a by-law to confirm all actions and proceedings of the Council.

**NOW THEREFORE THE COUNCIL OF THE TOWNSHIP OF EAST ZORRA-TAVISTOCK ENACTS AS FOLLOWS:**

All actions and proceedings of the Council taken at its meeting held on the 6th day of April, 2022 except those taken by By-law and those required by law to be done by resolution are hereby sanctioned, ratified and confirmed as though set out herein provided, however, that any member of this Council who has dissented from any action or proceeding or has abstained from discussion and voting thereon shall be deemed to have dissented or abstained, as the case may be, in respect of this By-law as it applies to such action or proceeding.

**READ A FIRST, SECOND AND THIRD TIME AND FINALLY PASSED THIS 6th DAY OF APRIL, 2022.**

_____

Don McKay, Mayor

seal

_____

Will Jaques, Clerk