THE CORPORATION OF THE TOWNSHIP OF NORTH GLENGARRY
Regular Meeting of Council

Agenda

Monday December 9, 2024, at 6 p.m.
Council Chambers
3720 County Road 34
Alexandria, Ontario K0C 1A0

THE MEETING WILL OPEN WITH THE CANADIAN NATIONAL ANTHEM

1. **CALL TO ORDER**

2. **DECLARATION OF PECUNIARY INTEREST**

3. **ACCEPT THE AGENDA (Additions/Deletions)**

4. **ADOPTION OF PREVIOUS MINUTES**

   Regular Meeting of Council Minutes – Monday November 25, 2024

5. **DELEGATIONS**

   Habitat for Humanity Cornwall & SDG: Community Engagement Coordinator - Brekyn Caers and Executive Director- Leigh Taggart

   EVB Engineering: Alexandria Inflow and infiltration – Vice President Marco Vincelli

6. **STAFF REPORTS**

   a. Building, Planning & By-law Department

      1.BP 2024-30: Zoning By-law Amendment Z-09-2024 La Gantoise Inc

   b. Community Services Department

      1. CS 2024-35: 2025 Community Grants

   c. Treasury Department

      1. DR 2024-06: Meeting to consider a Minor Improvement on the Real Diotte Branch of the R.A McLennan Drain

2. DR 2024-07: Court of Revision Appointment – County Road Branch of the Cumming Drain

7. **UNFINISHED BUSINESS**

8. **CONSENT AGENDA**

9. **NEW BUSINESS**

10. **NOTICE OF MOTION**

Next Regular Meeting of Council

Monday January 6, 2025, at 6 pm. in the Council Chambers, 3720

County Road 34, Alexandria, Ontario

Note: Meetings are subject to change and cancellation

11. **QUESTION PERIOD**
(Limit of one question per person and subsequent questions will be at the discretion of the Mayor/Chair)

12. **CLOSED SESSION**

13. **CONFIRMATION BY-LAW**
a. By-law 57-2024

14. **ADJOURNMENT**

THE CORPORATION OF THE TOWNSHIP OF NORTH GLENGARRY

Regular Meeting of Council

Minutes

Monday, November 25, 2024, 6:00 p.m

Council Chamber

3720 County Road 34

Alexandria, On. K0C 1A0

PRESENT: Mayor: Jamie MacDonald

Deputy Mayor: Carma Williams

Councillor: Jacques Massie

Councillor: Jeff Manley

Councillor: Michael Madden

Councillor: Brian Caddell

Councillor: Gary Martin

ALSO PRESENT: CAO/Clerk: Sarah Huskinson

Deputy Clerk: Jena Doonan

Treasurer & Director of Finance: Zoe Bougie

Director of Community services: Stephanie MacRae

Director of Public Works: Tim Wright

1. CALL TO ORDER

2. DECLARATIONS OF PECUNIARY INTEREST

3. ACCEPT THE AGENDA (Additions/Deletions)

Resolution No. 1

Moved by: Carma Williams
Seconded by: Jacques Massie

THAT the Council of the Township of North Glengarry accepts the agenda of the Regular Meeting of Council on Monday November 25, 2024, as amended.

Carried

4. ADOPTION OF PREVIOUS MINUTES

Resolution No. 2

Moved by: Jacques Massie
Seconded by: Jeff Manley

THAT the minutes of the following meeting(s) be adopted as circulated.

- Regular Meeting of Council Minutes- Monday November 12, 2024.

- Committee of the Whole Minutes – Wednesday November 20, 2024.

Carried

5. DELEGATION(S)

Maxville Manor Redevelopment – Director of the Maxville Board of Directors Alison McDonald, Maxville Manor Building Committee member Bernard McDonnell.

Director of the Board of Directors Alison McDonald and Maxville Monor Building Committee member Bernie provided Council an update on the Maxville Manors Redevelopment plans and requested Council's assistance in the redevelopment process.

6. STAFF REPORTS

a. Administrative Department

1. AD 2024-09: EOWC Support Resolution

Resolution No. 3
MOVED BY: Michael Madden
SECONDED BY: Jeff Manley

WHEREAS Eastern Ontario's small rural municipalities face insurmountable challenges to fund both new growth related infrastructure and ongoing maintenance of their capital assets including local roads and bridges, clean water, wastewater, waste facilities, and municipally owned buildings including recreational facilities and libraries; and

WHEREAS the Federation of Canadian Municipalities has calculated that Municipal Governments across Canada are responsible for approximately 60 percent of public infrastructure that supports our economy and quality of life, but only receive 10 cents of every tax dollar; and

WHEREAS the Eastern Ontario Wardens' Caucus (EOWC) region's capital infrastructure deficit has increased by 58 percent since 2011 and is now at $6 billion, and growing; and

WHEREAS in 2018, the Ontario Government mandated all Ontario municipalities to develop and fully fund capital asset management plans by July 2025; and

WHEREAS the EOWC has released a regional Municipal Infrastructure Policy Paper showing key infrastructure data, opportunities and challenges in small rural municipalities across Eastern Ontario; and

WHEREAS Eastern Ontario is a growing economy that can grow more with sustainable, innovative infrastructure partnership and investment from the Federal and Ontario Governments; and

WHEREAS the infrastructure deficit for small rural municipalities cannot be adequately addressed through property tax revenue, restricted municipal borrowing capacity, and municipalities limited ability to generate revenue; and

WHEREAS small rural taxpayers cannot afford dramatic increases to pay for the current and future infrastructure.

NOW THEREFORE BE IT RESOLVED THAT municipality joins the Eastern Ontario Wardens' Caucus, the Association of Municipalities of Ontario, and the Federation of Canadian Municipalities in calling on the Federal and Ontario Governments to immediately and sustainably partner with Municipal Governments by investing in both the new and

ongoing maintenance and repairs of municipal infrastructure in Eastern Ontario's small rural municipalities; and

THAT the Federal and Ontario Governments immediately review data and work together to implement solutions based on the EOWC's Municipal Infrastructure Policy Paper in partnership with small rural municipalities; and

FINALLY THAT this resolution be forwarded to The Honourable Justin Trudeau, Prime Minister of Canada, The Honourable Sean Fraser, Minister of Housing, Infrastructure and Communities of Canada; The Honourable Doug Ford, Premier of Ontario; The Honourable Kinga Surma, Ontario Minister of Infrastructure; The Honourable Paul Calandra, Ontario Minister of Municipal Affairs and Housing; The Honourable Lisa Thompson, Ontario Minister of Rural Affairs; The Honourable Peter Bethlenfalvy, Ontario Minister of Finance; The Honourable Prabmeet Sakaria, Ontario Minister of Transportation; The Honourable Victor Fedeli, Ontario Minister of Economic Development, Job Creation and Trade; Local MP; Local MPP; Federation of Canadian Municipalities; Association of Municipalities of Ontario; Canada Mortgage and Housing Corporation; Rural Ontario Municipal Association; Eastern Ontario Wardens' Caucus.

Carried

b. Treasury Department

1. TR 2024-18: Third Quarter Variance Report

Resolution No. 4

MOVED BY: Jeff Manley
SECONDED BY: Michael Madden
THAT the Council of the Township of North Glengarry receives staff report TR 2024-18, Third Quarter Variance Report for information purposes only.

Carried

c. Public Works Department

1. PW 2024-33: EV Ontario Charger Grant

Resolution No. 5

MOVED BY: Gary Martin
SECONDED BY: Jacques Massie

THAT the Council of the Township of North Glengarry receives staff report PW-2024-33, EV Charge Ontario Grant Application; and

THAT the Council of the Township of North Glengarry authorizes the Director of Public Works to enter into an agreement on behalf of the Township of North Glengarry with the Ministry of Transportation for funding to construct an EV charging station in Alexandria.

Carried

d. Community Services Department

1. CS 2024-35: South Nation Conservation Municipal Tree Planting Partnership

Resolution No. 6

MOVED BY: Jeff Manley
SECONDED BY: Michael Madden

THAT the council of the Township of North Glengarry receives staff report CS 2024-35: South Nation Conservation Municipal Tree Plating Partnership; and

WHEREAS, the Township of North Glengarry has an interest in increasing urban tree canopy within the municipality; and

WHEREAS, South Nation River Conservation Authority is applying for a funding opportunity from the Federation of Canadian Municipalities' Growing Canada's Community Canopies initiative for "Improving Tree Canopies in Eastern Ontario - A Municipal Tree Planting Partnership", and

THAT the Council of the Township of North Glengarry also recognizes that the lifetime contribution from the Growing Canada's Community Canopies initiative will not exceed $10 million for tree planting within our municipality, inclusive of a maximum contribution of $1 million for infrastructure activity costs, and that if approved this project will be counted towards that limit; and

THAT the Council of the Township of North Glengarry approves partnering with South Nation River Conservation Authority on the funding submission to Growing Canada's Canopies and, if approved, will contribute $5,000 towards this initiative.

Carried

7. UNFINISHED BUSINESS

8. CONSENT AGENDA

Resolution No. 7

Moved by: Brian Caddell
Seconded by: Michael Madden

THAT the Council of the Township of North Glengarry receives the item(s) from the consent agenda for informational purposes only.

Carried

9. NEW BUSINESS

1. Urging the Government to Promptly Resume the Assessment Cycle

Resolution No. 8

Moved By: Carma Williams

Seconded By: Jamie MacDonald

WHEREAS the assessment cycle is an essential process for maintaining the fairness and predictability of property taxes in our province and;

WHEREAS the pause in the reassessment cycle has created uncertainty and instability in property taxation, impacting both residential and commercial property owners and;

WHEREAS the government has delayed an assessment update again in 2024, resulting in Ontario's municipalities continuing to calculate property taxes using 2016 property values and;

WHEREAS both current and outdated assessments are inaccurate, increase volatility, and are not transparent and;

WHEREAS frequent and accurate reassessments are necessary to stabilize properly taxes and provide predictability for property owners, residents, and businesses alike and;

WHEREAS the staff at the Municipal Property Assessment Corporation would benefit from further skills enhancement and training in assessments, recognizing the importance of ensuring accurate evaluations for 100% of our municipality and;

WHEREAS the Government has announced a review of the property assessment and taxation system with a focus on fairness, equity, and economic competitiveness, and therefore further deferring new property assessment and;

NOW THEREFORE BE IT RESOLVED THAT the Council of the Corporation of the Township of North Glengarry hereby calls upon the Premier to promptly resume the assessment cycle to ensure the stability and predictability of property taxes while the Government conducts its review of the property assessment and taxation system, or respond with an alternative method for every municipality in Ontario to achieve fair taxation and;

FURTHERMORE, THAT all Municipalities in Ontario and their constituents are encouraged to apply pressure to the Premier, daily, weekly, and monthly, to resolve the situation before it causes undo stress to everyone in the Municipality and;

FINALLY RESOLVED THAT a copy of this resolution be forwarded to the Premier Doug Ford, the Association of Municipality in Ontario, the Rural Ontario Municipalities Association, the Federation of Northern Ontario Municipalities, the Municipal Property Assessment Corporation, and all municipalities in Ontario for their consideration, to make proper changes as quickly and efficiently as possible.

10. NOTICE OF MOTION

11. QUESTION PERIOD

12. CLOSED SESSION BUSINESS

Resolution No. 9

Moved by: Jeff Manley
Seconded by: Carma Williams

Proceed "In Closed Session"

As this matter deals with litigation or potential litigation, including matters before administrative tribunals affecting the municipality or local board they may be discussed in closed session under sections 239 (2)(e) of the *Ontario Municipal Act*);

Carried

Resolution No. 11

Moved by: Michael Madden
Seconded by: Gary Martin

THAT we return to the regular Meeting of Council at 8:09 p.m

Carried

13. CONFIRMING BY-LAW

Resolution No. 12

Moved by:
Seconded by:

THAT the Council of the Township of North Glengarry adopts by-law 54-2024 being a

by-law to adopt, confirm and ratify matters dealt with by Resolution; and

THAT By-law 54-2024 be read a first, second, third time and enacted in Open Council this 25th day of November 2024.

Carried

14. ADJOURN

Resolution No. 13

Moved by: Jacques Massie
Seconded by: Jeff Manley

THERE being no further business to discuss, the meeting was adjourned at 8:10 p.m.

Carried

CAO/Clerk/Deputy Clerk

Mayor/Deputy Mayor

Habitat for Humanity®
Cornwall & The Counties

Who we are

We bring communities together to help community members build **strength**, **stability** and **independence** through affordable housing solutions.

Habitat for Humanity® Cornwall & The Counties

We belong to a global network committed to a world where everyone has a decent place to live.

Habitat for Humanity International

Habitat for Humanity Canada

Local Habitat for Humanity Organizations

Habitat for Humanity® Cornwall & The Counties

We have served our communities for more than 25 years

21 homes builds including 3 in 2024!

Habitat for Humanity® Cornwall & The Counties

Why housing matters?

The housing crisis in Canada impacts our social and economic well-being.

According to Statistics Canada, Cornwall residents have identified:

- 11.8% of their homes needed major repairs
- 3.2% of their homes cost more than 30% of household income, was not suitable for their situation *and* needed major repairs
- 3.9% are considered to be in core housing need

Habitat for Humanity® Cornwall & The Counties

Affordable housing is a top concern for Canadians

- Housing affordability is the third most important issue facing the country today, behind inflation and healthcare
- Nine-in-ten Canadians believe there is a shortage of affordable housing in Canada
- One-quarter (27%) of Canadians are feeling pessimistic about whether much can be done to deal with Canada's housing problems, especially Millennials (34%) compared to Gen Zers, Gen Xers and Boomers

Habitat for Humanity® Cornwall & The Counties

Source: "Habitat for Humanity Canada's Affordable Housing Survey, November 2022

We can transform lives and communities with affordable housing solutions.

- Three quarters of Canadians believe that affordable housing could solve the social issues we're currently facing as a country. Affordable housing solutions lead to:
  - Increased employment quality and income
  - Better educational opportunities
  - More physically active and improved health
  - Greater engagement in the community and society

Habitat for Humanity® Cornwall & The Counties

Source: "Habitat for Humanity Canada's Affordable Housing Survey, November 2022

How Habitat is helping

At Habitat, we believe everyone has the right to a safe and decent place to live, and that it benefits all of society when they do. That's why we're launching our **Critical Repairs Program**: to keep people in their affordable homes safer and longer.

Habitat for Humanity® Cornwall & The Counties

Why now?

Habitat provides low-income homeowners the opportunity to invest in themselves.

- ✓ Helps bridge the income inequality gap
- ✓ Provides peace of mind, knowing they have community support
- ✓ Keeps people in their homes safer, longer
- ✓ Remain in their homes with pride and dignity

Habitat for Humanity® Cornwall & The Counties

How it works

1

Projects will be assessed by our team to make sure the repair or modification is appropriate for the home

2

Work will be done by Habitat Cornwall

3

Participants will pay back an interest free loan, which will be used to fund future affordable housing projects

Habitat for Humanity® Cornwall & The Counties

Township Support

All townships are being approached for similar support

Local contributions remain local

Positive economic impact

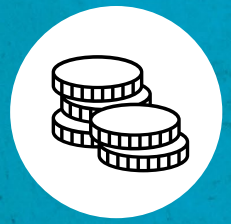
Support now supports future Critical Repairs projects

Habitat for Humanity® Cornwall & The Counties

Habitat projects have benefits that go beyond an individual home

For every $1 invested in Habitat for Humanity, approximately $4 is returned to society.

37% of Habitat families were in social housing before moving into their Habitat home.



70% of Habitat families donate their time and money to charity.

Homeowners' quality of employment increased after moving into a Habitat home. Habitat families also work fewer jobs and report greater stability.

Children who grow up in Habitat homes are more likely to achieve a bachelor's degree or higher.

Habitat for Humanity® Cornwall & The Counties

*Boston Consulting Group 2015

Thank you

Questions?

Habitat for Humanity®
Cornwall & The Counties

ALEXANDRIA INFLOW AND INFILTRATION

THE TOWNSHIP OF NORTH GLENGARRY

DECEMBER 9th, 2024

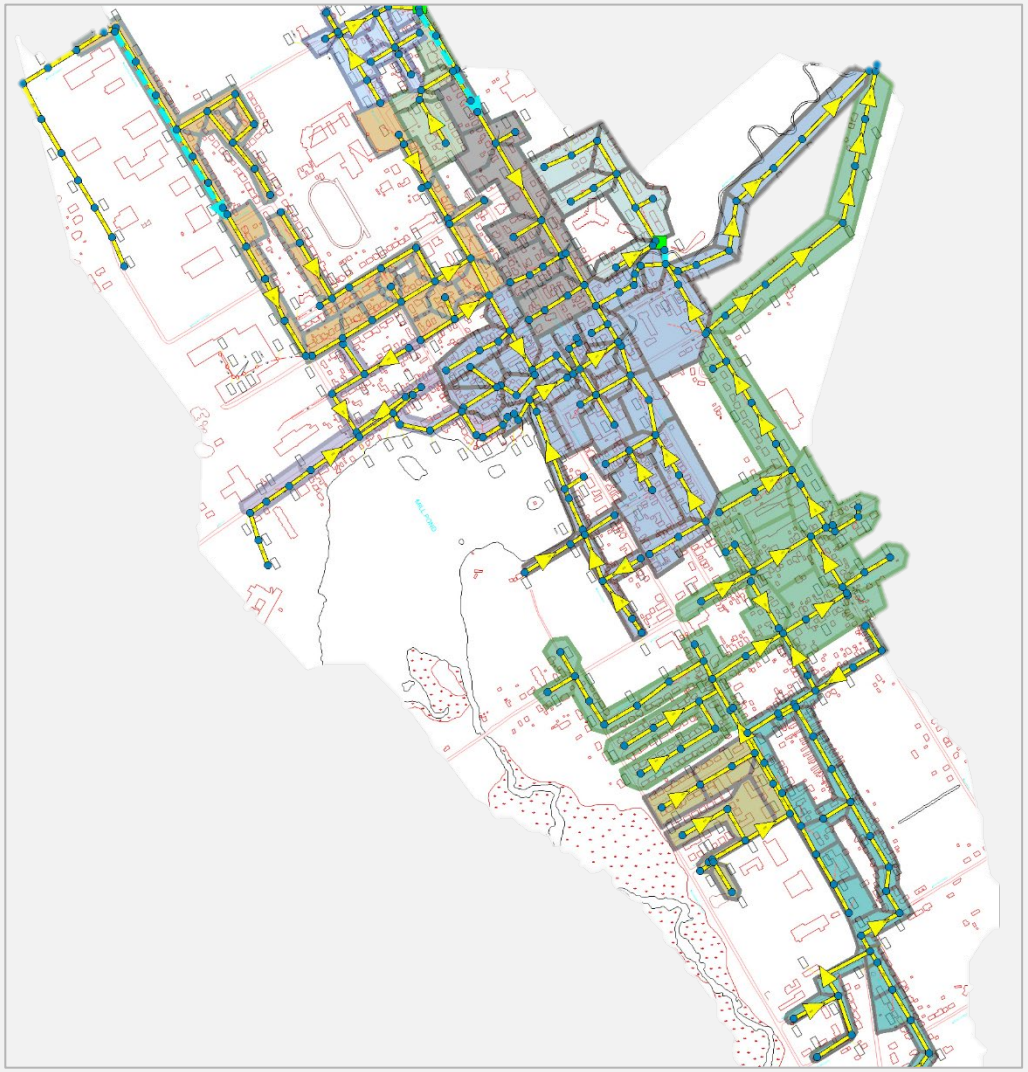
INTRODUCTION – INFLOW AND INFILTRATION

- Infiltration/Inflow (I/I)describes the migration of groundwater and surface water into the sanitary sewer system.
  - Infiltration – groundwater/surface water entering through defective pipe joints and broken pipes.
  - Inflow – groundwater/surface water entering through inappropriate connections (i.e. sump pumps, roof drains, etc.).
- I/I consumes capacity in both the wastewater collection system and the wastewater treatment plant (Alexandria Lagoons).

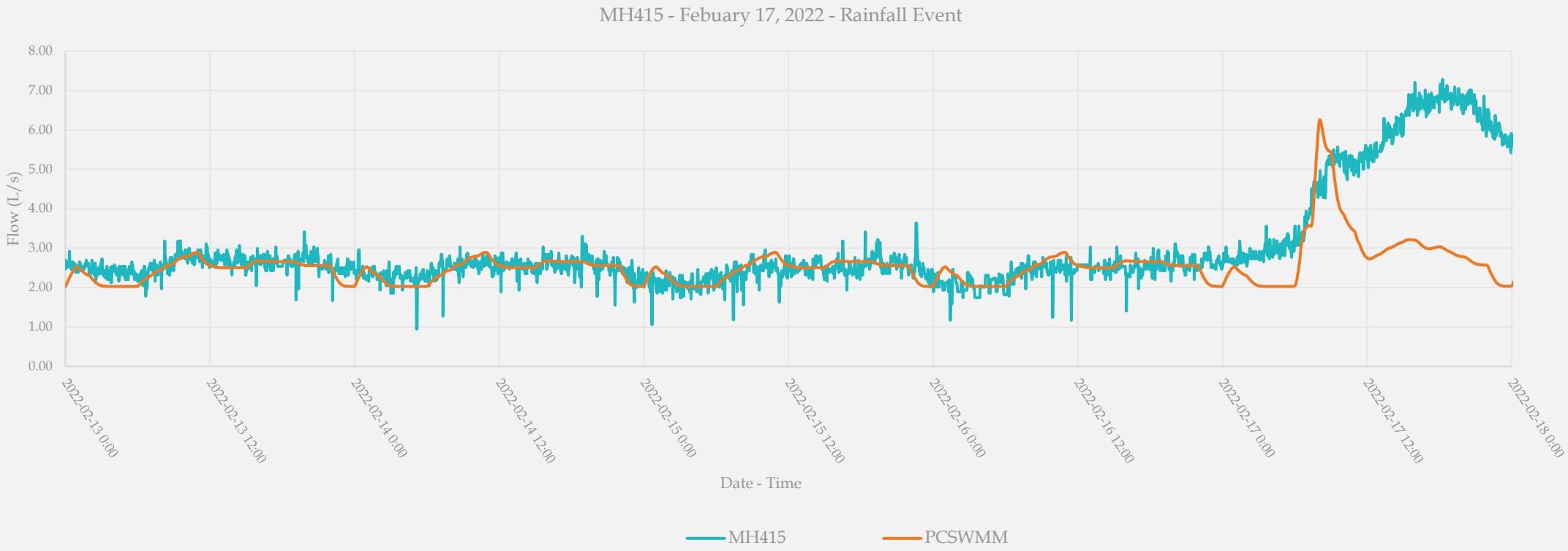
Quantifying Infiltration/Inflow

- Closed Circuit Television (CCTV) Inspection of sewers – identifies leaks into the system as well as sources of inflow.
  - Township has a CCTV inspection program
  - Critical to asset management planning
- EVB undertook the creation of a Sewer Model
  - Recreate the sanitary sewer system in a 3D program.
  - Monitor the flows at critical junctions in the sanitary sewer system.
  - Corelate flows to precipitation.
  - Simulate flows to demonstrate sewer capacity.

I/I Report Findings



Example Trending from Model



Evaluation Criteria for Sanitary System

1. Pipe Capacity

- 4 – Surcharged: **Pipe Capacity ≥ 100%**
- 3 – Poor: **100% > Pipe Capacity ≥ 80%**
- 2 – Fair: **80% > Pipe Capacity ≥ 50%**
- 1 – Good: **50% < Pipe Capacity**

2. Flood Conditions

- 3 – Flooding: **Depth of Water ≥ Depth at Rim**
- 2 – Poor: **Depth of Water < 2m Below Rim**
- 1 – Good: **Depth of Water > 2m Below Rim, & Above Obvert**

EVB ENGINEERING

Evaluation Summary – Sewage Pumping Stations

Table 31 – Leroux Pumping Station – Dry & Wet Weather Flows, Peak & Firm Capacity

RAIN EVENT		FLOW RECIEVED PCSWMM (L/s)	FIRM CAPACITY (L/s)	FIRM CAPACITY RATING	PEAK CAPCITY (L/s)	PEAK CAPACITY RATING
09-July-2022	Dry Weather	1.56	19.60	Good	25.31	Good
23-Aug-2022	2 – Year Storm	13.46	19.60	Good	25.31	Good
12-Oct-2022	5 – Year Storm (Theoretical)	15.83	19.60	Good	25.31	Good
05-Oct-2022	10 – Year Storm (Theoretical)	18.36	19.60	Fair	25.31	Good
04-Oct-2022	100- Year Storm (Theoretical)	21.3	19.60	Severe	25.31	Good

Table 35 - Sandfield Pumping Station - Peak & Firm Capacity

RAIN EVENT		FLOW RECIEVED PCSWMM (L/s)	FIRM CAPACITY (L/s)	FIRM CAPACITY RATING	PEAK CAPACITY (L/s)	PEAK CAPACITY RATING
28-April-2022	Dry Event	3.2	14.8	Good	16.69	Good
23-Aug-2022	2 - Year Storm	3.35	14.8	Good	16.69	Good
12-Oct-2022	5 - Year Storm (Theoretical)	4.09	14.8	Good	16.69	Good
05-Oct-2022	10 – Year Storm (Theoretical)	4.52	14.8	Good	16.69	Good
04-Oct-2022	100- Year Storm (Theoretical)	14.87	14.8	Severe	16.69	Fair

Table 33 - Bishop Pumping Station - Peak & Firm Capacity

RAIN EVENT		FLOW RECIVED PCSWMM (L/s)	FIRM CAPACITY (L/s)	FIRM CAPACITY RATING	PEAK CAPACITY (L/s)	PEAK CAPACITY RAING
28-April-2022	Dry Event	5.51	10.5	Good	17.4	Good
23-Aug-2022	2 - Year Storm	12.15	10.5	Severe	17.4	Fair
12-Oct-2022	5 - Year Storm (Theoretical)	24.68	10.5	Severe	17.4	Severe
05-Oct-2022	10 – Year Storm (Theoretical)	28.99	10.5	Severe	17.4	Severe
04-Oct-2022	100- Year Storm (Theoretical)	33.43	10.5	Severe	17.4	Severe

Table 37 - Main Pumping Station Firm & Peak Capacities

RAIN EVENT		NORTH TRUNK PCSWMM (L/s)	SOUTH TRUNK PCSWMM (L/s)	TOTAL RECEIVED FLOWS (L/s)	FIRM CAPACITY (L/s)	FIRM CAPACITY	PEAK CAPACITY (L/s)	PEAK RATING
28-Jan-2022	Dry Event	31.6	22.19	53.79	65	Good	295	Good
16-May-2022	2 -Year	131	93	224	65	Severe	295	Fair
12-Oct-2022	5 - Year Storm (Theoretical)	144	160	304	65	Severe	295	Severe
05-Oct-2022	10 – Year Storm (Theoretical)	167	171	333	65	Severe	295	Severe
04-Oct-2022	100- Year Storm (theoretical)	194	206	400	65	Severe	295	Severe

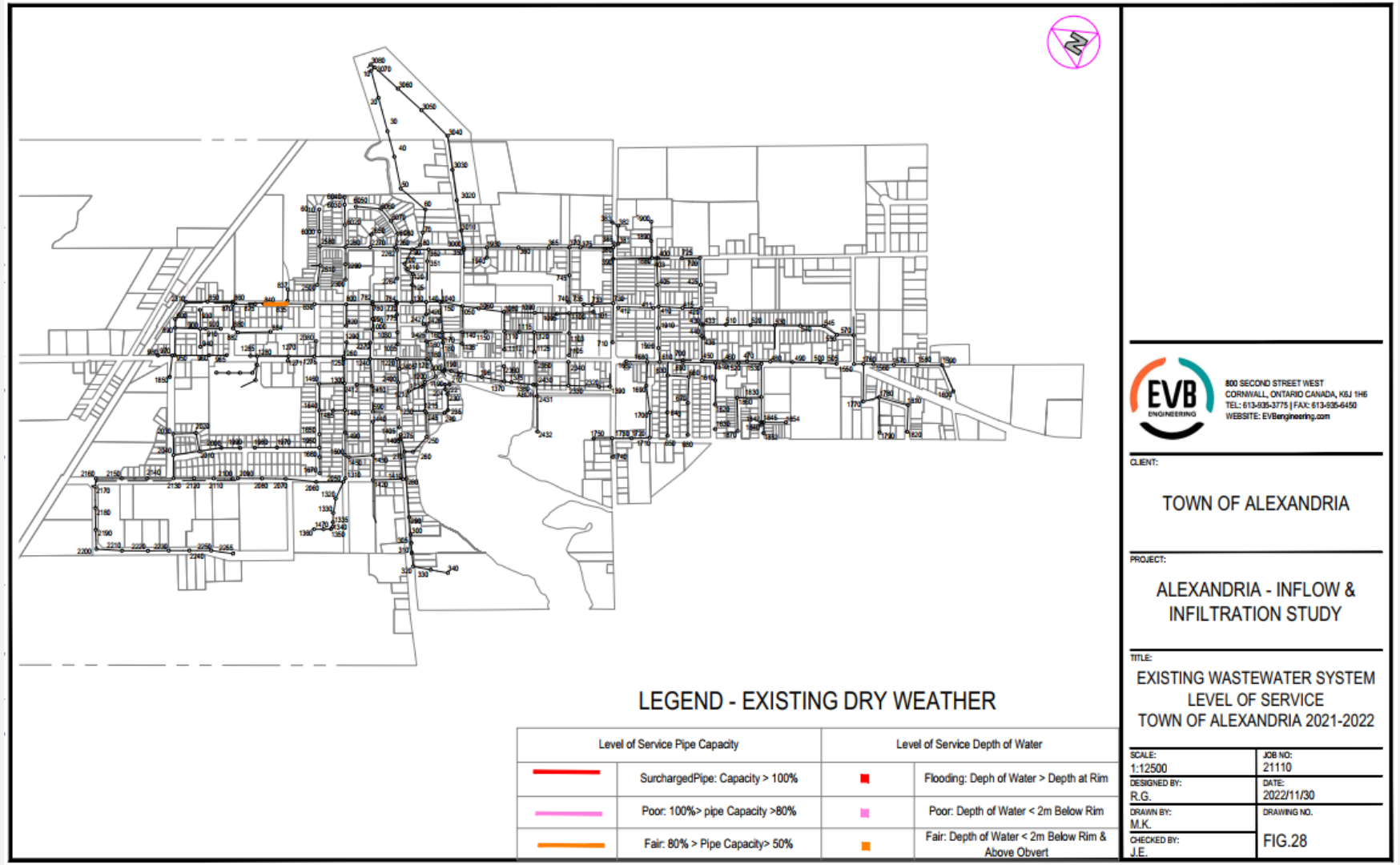
EVB ENGINEERING

Evaluation Summary – Sanitary Collection System

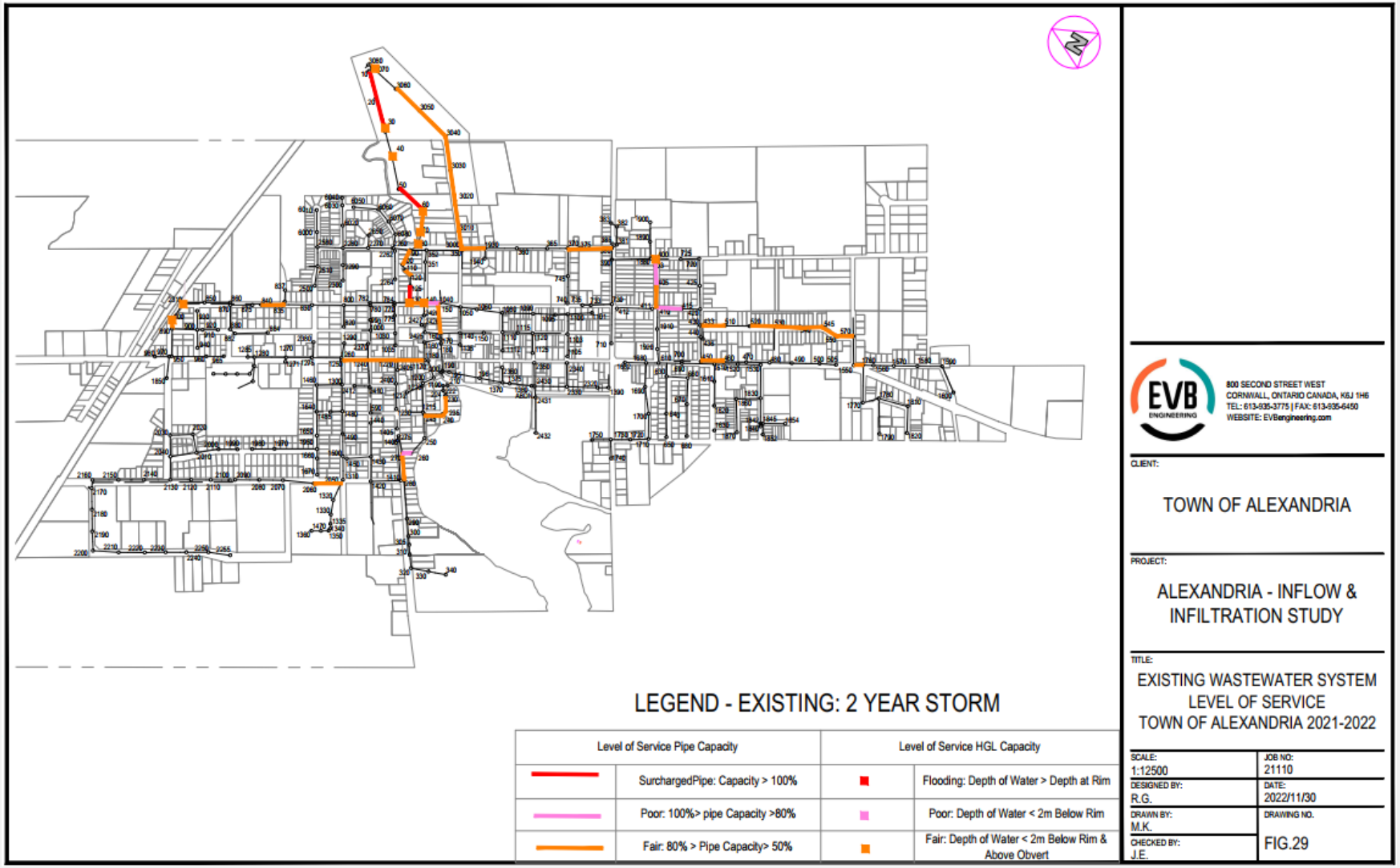
TABLE 18 - WET WEATHER SANITARY SEWER PIPE CAPACITY SUMMARY

RAINFALL	GOOD (CAPACITY < 50%)	FAIR (80% > CAPACITY > 50%)	POOR (100% > CAPACITY > 80%)	SURCHARGING (CAPACITY> 100%)
2 YEAR	87% (273 Sections)	10% (31 Sections)	2% (5 Sections)	1% (3 Sections)
5 YEAR	82% (256 Sections)	9% (29 Sections)	3% (11 Sections)	5% (16 Sections)
10 YEAR	76% (243 Sections)	10% (32 Sections)	5% (17 Sections)	6% (20 Sections)
100 YEAR	77% (241 Sections)	10% (31 Sections)	5% (18 Sections)	7% (22 Sections)

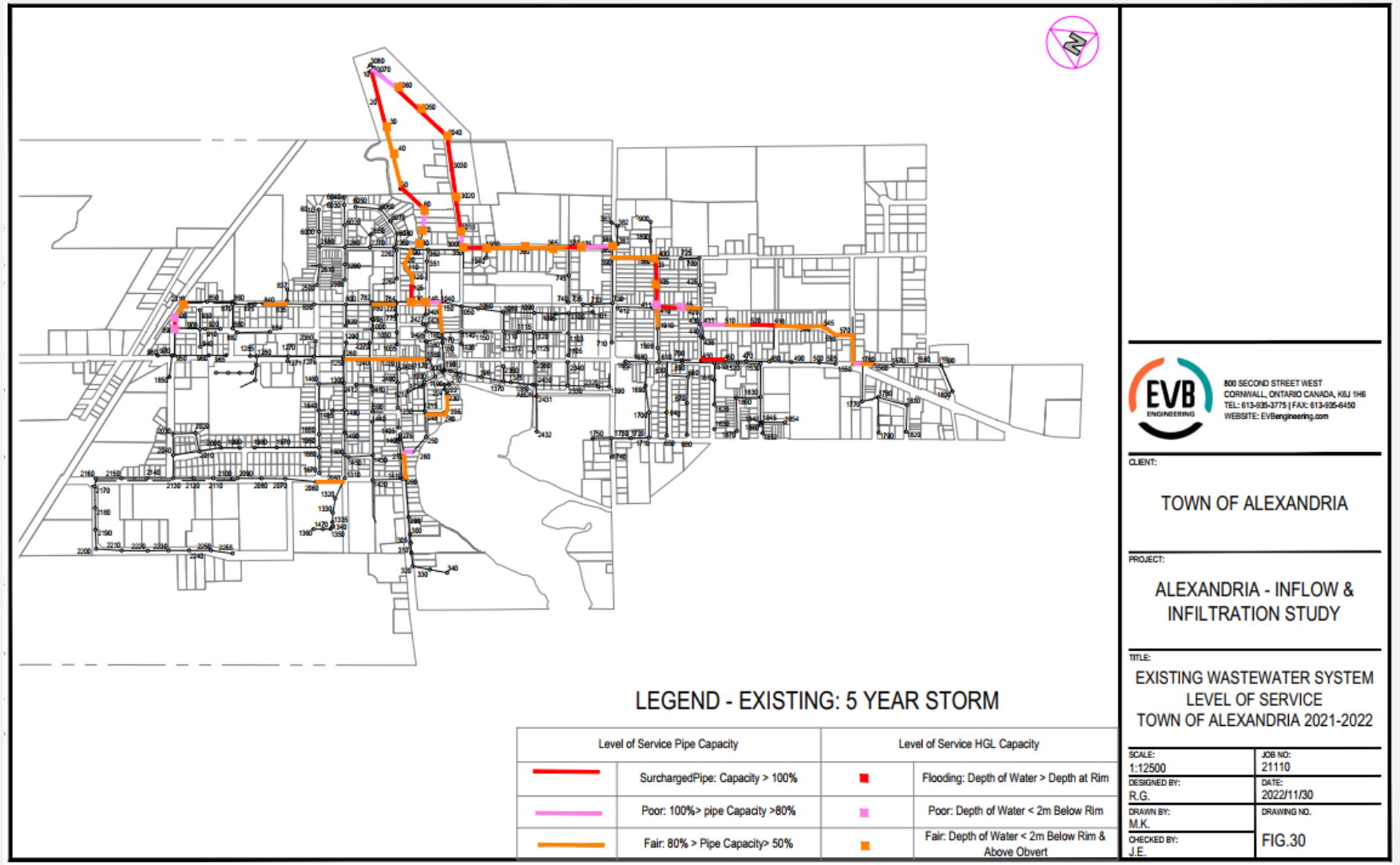
I/I Figures – Dry Weather Baseline



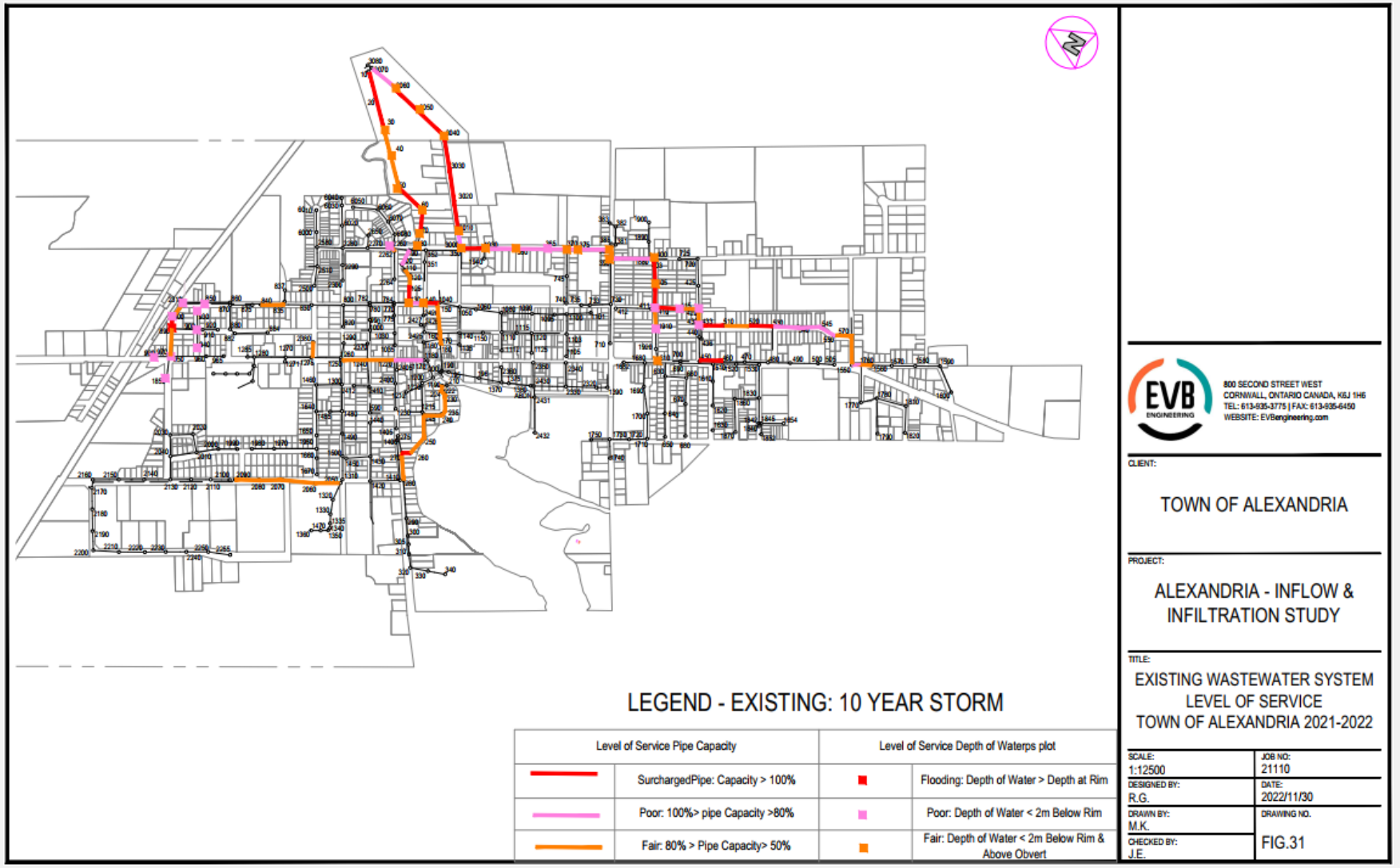
I/I Figures – 2-Year Storm



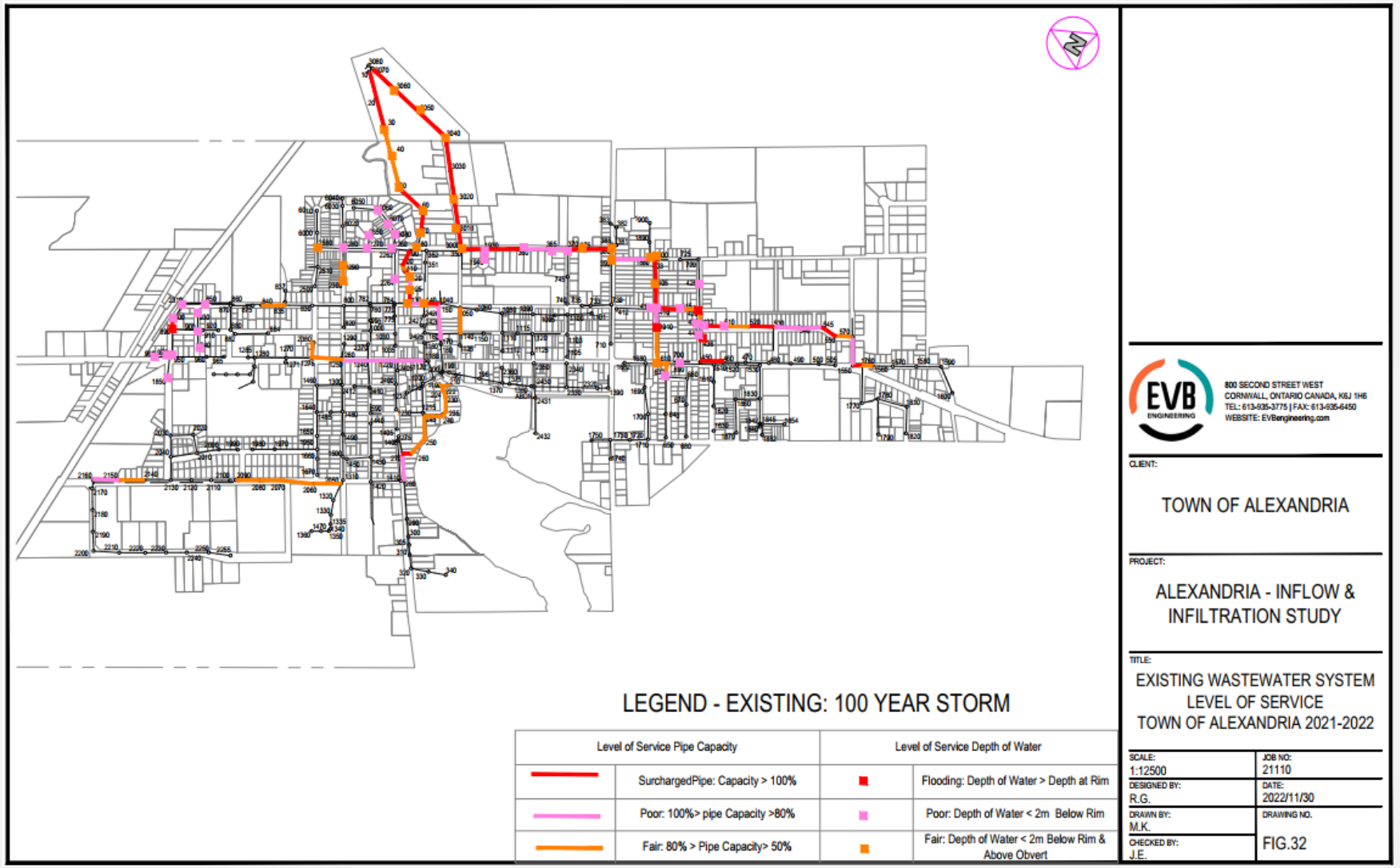
I/I Figures – 5-Year Storm



I/I Figures – 10-Year Storm



I/I Figures – 100-Year Storm



I/I Recommendations

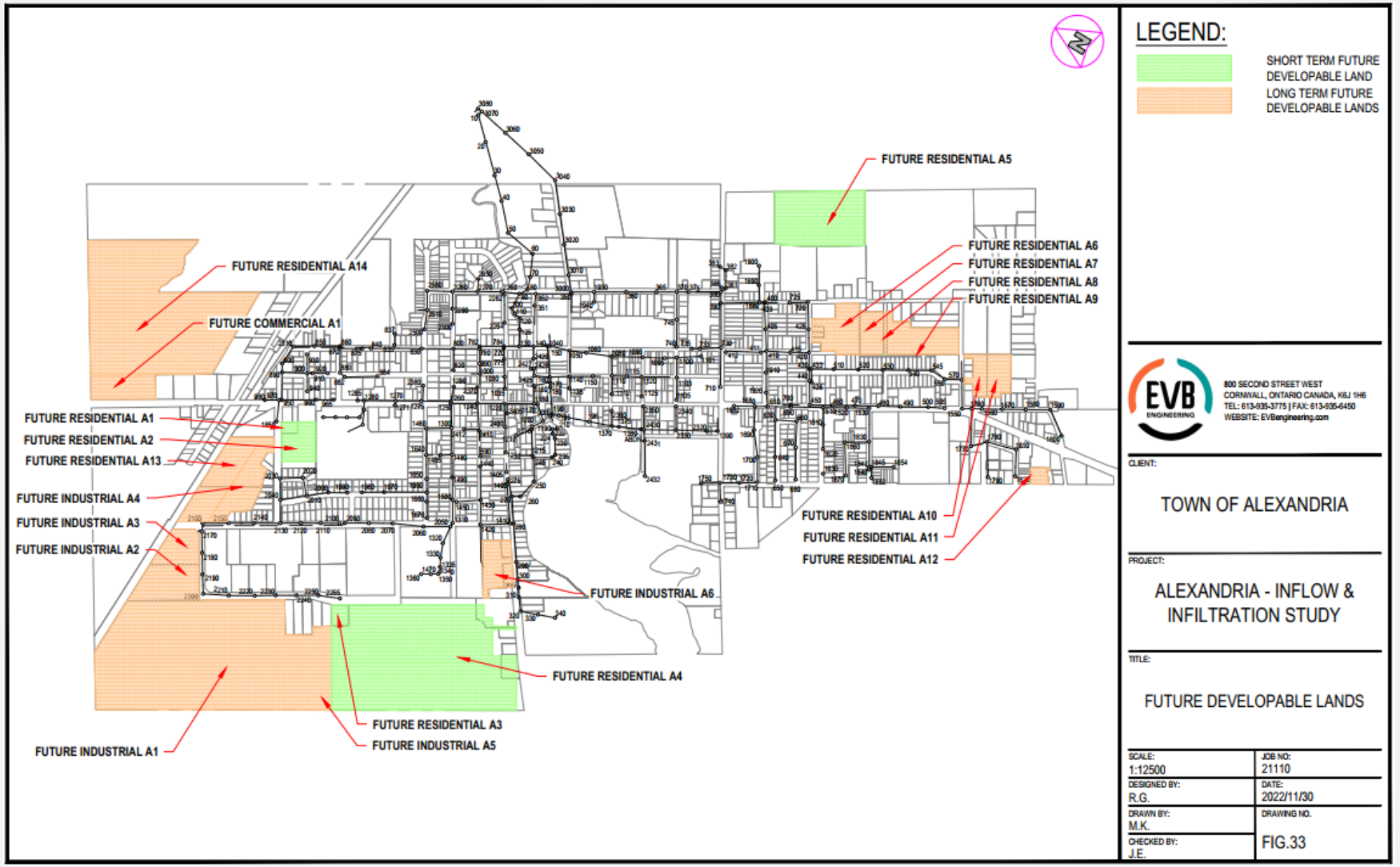
- Target Specific Catchment Areas for I/I Reduction
  - Smoke Testing
  - CCTV Investigation
  - Further Flow Meter Logging Analysis
  - House Surveys
- I/I Reduction Efforts (Short Term)
  - Disconnect sump pump, storm laterals and roof downspouts from sanitary system
  - Cast-in-place pipe-lining of sewers
  - Grouting/Sealant of manholes

EVB ENGINEERING

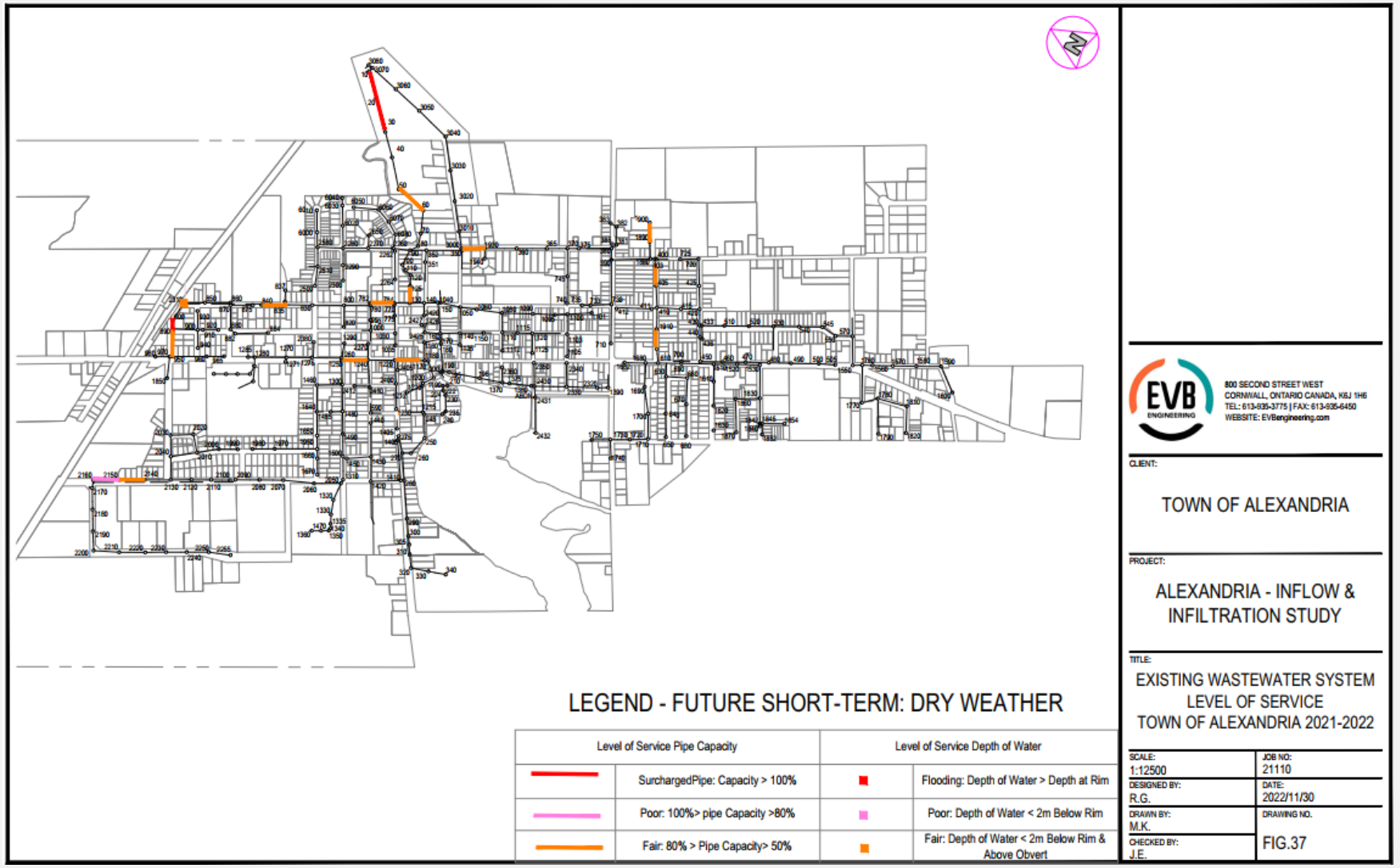
I/I Recommendations

- Long-Term Planning
  - Sewer replacement of failed sewers
  - Individual manhole replacement
  - Upsizing of sewer pipes
  - Pumping Station Upgrades

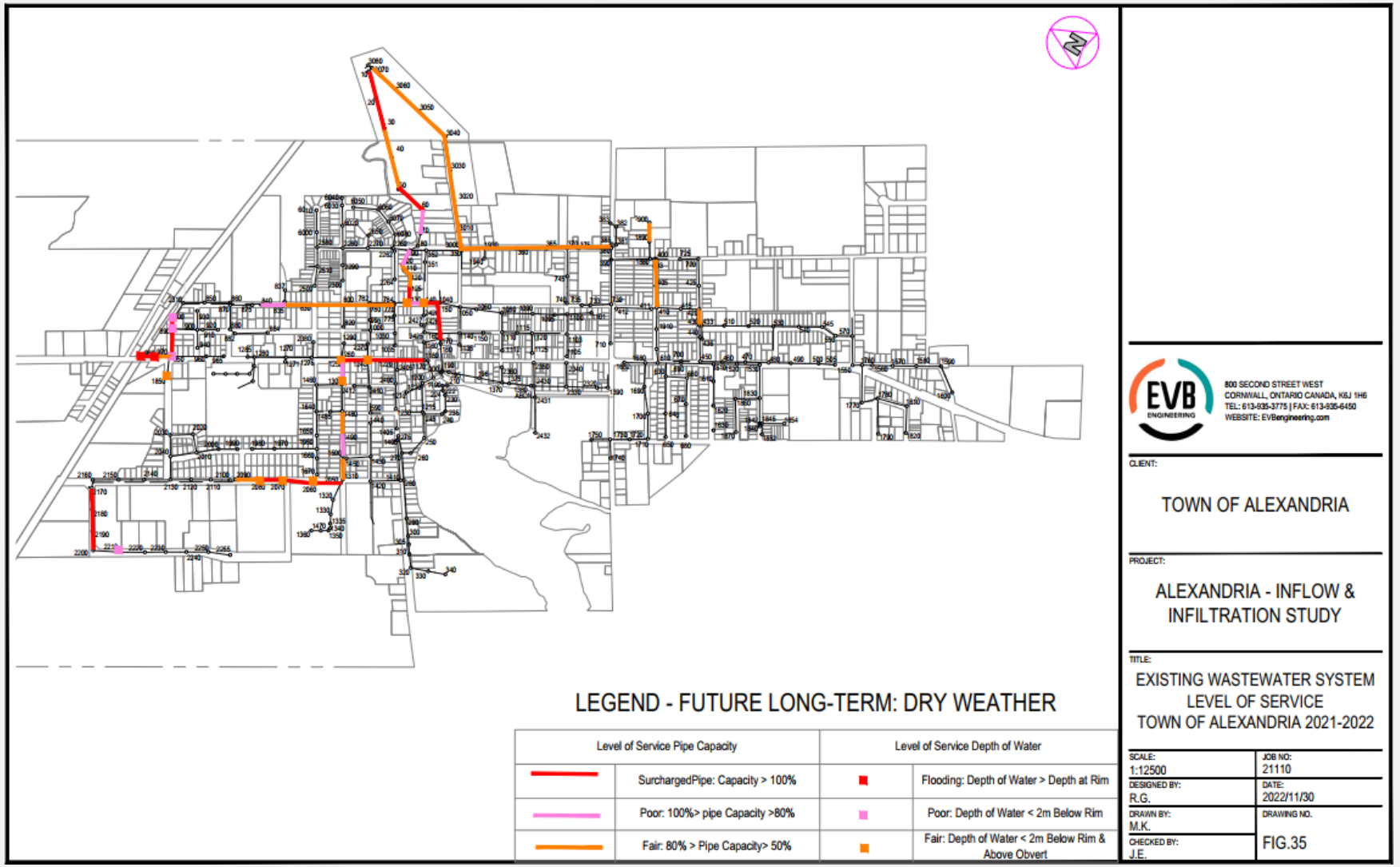
Addressing Growth



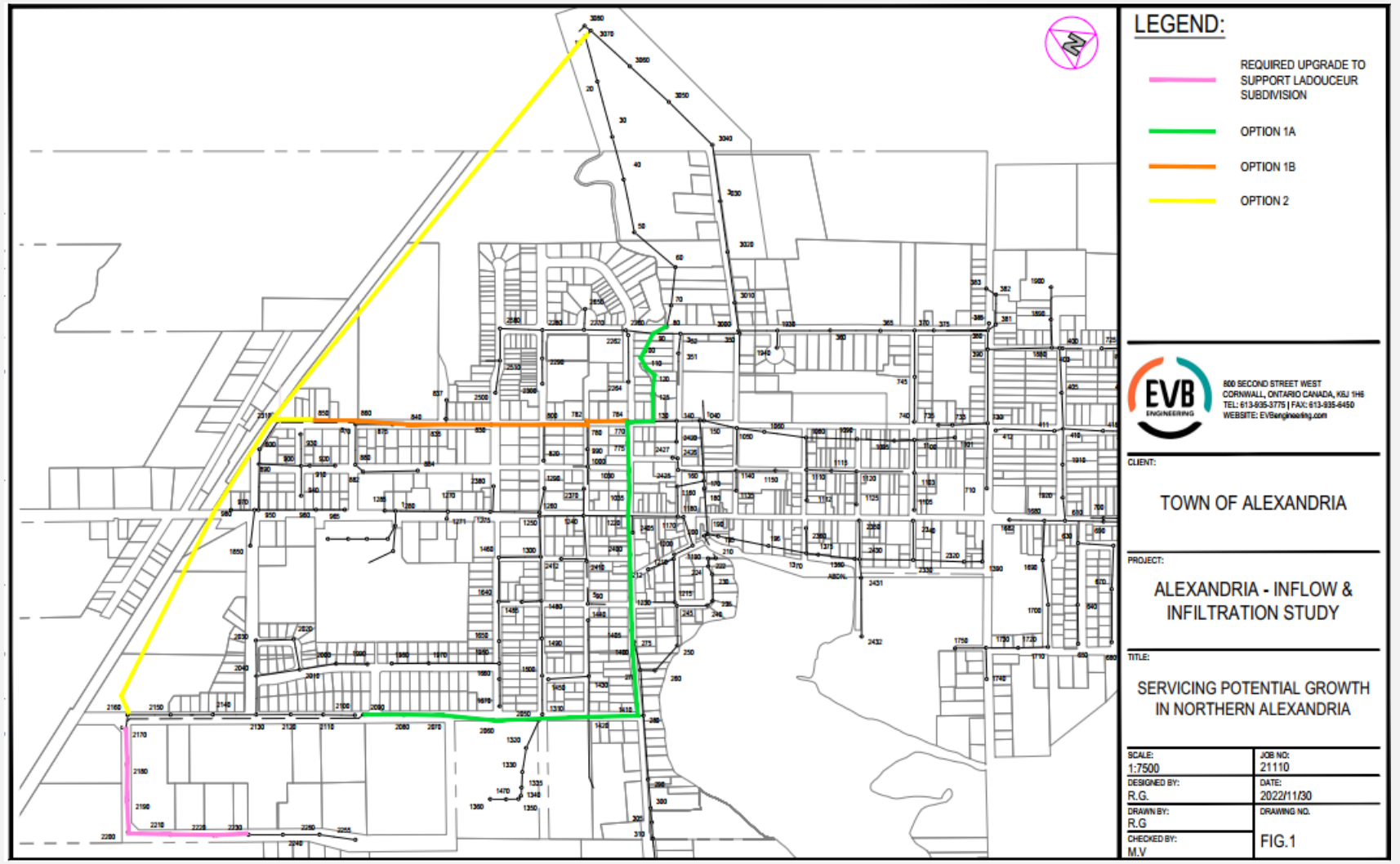
Addressing Growth – Dry Weather Baseline (Short-Term)



Addressing Growth – Dry Weather Baseline (Long-Term)



Addressing Growth



Addressing Growth – North End of Alexandria

OPTION	1A + 1B	2
Gravity Sewer on Industrial/Leroux	$900,000	$900,000
Leroux SPS Upgrades	$1,500,000	$1,500,000
Trunk Sewer Upgrades	$3,750,000	
Bishop SPS Upgrades	$750,000	$750,000
Bishop Forcemain	$330,000	$330,000
Gravity Sewers Downstream of Bishop SPS	$1,050,000	
Forcemain		1,950,000
SUBTOTAL	$8,280,000	$5,430,000

- Township administration and Council need to evaluate when this infrastructure will move forward and who will pay for the infrastructure.

EVB ENGINEERING

Addressing Growth – Water

- There are limitations at the Alexandria Water Treatment Plant for servicing future growth.
- The determination of the available servicing capacity is calculated by doing an uncommitted reserve capacity calculation.
- This takes into consideration properties within the urban settlement boundaries that have access to water but are not connected (committed capacity)
  - 181 Residential Lots
  - 8.23 hectares of ICI properties

Addressing Growth – Water

- Based on current Permit to Take Water Restriction 5,616 m^3/d, the Alexandria WTP has the capacity to service an additional
  - 734 uncommitted lots

  (Note: Ladouceur Subdivision's Phase 1 # of Residential Lots is 160 & Ultimate # of Residential Lots is 1,370)
- The Alexandria WTP has a rated capacity of 8,014 m^3/d
- Township needs to complete a Water Balance study to demonstrate that the Permit to Take Water limit can be increased without impacting the Loch Garry System.

QUESTIONS?

STAFF REPORT TO COUNCIL

Report No: BP-2024-30

December 9, 2024

From: Jacob Rheaume, Director of Building, By-law & Planning

RE: **ZONING BY-LAW AMENDMENT No. Z-09-2024**

Owner: La Gantoise Inc.

Location: 20522 Lochiel Road (County Road 21), Alexandria
Lochiel Con 4, West Part Lot 34

Recommended Motion:

THAT the Council of the Township of North Glengarry adopt Zoning By-Law No. Z-09-2024.

THAT By-Law No Z-09-2024 be read a first, second and third time and enacted in open Council this 9th day of December 2024.

Background / Analysis:

A zoning amendment application was presented during a public meeting of planning on December 9, 2024.

Purpose of application was to re-zone both the severed and retained portion subject to Consent Applications B-74-24 Conditions No. 3 & 4 as follows;

To re-zone the retained portion of Consent Applications B-74-24 (106.41 acres) of the property from General Agricultural (AG) to General Agricultural Special Exception (AG-253) to:

- prohibit residential development and;
- acknowledge the deficiency with the road frontage from the required 200m to the proposed 167m and;

To re-zone the severed portion of Consent Applications B-74-24 (2.29 acres) from General Agricultural (AG) to General Agricultural Special Exception (AG-254) to:
prohibit agricultural uses.

The application was circulated as per the planning act, being by regular mail, posted on the property and posted on the Township website. No questions or concerns from the public or other agencies have been brought forward.

The application is being presented this evening to the Council of The Township of North Glengarry for further discussion and adoption.

Alternatives: Option #1 That Council adopt the by-law as presented

OR

Option #2 Council does not adopt the by-law

Financial Implications:

No financial implications to the Township

Attachments & Relevant Legislation:

- By-Law Z-09-2024
- Public Meeting of Planning Staff report from December 9 2024

Others Consulted:

n/a

_____

Reviewed and Approved by:
Sarah Huskinson, CAO/Clerk

THE CORPORATION OF THE TOWNSHIP OF NORTH GLENGARRY

BY-LAW NO. Z-09-2024

BEING A BY-LAW TO AMEND ZONING BY-LAW NO. 39-2000

WHEREAS By-Law No. 39-2000 regulates the use of land and erection of buildings and structures within the Township of North Glengarry, United Counties of Stormont, Dundas & Glengarry;

AND WHEREAS the Council of the Corporation of the Township of North Glengarry deems it advisable to amend By-Law 39-2000 as hereinafter set forth;

NOW THEREFORE the Council of the Corporation of the Township of North Glengarry enacts as follows:

1. Not withstanding the provisions of Section 11.2 to the contrary, on the lands described as being Lochiel Con 4, West Part Lot 34 (20522 Lochiel Road-County Road 21, Alexandria) of North Glengarry zoned General Agricultural Special Exception 253 (AG-253) and General Agricultural Special Exception 254 (AG-254) on Schedule "A" attached hereto, the following provisions shall apply:

i) AG-253 Special Exception on the retained portion of Consent Applications B-74-24 (106.41 acres) to:
- prohibit residential development and;
- acknowledge the deficiency with the road frontage from the required 200m to the proposed 167m.

ii) AG-254 Special Exception on the severed portion of Consent Applications B-74-24 (2.29 acres) to:
- prohibit agricultural uses.

2. That Schedule "B" of By-Law 39-2000 is hereby amended by changing the "AG" Zone Symbol on the subject lands to "AG-253" and "AG-254" on the Schedule "A" hereto.

3. That Schedule "A" attached hereto is hereby made fully part of the By-Law.

This By-Law shall come into effect on the date of passing hereof subject to the provisions of the Planning Act.

READ a first, second, third time and enacted in Open Council, this 9th day of December 2024.

_____ _____

CAO/Clerk/Deputy Clerk Mayor/Deputy Mayor

I, hereby certify that the forgoing is a true copy of By-Law No. Z-09-2024, duly adopted by the Council of the Township of North Glengarry, on the 9th day of December 2024.

_____ _____

Date Certified Clerk / Deputy Clerk

SCHEDULE "A"
TO BY-LAW NUMBER Z-09-2024

Legend
Subject Lands
Zone Change from "AG" to "AG-253" and "AG-254"

Lochiel Con 4, West Part Lot 34
20522 Lochiel Road (County Road 21), Alexandria
Township of North Glengarry
United Counties of Stormont, Dundas & Glengarry

This is Schedule "A" to By-Law Z-09-2024.
Passed this 9th day of December 2024.

_____
Mayor/Deputy Mayor

_____
CAO/Clerk/Deputy Clerk

STAFF REPORT
PUBLIC MEETING OF PLANNING

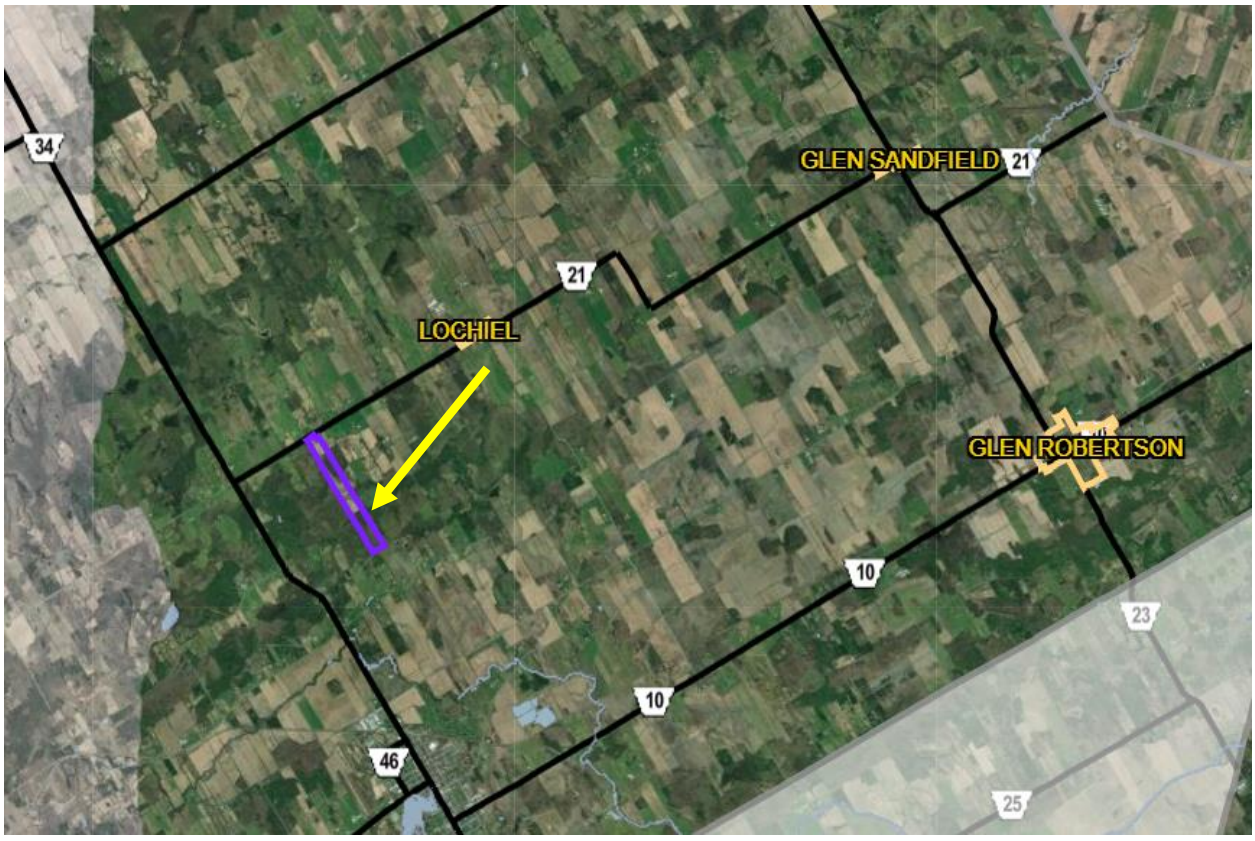
DATE: December 9, 2024

TO: Mayor and Council Members

FROM: Jacob Rheaume, Director of Building, By-law & Planning

RE: **Zoning By-law Amendment No. Z-09-2024**

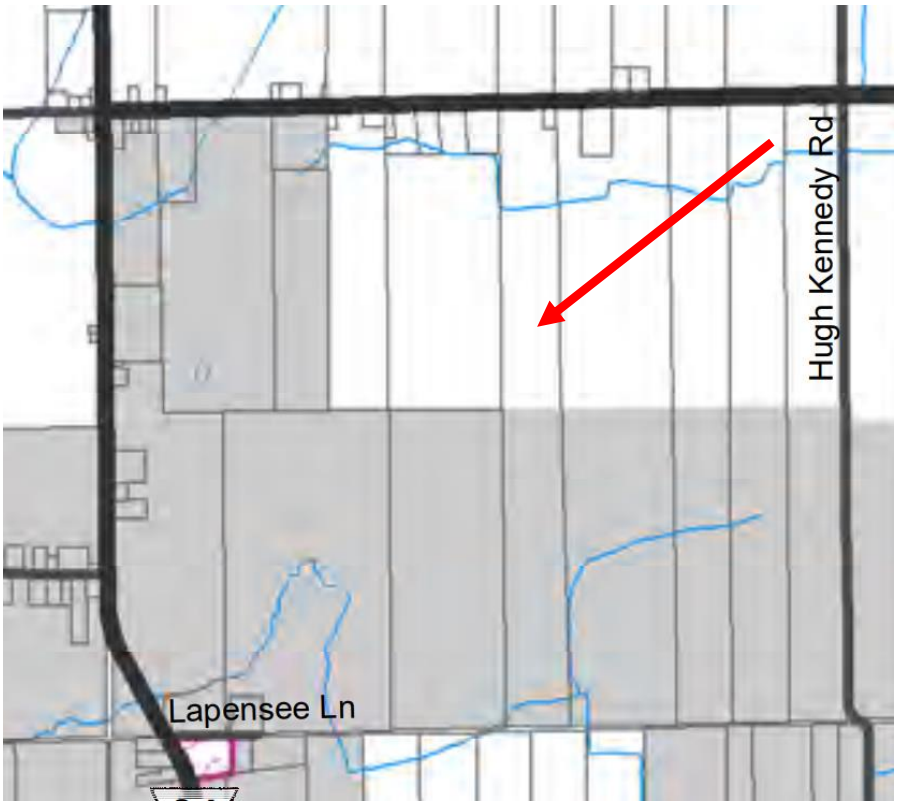
Owner: La Gantoise Inc.
20522 Lochiel Road (County Road 21), Alexandria
Lochiel Con 4, West Part Lot 34



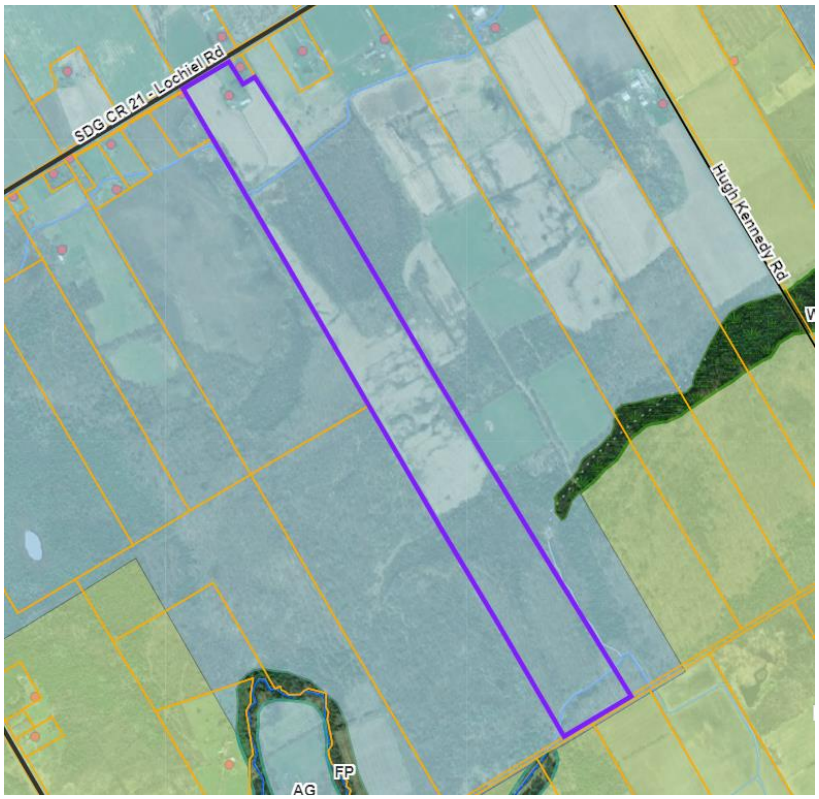

SDG


SDG CR 21 - Lochiel Rd
20530
B-74-24
B-74-24
20522

Official Plan designation: Agricultural Resource Lands & Rural District



Zoning designation: General Agricultural (AG)



Purpose of application: to re-zone both the severed and retained portion subject to Consent Applications B-74-24 Conditions No. 3 & 4 as follows;

To re-zone the retained portion of Consent Applications B-74-24 (106.41 acres) of the property from General Agricultural (AG) to General Agricultural Special Exception (AG-253) to:

- prohibit residential development and;
- acknowledge the deficiency with the road frontage from the required 200m to the proposed 167m and;

To re-zone the severed portion of Consent Applications B-74-24 (2.29 acres) from General Agricultural (AG) to General Agricultural Special Exception (AG-254) to:

- prohibit agricultural uses.

Discussion: The subject land area is approximately 108.70 acres. The applicant received conditional approval from the United Counties of Stormont Dundas & Glengarry on September 18, 2024, to sever approximately 2.29 acres of land deemed surplus to the needs of the farming operation.

The newly created property lines will be created in accordance with the Zoning By-law requirements for both portions, the setbacks from the accessory storage building top property lines will be made compliant with the interior yard minimum required. The survey has not been submitted at this point in time, the owner will have to submit it in order to clear another condition of the consent application, the septic system location will also have to be shown on the survey to ensure compliance. Usually, the survey is available for the Public Meeting of Zoning but because of time constraints, the owner will ensure it's made a complaint after the meeting.

The closest point to the property line to all buildings will need to be more than 6m or another Planning Application (Minor Variance) will be required. The new property line is proposed to be in such a location to keep the area to a minimum to accommodate the residential use for the dwelling, septic, well and the accessory building. Only the lot frontage for the agricultural portion is non-compliant for this severance. The lot area is proposed to be more than the minimum required 74 acres for agricultural lands.

The existing driveway and civic number will be used only for the residential portion. There are no other entrances for the agricultural portion, the owner will have to apply to the United Counties of SDG to clear that condition, or the fields could be accessed via neighboring fields. A new civic number could be issued for the agricultural portion of the severance.

The owner will have to apply for a change-of-use permit for the agricultural building as it will remain on the residential portion of the severance. Prior to clearing all the conditions, the Chief Building Official will go on site to ensure no other structures are creating a health and safety hazard for the public and future owners, such as sheds, silo, other old buildings, etc.

The use of either portion of the severance will remain the same. The residential lot will be used only for residential purposes.

The surrounding official plan designation is Agricultural Resource Lands & Rural District for all adjacent and neighboring properties.

The surrounding zoning is General Agricultural (AG) & Rural (RU) for all adjacent and neighboring properties with some Wetlands (WL).

The surrounding uses include mostly rural residential properties, cash crop properties with some intensive livestock facilities on the North and East.

We have received a comment from RRCA as there is a mapped watercourse on and within 15m of the subject lot. Alterations to the watercourse including but not limited to shoreline restoration, crossings, bridges, culverts, channelization, channel closures, realignment and cleanouts shall require permission from the Raisin Region Conservation Authority, as per O. Reg. 175/06.

No other agencies, Township departments or members of public expressed concerns or provided any comments regarding this Zoning By-law Amendment.

Planning Act

The Ontario Planning Act gives municipal Councils the authority to pass zoning by-laws, and make amendments to existing zoning by-laws, under Section 34 of the Act. The Planning Act also requires that in making planning decisions Council must have regard for matters of Provincial Interest. The Planning Act requires that Council's decisions must be consistent with the Provincial Policy Statement, and conform, or not conflict with, the Stormont, Dundas and Glengarry Official Plan which apply to the lands.

Provincial Policy Statement (2020)

According to the Provincial Policy Statement (2020) lot creation in prime agricultural areas is discouraged and may only be permitted in certain circumstances. A residence surplus to a farming operation is the most common reason and is applicable to this application provided that:

The new lot will be limited to a minimum size needed to accommodate the use, accessory uses, and appropriate sanitary sewage and water services, and the planning authority ensures that new residential dwellings are prohibited on any remnant parcel or farmland created by the severance.

SDG Counties Official Plan (2018)

The SDG Counties Official Plan Policy (8.12.13.3(7)) permits lot creation in agricultural lands for a residence surplus to a farming operation if the new lot will be limited to a minimum size needed to accommodate the use, accessory uses, and appropriate sanitary sewage and water services, and the municipality prohibits further dwellings (residential development) on the vacant retained lands created by the subject consent.

In conclusion, based on the criteria above, the proposed zoning amendment conforms to the relevant policies of the United Counties of Stormont Dundas and Glengarry's Official Plan, it is consistent with Provincial Policy Statement and compliant with the Township of North Glengarry Zoning By-law No. 39-2000.

STAFF REPORT TO COUNCIL **Report No: CS-2024-35**

December 9, 2024

From: Stephanie MacRae – Director of Community Services

RE: 2025 Community Grants

Recommended Motion:

THAT Council receives Staff Report CS-2024-35; and

THAT Council approves the following grants conditional to the approval of Community Grant Program funding in the 2025 municipal budget.

Name of Organization	Amount Approved	In Kind Approved	TOTAL
2025			
Alexandria & District Lions Club	$3,500.00		$3,500.00
Caddell Productions	$2,500.00		$2,500.00
Friends of the Glengarry Trails	$650.00		$650.00
Kenyon Agricultural Society	$3,500.00		$3,500.00
Maxville & District Chamber of Commerce	$1,604.00		$1,604.00
Maxville & District Horticultural Society	$2,934.00	$335.00	$3,269.00
Maxville & District Lions Club	$2,058.86		$2,058.86
Priest's Mill Arts Centre	$1,500.00		$1,500.00
The SunShiners Social Club	$750.00	$1,412.0	$2,162.00
TOTAL	**$18,996.86**	**$1747.00**	**$20,743.86**

For a total of $18,996.86 in funding and $1,747.00 of in-kind through the Community Grants Program.

Background / Analysis:

Each year, Council establishes a budgetary envelope to support special projects or events organized by community groups or individuals through the Community Grants Program. The Community Grant Policy, criteria, and accompanying selection process requires all Community Grant Program applications to be vetted by the Arts, Culture and Heritage Advisory Committee (ACHC) whose recommendations are submitted to Council for approval.

This year the Township of North Glengarry received eleven (11) applications from eleven (11) organizations totalling $ 31,225.22 in funding and $1,747.00 for in-kind requests.

The Arts, Culture and Heritage Committee met on December 2, 2024, and reviewed each application in detail. The ACHC determined that nine (9) applications met the requirements set out in the selection criteria.

The ACHC recommends to Council that the grants be allocated as outlined in the attached document for a total of $18,996.86 in funding and $1,747.00 for in-kind funding, conditional on the approval for the Community Grant Funding through the 2025 Budget exercise.

Alternatives:

Option 1 – Recommended – That Council approves this resolution

Or

Option 2 – Not recommended – That Council does not approve this resolution

Financial Implications:

The 2025 Municipal Budget will include a request for an allocation of $25,000.00. During this first intake round, $18,996.86 in funding and $1,747.00 of in-kind qualified under the Community Grant Program. Staff has launched the second intake round with the remaining $6,003.14 which will close on February 28, 2025.

Prior to the disbursement of any funds, community groups are required to sign a “Letter of Agreement” that will specify the terms and conditions of the Community Grants.

The grants are conditional at this time and would only be issued once the Community Grants Program is approved as part of the 2025 Operating Budget.

Attachments & Relevant Legislation:

- Attached - 2024 Community Grants Chart
- Relevant Documentation – Community Grants Program

Others Consulted:

_____

Reviewed and Approved by:
Sarah Huskinson, CAO/Clerk

Name of Organization	Contact Person	Project	Amount Requested	In Kind Requested	Amount Approved	In Kind Approved	TOTAL	Description of In-Kind
2025								
Maxville & District Lions Club	Brad Quaile	Community Bench - Purchase and install a new Lions Club Community bench in front of the Maxville arena to provide additional seating for parents and kids alike while they enjoy the park.	$3,458.86		$ 2,058.86		$ 2,058.86	
Kenyon Agricultural Society	Vanessa Metcalfe	Maxville Fair - a wide variety of community activities and entertainment take place at the Fair. Funding this year would help cover the cost of childrens activities and education.	$ 3,500.00		$ 3,500.00		$ 3,500.00	
Maxville & District Horticultual Society	Phyllis VanEgmond	New flower boxes for Maxville - replace 5 old urns that the society has been using for the past 9 years with new wooden ones made by a local carpenter.	$ 2,934.00	$ 335.00	$ 2,934.00	$ 335.00	$ 3,269.00	i. Use of Public Works staff ii. Use of Public Works vehicles
Maxville & District Chamber of Commerce	Audrey Evans	Main Street Beautification - new garbage cans to purchase for Main Street that are then adorned in Celtic themes.	$ 3,401.36		$ 1,604.00		$ 1,604.00	
La Fraternite Alexandria	Nicole Geffrion	Soiree des Jubilaires - pour celebrer les couples qui feteront leur 50e, 55e, 60e etc...au cours de la prochaine annee.	$ 1,455.00		$0.00		$0.00	
TheSunshiners Social Club	Finola Hogan	The Glengarry Community Creators 2025 Expo and Holiday Market - Fundraising event to help celebrate the community of creators and highlighting those with intellectual and developmental disabilities. Vendor tables to be free of charge and free admission. Evening market on the 22nd and holiday market on the 23rd.	$ 2,326.00	$ 1,412.00	$ 750.00	$ 1,412.00	$ 2,162.00	i.Use of banquet hall with bar ii. Use of banquet hall without bar iii. Use of kitchen iv. Rectangular tables (30) and chairs (90)
Friends of the Glengarry Trails	Helena McCuaig	Proper signage on trails -In order to improve safety, updated signs are needed. The FGTA will replace 3 and refurbush 10 existing signs.	$ 650.00		$ 650.00		$ 650.00	
PMAC	Lourens Joubert	Passion & Petals -aims to celebrate the changing of the season through floral art. PMAC to host 4-5 adult workshops, a youth workshop and a one-day live competition. Funding to advertising and youth workshop.	$ 3,500.00		$ 1,500.00		$ 1,500.00	
Diversity Cornwall	Rebecca Sorrel	Diversity Cornwall 2SLGBTQ+ Activities and Education - Proposing two Pride events for North Glengarry: 1A) Community picnic at Island Park in June and 2) a film screening in April. They will also provide 2SLGBTQ+ training for North Glengarry Council and Administration.	$ 3,000.00		$0.00		$0.00	
Caddell Productions	Liz Caddell	Glengarry's Got Talent - North Glengarry Talent Show will allow people of all ages to demonstrate their talents. Event will be held at the Atlantic Pub, and it will cost $10 to audition and $10 to attend.	$ 3,500.00		$ 2,500.00		$ 2,500.00	
Alexandria Lions Club	Kate Libbos	Lion's Club Chrismas at Island Park - to continue Christmas at Island Park that involves members of the community. Funding requested for additional archways and storage supplies.	$ 3,500.00		$ 3,500.00		$ 3,500.00	
			$31,225.22	**$ 1,747.00**	**$ 18,996.86**	**$ 1,747.00**	**$ 20,743.86**	

STAFF REPORT TO COUNCIL **Report No: DR-2024-06**

December 9, 2024

From: Zoe Bougie – Director of Finance/Treasurer

RE: Meeting to Consider a Minor Improvement on the Real Diotte Branch of the R.A. McLennan Drain

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Recommended Motion:
THAT the Council of the Township of North Glengarry receives report DR-2024-06 Meeting to Consider a Minor Improvement on the Real Diotte Branch of the R.A. McLennan Drain;

AND THAT By-Law 56-2024 be read a first and second time and provisionally adopted in open Council this 9th day of December 2024.

Background / Analysis:
In April of 2024, the landowner of Part of Lot 5, Concession 4, Lochiel, submitted a request for a minor improvement to install a new farm crossing. The proposed crossing would be installed on the Real Diotte Branch of the R.A. McLennan Drain.

On May 27, 2024, Shade Group Inc. was appointed by resolution to prepare the Engineer's Report for the minor improvement. This meeting is being held to consider this report. There would be no change to the way future repair and maintenance costs are allocated for the branch or drain.

Alternatives:
N/A

Financial Implications:
There are no financial implications to the Township of North Glengarry. All expenses will be assessed to the landowner.

Attachments & Relevant Legislation:
By-Law 56-2024
Engineer's Report – Proposed New Farm Crossing Real Diotte Branch

Others Consulted:
Monica Shade, P. Eng., V.P. of Engineering & Sales

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Reviewed and approved by:
Sarah Huskinson, CAO/Clerk

THE CORPORATION OF THE TOWNSHIP OF NORTH GLENGARRY

BY-LAW NO 55-2024

BEING A BY-LAW TO APPOINT A MEMBER TO THE COURT OF REVISION FOR THE COUNTY ROAD BRANCH OF THE CUMMING DRAIN

REFERENCE: Sections 52 and 97(3) of the Drainage Act, R.S.O. 1990, c. d.17

WHEREAS the County Road Branch of the Cumming Drain serves lands in the Township of North Stormont and the Township of North Glengarry.

AND WHEREAS pursuant to Section 97(3) of the Drainage Act, where the lands assessed for the drainage works extend from the initiating municipality into a neighbouring municipality, the court of revision shall consist of two members appointed by the council of the initiating municipality, of whom one shall be chair and one member appointed by the council of each of the neighbouring municipalities and the court shall hear and rule on appeals as if the entire area affected by the drainage works were in one municipality;

AND WHEREAS Council now deems it necessary and expedient to appoint a Member to the Court of Revision to hear assessment appeals with respect to the Engineer's Report for the County Road Branch of the Cumming Drain;

THEREFORE the Council of the Corporation of the Township of North Glengarry enacts as follows:

1. THAT the Court of Revision to hear assessment appeals with respect to the Engineer's Report for County Road Branch of the Cumming Drain, shall consist of three members;
2. THAT the Mayor of North Glengarry, Jamie MacDonald be appointed to the Court of Revision for the County Road Branch of the Cumming Drain.
3. THAT should the Mayor be unable to attend the Court of Revision, then the Deputy Mayor, Carma Williams, be appointed serve in their place.
4. THAT this By-Law shall come into force and take effect upon its passing.

READ a first, second and third time and passed in Open Council this 9th day of December, 2024.

CAO/Clerk/Deputy Clerk	**Mayor/Deputy Mayor**

I hereby certify this to be a true copy of By-Law No. 55-2024, and that such By-Law is in full force and effect.

Date Certified	**CAO/Clerk/Deputy Clerk**

New Farm Crossing
on the Real Diotte Branch of the R. A. McLennan Drain

Minor Improvement

Section 78(5) Report

Presented by Monica Shade, P. Eng.

SHADE GROUP INC

Overview

- Purpose of Meeting
- Brief History
- Section 78 (5) of the Drainage Act
- Summary of the Engineer's Report
- Next Steps

Purpose of Meeting

- Engineer to present report;
- Council or initiating landowner may request changes or ask questions;
- Council may present provisional by-law to adopt the report.

Drain History

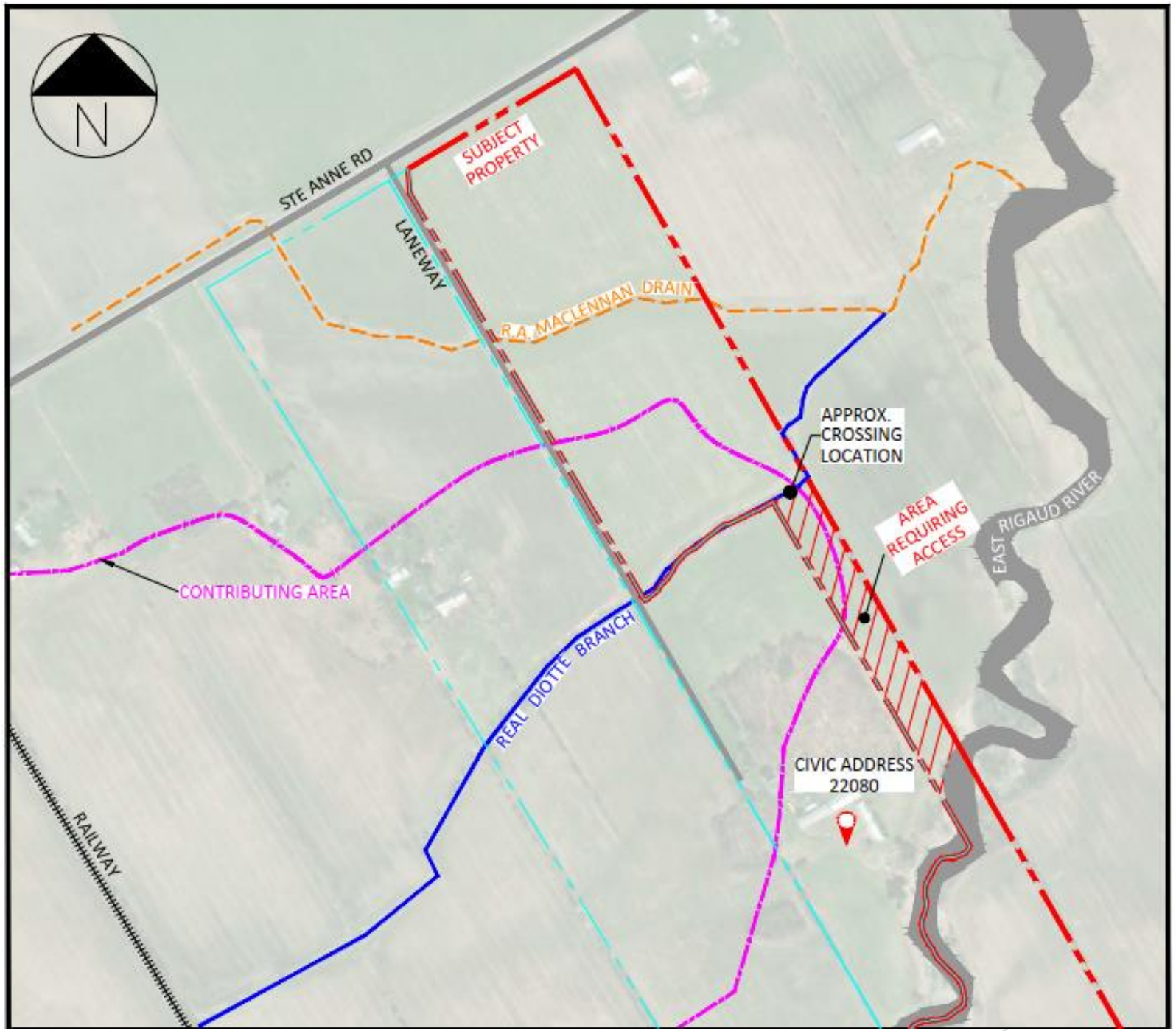
Last Updated in 1979

Total length: 8,776 ft

Area Drained: 277 acres

Requested Change

New Farm Crossing in Part of Lot 5, Con 3, Twp of Lochiel


N
STE ANNE RD
SUBJECT PROPERTY
LANEWAY
R.A. MACLENNAN DRAIN
APPROX. CROSSING LOCATION
AREA REQUIRING ACCESS
EAST RIGAUD RIVER
CONTRIBUTING AREA
REAL DIOTTE BRANCH
CIVIC ADDRESS 22080
RAILWAY

Engineer's Report (S. 78(5))

- Drain History
- Conformance with 78(5) conditions
- Hydrologic and hydraulic design
- Erosion and capacity review
- Future maintenance
- Summary of costs

Crossing Design

Three options presented in report:

Option 1: 9m corrugated steel pipe with headwalls

Option 2: 9m plastic pipe with headwalls

Option 3: 12m plastic pipe with projecting ends

Permitting / Consultation

- The project was circulated to:
  - Fisheries and Oceans Canada (DFO)
  - Raisin Region Conservation Authority (RRCA)

- On-going Consultation with:
  - Initiating Landowner
  - Township Representative

Next Steps

Council gives property owner and prescribed persons the opportunity to provide input;

Council decides if the project should proceed;

Council provisionally adopts the Engineer's Report;

Clerk circulates the provisional by-laws and notice of process to appeal to referee to initiating property owner and OMAFA;

Projects may proceed to construction.

Questions?

PROPOSED NEW FARM CROSSING
REAL DIOTTE BRANCH
OF THE R.A. MCLENNAN DRAIN
S. 78 (5) ENGINEER'S REPORT
TOWNSHIP OF NORTH GLENGARRY

PREPARED BY

SHADE GROUP INC
4625 MARCH ROAD
ALMONTE, ON
K0A 1A0

PREPARED FOR

THE TOWNSHIP OF NORTH GLENGARRY
3720 COUNTY ROAD 34, R.R. 2
ALEXANDRIA, ON
K0C 1A0

FINAL - REV 01 – NOVEMBER 2024

EXECUTIVE SUMMARY

This Engineer's Report has been prepared under Section 78(5) of the *Drainage Act, R.S.O. 1990, c. D. 17* (henceforth referred to as *the Act*). Section 78(5) refers to 'minor improvements' which may be completed through an expedited process compared to 'major improvements' (Section 78(1)). This report has been prepared in reference to the process outlined in Ontario Regulation 500/21, which details the process to be undertaken for a minor improvement. To undertake a 'minor improvement', the project must meet several conditions which have been discussed in further detail in Section 5.2 of this report.

The proposed 'minor improvement' is to install a new farm crossing within Part of Lot 5, Concession 3, Geographic Township of Lochiel, United Counties of Stormont, Dundas and Glengarry. The crossing is proposed on the property identified as Roll Number 0111-016-007-13002. The crossing is proposed to be installed on the Real Diotte Branch of the R. A. McLennan Drain. A map showing the location of the proposed crossing has been enclosed in **Appendix A**.

The Real Diotte Branch was first constructed under a report authored by Stidwell & Associates Limited, dated April 10, 1979.

Shade Group Inc. (Shade Group) was appointed as the engineer to prepare an Engineer's Report for a minor improvement on the Real Diotte Branch on May 27, 2024. A copy of the resolution supplied by the Township has been enclosed in **Appendix G**.

The proposed crossing has been sized to meet industry design standards and would not be expected to have a measurable impact on the performance of the drainage system. Permanent and temporary erosion control measures are proposed as part of the works such that the proposed crossing is not anticipated to have any measurable impacts of erosion in the system.

The proposed new crossing would not result in changes to the way in which future repair and maintenance costs are allocated to other property owners in the watershed. As the culvert has been installed under Section 78(5) rather than 78(1) (Major Improvement) – costs associated with the future repair and maintenance of the new crossing will remain the responsibility of the subject property owner until such a time that a full update is done to adopt the crossing as part of the entirety of the drainage system such that it may be assessed to those upstream of the works.

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APPENDICES

APPENDIX A: LOCATION PLAN
APPENDIX B: ENGINEERING PLANS
APPENDIX C: REFERENCE FILES
APPENDIX D: HYDROLOGIC & HYDRAULICS CALCULATIONS
APPENDIX G: CONSTRUCTION COST ESTIMATE
APPENDIX F: PERMITS
APPENDIX G: RESOLUTION + BY-LAW

REVISIONS & SUBMISSIONS

Revision #	Comments	Date
00	Request for Review (Form Only) Submitted to DFO	August 22, 2024
00	Draft Submission to Township, Landowner & RRCA	September 10, 2024
01	Final Submission to Township w. Permits	November 22, 2024

1.0 OBJECTIVE

This Engineer's Report has been prepared under Section 78(5) of the *Drainage Act, R.S.O. 1990, c. D. 17* (henceforth referred to as *the Act*). Section 78(5) refers to 'minor improvements' which may be completed through an expedited process compared to 'major improvements' (Section 78(1)). This report has been prepared in reference to the process outlined in Ontario Regulation 500/21, which details the process to be undertaken for a minor improvement. To undertake a 'minor improvement', the project must meet several conditions which have been discussed in further detail in Section 5.2 of this report.

The proposed 'minor improvement' is to install a new farm crossing within Part of Lot 5, Concession 3, Geographic Township of Lochiel, United Counties of Stormont, Dundas and Glengarry. The crossing is proposed on the property identified as Roll Number 0111-016-007-13002. The crossing is proposed to be installed on the Real Diotte Branch of the R. A. McLennan Drain.

A map showing the location of the proposed crossing has been enclosed in **Appendix A**.

2.0 DRAIN HISTORY

The Township of North Glengarry was consulted about the history of the Real Diotte Branch of the R. A. McLennan Drain as part of the project undertaking. Per the supplied information, the governing report for the Real Diotte Branch is understood to be from April 10, 1979 and authored by Stidwell & Associates Limited.

The Real Diotte Branch was first constructed under the 1979 Engineer's report. According to this report, the alignment of the Real Diotte Branch is as follows:

"*The Real Diotte Branch has its point of commencement of the West Part of Lot 6 in Concession 3 of Lochiel Township, some 2000 feet south of the intersection of County Road 21 with the Canadian Railway. It runs in a generally easterly direction across Lots 6, 5 and 4 of Concession 3 for a distance of 3479 feet to its outlet in the R.A. McLennan Drain.*"

3.0 EXISTING CONDITIONS

3.1 AREA REQUIRING DRAINAGE

The area requiring drainage as impacted by the proposed crossing is Part of Lot 5, Concession 3, Geographic Township of Lochiel, United Counties of Stormont, Dundas and Glengarry. The culvert is to be located within the property identified as Roll Number 0111-016-007-13002.

4.0 PROPOSED WORKS

The proposed works include the installation of a new farm crossing on the Real Diotte Branch of the R. A. McLennan Drain at the property identified as Roll Number 0111-016-007-13002 to facilitate access to lands that are otherwise inaccessible without access via neighbouring private property. The lands owned by the proponent south of the Real Diotte Branch cannot be accessed from the south as it would require a significant crossing over the East Rigaud River. The lands are currently accessed by way of travelling through the adjacent privately owned property (22080 Ste Anne Road).

A project key plan has been enclosed in **Appendix A** to provide an overview of the properties and to assist in visually explaining why the crossing is required.

5.0 DRAINAGE ACT, 1990, PROCESS

5.1 TO DATE

Shade Group Inc. (Shade Group) was appointed as the engineer to prepare an Engineer's Report for a minor improvement on the Real Diotte Branch on May 27, 2024. A copy of the resolution supplied by the Township has been enclosed in **Appendix G**.

A site visit was conducted on June 18, 2024 by the engineer (author) as per Section 8(3) of Ontario Regulation 500/21 at the project location. Additional on-going consultation has taken place with both the Township's Drainage Superintendent and the initiating landowner throughout the duration of this project.

A "Request for Review" for the project was submitted to Fisheries and Oceans Canada (DFO) on August 22, 2024 as part of the permitting process, and a draft submission, along with a permit application to Raisin Region Conservation Authority (RRCA) followed on September 10, 2024. Permitting has since been received – with a letter of advice from DFO received in October 2024, and a permit received from RRCA in November 2024. For more information on permitting – see Section 9.0 of this report.

5.2 CONDITIONS FOR MINOR IMPROVEMENT

As per Section 7 of Ontario Regulation 500/21 which outlines the approval process for a minor improvement under Section 78(5) of the Drainage Act, to undertake a minor improvement, the project must meet the following conditions:

1) *The activity takes place on an individual property.*

The crossing is to be installed on a single landowner's property: Part of Lot 5, Concession 3, Geographic Township of Lochiel, Roll No. 0111-016-007-13002.

2) *The costs and fees associated with the activity, including the fees and expenditures of the engineer and the construction, contingency, incremental future maintenance, and eligible*

municipal administrative costs, are the responsibility, whether the activity proceeds or not, of,

i. the person initiating the activity,

ii. the Municipality in which the activity is taking place, or

iii. both the person initiating the activity and the Municipality in which the activity is taking place.

The initiating owner will be paying for all costs associated with the Section 78(5) undertaking, including (but not limited to) construction, permitting and engineering related fees.

3) The activity,

i. does not require construction access from neighbouring properties,

ii. does require construction access from neighbouring properties and the person initiating the activity has,

A. obtained the consent for the construction access from all applicable owners of the neighbouring properties prior to beginning the activity, and

B. provided such proof of consent to the municipality as part of the application to carry out the activity.

The activity *will* require construction access from the neighbouring property – via the driveway for 22080 Ste. Anne Road. The initiating landowner will be required to obtain consent for access from the applicable owner of 22080 Ste. Anne Road and present proof of consent to the municipality prior to undertaking any construction.

4) The activity will not result in any changes to the way in which future repair and maintenance costs are allocated to other property owners in the watershed.

The proposed new crossing would not result in changes to the way in which future repair and maintenance costs are allocated to other property owners in the watershed. Costs associated with the future repair and maintenance of the new crossing will remain the responsibility of the subject property owner until such a time that a full update is done to adopt the crossing as part of the entirety of the drainage system under a Major Improvement process, such that it may be assessed to those upstream of the works. However, the Township would administer such maintenance, in fitting with the process of the Drainage Act.

5) The activity does not change existing drainage capacity or erosion capacity.

The proposed crossing has been sized to meet industry design standards and would not be expected to have a measurable impact on the capacity of the drainage system. Permanent and temporary erosion control measures are proposed as part of the works.

Further discussion of capacity and erosion has been discussed in Section 6.0 of this report.

6) The activity does not result in the existing drainage works being enclosed.

The proposed crossing does not constitute an enclosure of the channel.

7) The activity does not take place within any wetlands.

The proposed project does not take place within any wetlands.

Based on the above noted reasonings, it is the author's professional opinion that the proposed activity generally meets the intentions of Section 7 (1) Ontario Regulation 500/21.

6.0 HYDROLOGY & HYDRAULIC ANALYSIS

6.1 DESIGN CRITERIA

The crossing design has been prepared in reference to *A Guide for Engineers working under the Drainage Act in Ontario* (Publication 852, Ministry of Agriculture, Food and Agribusiness). Per Table B2-2 – Design Storm Selection for Drainage Works, Field Crossings are recommended to be sized to the 2 – 5 year storm, noting that "*it is acceptable to have a risk of flooding from larger storms that could erode driving surface*". Our design has been prepared to the 5-year storm event.

The crossing has also been reviewed against WC-7 of the Highway Drainage Design Standards (Ministry of Transportation, January 2008). WC-7 recommends that local roads have freeboard of greater than or equal to 0.3m, while maintenance roads be set 0.3m above the average summer water levels for culverts with a span less than 3m. WC-7 also specifies that culverts with diameter or rise <3.0; the ratio of the headwater to diameter shall be less than or equal to 1.5. For the purposes of our design, we have reviewed the design against the freeboard recommendations and found that the design centerline would meet the freeboard requirement, however the south side of the crossing would have a reduced freeboard. As this crossing is only to be privately used for farming access, it is the author's opinion that this is sufficient for the intended use. While the exact average summer water level is not known for this drain, the site visit was conducted in June 2024 and there was limited water in the channel despite it being a wet year with higher than usual rainfall. With that, it is expected that the recommended freeboard requirements could be met. Overall, the proposed crossing is considered to be a low-risk crossing, as it would be expected to have minimal passage given the only intended use is for farming access.

WATERSHED

The contributing catchment area was initially reviewed using the Ontario Watershed Information Tool (OWIT) which determines approximate catchment areas based on Ontario Base Mapping contour data. The contributing area was then compared against the watershed map associated with the Real Diotte Branch of the R.A. McLennan Drain. Finally, the watershed boundary was adjusted based on publicly available terrain data (Ontario Digital Terrain Model – Lidar Derived, Ontario Ministry of Natural Resources and Forestry).

A schematic of the catchment area used to analyse the crossing has been enclosed in **Appendix B**. Land use breakdown and associated watershed slope information has been extracted from OWIT, reviewed based on satellite imagery, and refined in reference to the profile data available from the Real Diotte Branch of the R. A. McLennan Drain Engineer's Report.

SOILS

A desktop review of the soils conditions within the catchment was completed as part of the preparation of this report. Soils mapping information was reviewed from GeoHub (Soil Survey Complex) and AgMaps, which are understood to have been compiled in reference to the various soil maps for the province. The approximate composition breakdown can be found in Table 1.

Table 1: Soils

Soil Survey Name	Percentage of Contributing Area	Type
BEARBROOK	17%	Clay
GRENVILLE	83%	Loam

A map extracted from AgMaps showing the approximate watershed boundary and the soil compositions can be found in **Appendix C**.

LAND COVER

Land cover was determined using OWIT data and generally verified by a desktop review of aerial imagery. The land cover used to determine the peak flows can be found in Table 2.

Table 2: Land Cover

Land Cover	Percentage of Contributing Area	Approximate Area (ha)
Treed	1.52%	1.0
Urban/Community	1.71%	1.2
Rural	96.77%	66.3
Total	***100%***	**68.5**

Land cover classification was used to determine the appropriate runoff coefficient and curve number, which was used to then determine the associated composite curve number and weighted runoff coefficient for the catchment area. The runoff coefficients and curve numbers used to determine the composite curve number and weighted curve number can be found in Table 3.

Table 3: Curve Numbers & Runoff Coefficients

Land Cover	Curve Number	Runoff Coefficient
Treed	79	0.12
Urban/Community	90	0.82
Rural	86	0.73

INTENSITY-DURATION-FREQUENCY

The IDF curve for the crossing was determined using the IDF Curve Lookup web-based application maintained by the Ministry of Transportation of Ontario (MTO). The IDF Curve results have been included in **Appendix C**.

PEAK FLOWS

Peak flow rates have been calculated using hydrologic modeling software Visual Otthymo 6.2. Input values used are summarized in the Visual Otthymo summary as attached to this report. Modeling output results have also been attached.

Peak flow rates are based on a NasHYD hydrograph and the SCS Type II – 12 hour, 15 minute distribution.

Table 4: Est. Peak Flow Rates – Visual Otthymo

Storm Event	Est. Peak Flow Rate (m^3/s)
2	0.38
5	**0.65**
10	0.84
25	1.11
50	1.31
100	1.52

The detailed breakdown of calculations can be found in **Appendix D**.

CROSSING DESIGN

A few different options have been presented in this report to allow the initiating landowner to choose the most cost-effective installation at the time of construction. The analysis completed by Shade Group has included the following options:

- 9m corrugated steel pipe (CSP) with headwall end treatment;
- 9m high density poly ethylene (HDPE) with headwall end treatment;
- 12m high density poly ethylene (HDPE) with projecting end, and 2:1 side slopes.

A 12m option with corrugated steel pipe was also reviewed but resulted in requiring an increase in the pipe diameter. With that, it is the author's opinion that that option would be the most expensive option of those presented above, and as such, was eliminated as an option.

The initiating landowner requested a minimum 25ft (7.6m) wide driving platform to ensure that their equipment would be able to pass. This design consideration was used to determine the appropriate culvert length options as presented above.

The 3 options presented above have been analyzed using HY-8 software, and the results have been enclosed in **Appendix D**. The results suggest that a 750mm diameter is required to accommodate the peak flow rates noted above and to meet current design standards.

100-YEAR STORM EVENT

Based on the results presented in **Appendix D**, the 100-year storm event would be expected to not only overtop the crossing, but also crest the banks and temporarily pond onto the adjacent surrounding lands, as is common for drains adopted under the Drainage Act as the systems are not generally intended to contain the conveyance of the 100-year storm event.

It should also be noted that given there is a smaller diameter culvert approximately 150m upstream (600mm diameter; per the adopted Engineer's Report), it would be expected that runoff would be controlled upstream of *that* culvert in a 100-year storm event. With that, the impacts upstream of the proposed farm crossing discussed in this report are expected to be negligible.

To address possible concerns with velocities downstream during the 100-year storm event, the culvert has intentionally been proposed away from the sharp bend in the drain; and velocity reducing measures such as the sediment basin on the upstream end; and the rip-rap on both the inlet and outlet of the pipe, would be expected to provide further reduction in velocities to avoid impacts downstream.

6.2 EROSION CONSIDERATIONS

The proposed culvert is expected to be located between approximately Station 27+80 and 28+59, and shall not be placed closer than 20m from Station 29+52 to avoid the outflow from causing erosion at the bend on the Real Diotte Branch at Station 29+52. The exact placement between 27+80 and 28+59 is at the discretion of the landowner. End treatment shall be installed on both the inlet and outlet sides of the culvert to offer further dissipation of flows and reduction of velocities. A permanent sediment basin shall be excavated immediately upstream of the new culvert. This will further help to dissipate flow velocities prior to reaching the culvert, and offer attenuation of sediment. It is expected that this basin may experience ponding water as it would not have a gravity outlet, as is common for sediment basins.

Overall, the proposed crossing is not anticipated to have any measurable negative impacts on erosion in the system, as long as the above noted erosion control measures are implemented.

The permanent and temporary erosion control measures have been shown on the enclosed Crossing Details Plan and on a standalone Erosion and Sediment Control Plan (as requested by the Conservation Authority), found in **Appendix B**.

7.0 PLAN, PROFILE & SPECIFICATIONS

It is intended that the accompanying Watershed Plan, Crossing Details Plan and Erosion and Sediment Control Plan form part of this report, and that they together with this report, govern the performance of the work. The plans have been enclosed in **Appendix B**.

8.0 FUTURE MAINTENANCE

8.1 ASSESSMENT OF COSTS

No changes are proposed to how costs are to be assessed. The applicable governing assessment schedule for the Real Diotte Branch shall continue to govern.

8.2 FUTURE MAINTENANCE - CONSTRUCTION

Future maintenance/replacement of the crossing is to be administered by the municipality in fitting with specifications of the Drainage Act. All fees associated with maintenance or replacement of this culvert shall be assessed to the landowner until such a time as a full update (Major Improvement) is completed on the Real Diotte Branch at which time the culvert replacement/maintenance *may* be assessed to those upstream, at the discretion of the engineer.

9.0 PERMITTING & SPECIAL CONSIDERATIONS

As part of the preparation of this report, the author conducted a review of AgMaps, the Geographic Information System managed by the Ministry of Agriculture, Food and Agribusiness. AgMaps identifies the Real Diotte Branch as a Class 'E' drain. Class 'E' drains are described as having permanent flow and sensitive species present. It is our understanding that this classification has been made due to the proximity to the East Rigaud River.

No fisheries studies were conducted as part of Shade Group's scope.

9.1 RAISIN REGION CONSERVATION AUTHORITY

The Engineer's Report was circulated to the Raisin Region Conservation Authority (RRCA) for review and permit on September 10, 2024. RRCA provides permits under the Conservation Authorities Act regarding the Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses.

A copy of the permit has been enclosed in **Appendix F**. Please note this permit will only be for the initial installation. Future maintenance and/or replacement may require new permitting, subject to legislative requirements at the time of future works.

9.2 DEPARTMENT OF FISHERIES AND OCEANS

Consultation and permitting with Fisheries and Oceans Canada (DFO) was completed concurrent with the preparation of this report. A "Request for Review" application was submitted on August 22, 2024 and a copy of this report was provided upon assignment of a specific reviewer. Projects in or near water may require authorization under the Fisheries Act.

Per email correspondence received from DFO on October 11, 2024, the project does not require Fisheries Act Authorization and instead, a "letter of advice" was received with specific limitations and specifications for when and how the work may be performed. A copy of the correspondence has been enclosed in **Appendix F**.

9.3 OTHER CONSIDERATIONS

INSTALLATION

The proposed crossing should be installed by an experienced contractor. The culvert is to be installed in conformance with Ontario Provincial Standard Specification 421. The culvert is to be embedded by 10%, which has been reflected in the culvert elevations as shown on the plans. Installation shall conform with the specifications and limitations as outlined in the permit from Raisin Region Conservation Authority; and any limitations outlined by Fisheries and Oceans Canada.

Multiple options have been presented – with or without headwalls. Final decision of whether or not to implement headwalls is to be at the discretion of the landowner, as they are paying for the works. Headwalls may be constructed out of various materials; armour stone, large block, etc. Installation of headwalls shall be done by an experienced contractor and done in such a manner so provide a stable retention of the driving surface. Only *one* option is to be installed (i.e. one crossing).

INLET AND OUTLET CONTROL PROTECTION – RIP-RAP OR BLAST ROCK

Scour and erosion protection measures are to be installed on either end of the culvert. Installation shall be in fitting with SGI Standard Drawing 4 – attached.

EROSION AND SEDIMENT CONTROL

Permanent erosion and sediment control measures have been shown on the enclosed engineering plans and include the installation of end treatment (rock protection) on the inlet and outlet of the culvert and excavation of a sediment trap.

Temporary erosion and sediment control measures shall include the erection of strawbale check dams within the work area. It is expected that works will be performed in the dry, or in low or no flow conditions, and outside of any timing window restrictions.

Inspection and ongoing maintenance of the erosion and sediment control measures shall be the responsibility of the contractor throughout construction. Following the excavation works, the erosion and sediment control measures are to be kept in place until the area is deemed

sufficiently stabilized by the engineer, Drainage Superintendent or applicable permitting agency. It shall be the contractor's responsibility to maintain these measures after every rainfall event (>10mm) and as required throughout construction to ensure they are operating as per standard industry practice.

Given the scale of the project, it is not expected that the installation should take more than 2 days to complete. Assuming due consideration for weather events at the time of scheduling the work, it is expected that the temporary erosion and sediment control measures can be removed following construction, as it is not expected that any areas of instability should remain after construction. The removal and proper disposal of the erosion and sediment control measures shall be considered part of the contract.

Maintenance of all erosion and sediment control measures, both permanent and temporary, shall conform with the Ministry of Transportation of Ontario's Environmental Guide for Erosion and Sediment Control (February 2007).

Additional erosion and sediment control measures may be required at the direction of the engineer, municipality, RRCA or DFO, as needed to address site conditions at the time of the work. The review and implementation of erosion and sediment control measures is intended to be a living practice, where additional measures may be required depending on the conditions at the time of the work, including maintenance activities.

Erosion control measures have been shown on the enclosed engineering plans and can be found in **Appendix B**.

UTILITIES

The contractor shall acquire applicable utility clearance prior to excavation as per the Ontario Underground Infrastructure Notification System Act. Should utility conflicts be identified, Shade Group shall be notified.

10.0 PROJECT COSTS

10.1 ENGINEERING

The engineering costs associated with this project are estimated to be $11,000 + HST. This estimate does not factor in any appeals or revisions to the report following submission. Any appeals following submission of the report to Council would be considered extra.

10.2 CONSTRUCTION

Shade Group has prepared a construction cost estimate for *one* of the options, which we believe to be the most cost-effective solution based on our current available market data. As local contractors may offer alternative pricing and have access to more competitive options, the final decision on the desired installation has been left to the initiating landowner.

The estimated cost of construction for the crossing, using a 12m projecting end HDPE pipe is approximately $10,175 plus any applicable taxes. This estimate is based on 2024 costing, assumed for construction in 2024/2025. Should there be delays in construction, construction costs may be higher. Final construction costs may be higher or lower than those estimated herein.

Per Section 8(10) of Ontario Regulation 500/21, should the contract price exceed the engineer's estimate by more than 133%, the applicant may choose to either consent to the new contract price or withdraw their project (and the by-law would be repealed).

A detailed breakdown of the project costs has been enclosed in **Appendix E**.

10.3 SUMMARY OF COSTS

The following provides a breakdown of the anticipated project costs as described above. It does not include any administrative costs from the municipality (printing, photocopying, postage, etc.), nor does it include any applicable taxes or grant.

Professional Engineering Fees	$11,000
Estimate Construction Costs	$10,175
Permitting Fees	$600
Total Estimated Project Cost	**$21,775**

All fees summarized in Section 10.3 are to be borne by the initiating landowner.

10.4 ADIP GRANTS

Properties that are registered with the Ontario Ministry of Agriculture, Food and Agribusiness (OMAFA) for the Farm Property Class Tax Rate Program may be eligible for a 1/3 grant from the Province. If the applicant has any questions on whether the property is eligible for grant, please contact the Township's Drainage Superintendent or the undersigned to discuss further.

As the initiating landowner's property is understood to be an active agricultural operation, it is anticipated that the project may be eligible for grant. Note that grant availability is not guaranteed and is at the discretion of the province.

11.0 CLOSING

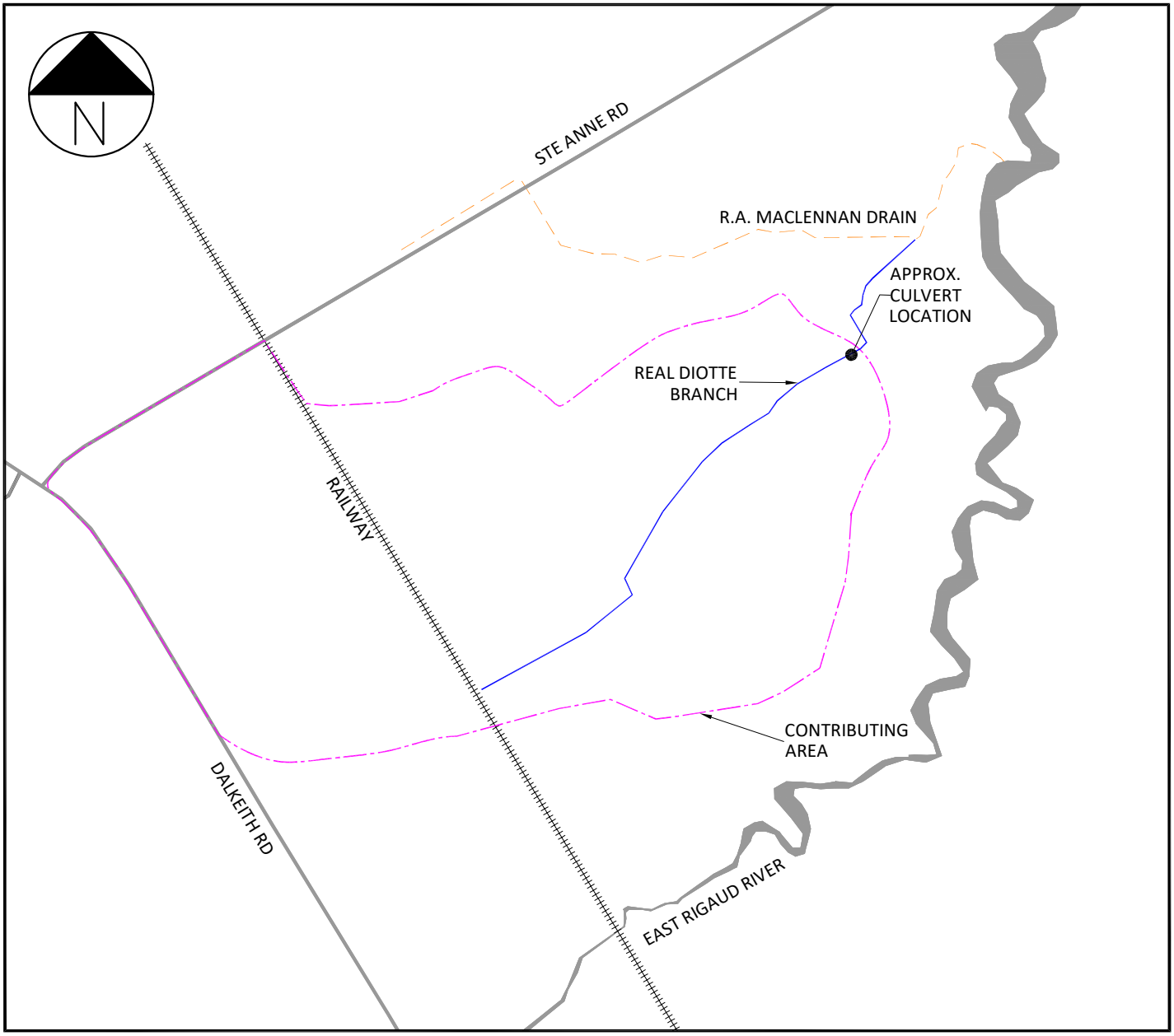
This report is respectfully submitted this November 22, 2024.

Should you have any questions or concerns, please do not hesitate to contact the undersigned.

Monica Shade, P. Eng.
Drainage Engineer
Shade Group Inc.

APPENDIX A

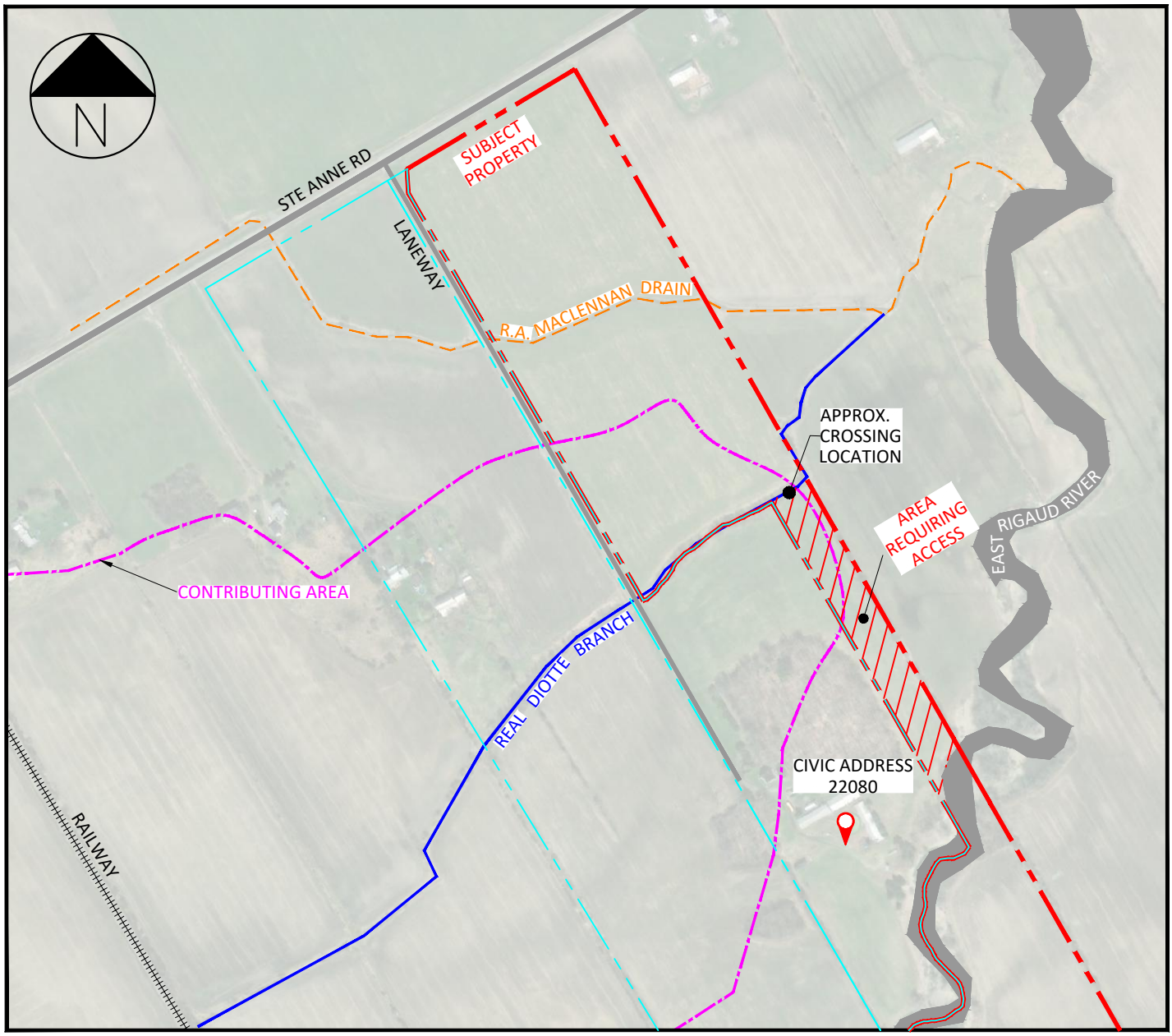
LOCATION PLAN



LOCATION PLAN
N.T.S.

REAL DIOTTE BRANCH CROSSING
NORTH GLENGARRY
2024

SHADE GROUP INC



PROJECT KEY PLAN
N.T.S.

REAL DIOTTE BRANCH CROSSING
NORTH GLENGARRY
2024

SHADE GROUP INC

APPENDIX B

ENGINEERING PLANS

REAL DIOTTE BRANCH CROSSING DESIGN

STE ANNE ROAD

DALKEITH ROAD

SUBJECT PROPERTY
ROLL NO. 0111-016-007-13002
CONCESSION 3, PT LOT 5
GEOGRAPHIC TWP OF LOCHIEL

R.A. McLENNAN DRAIN

REAL DIOTTE BRANCH

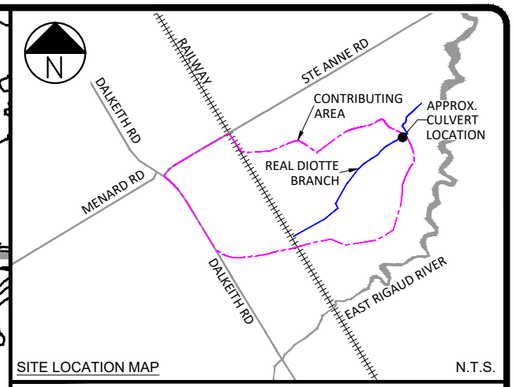
SOUTH LAGRASSE DRAIN

EAST RIGAUD RIVER

APPROX. LOCATION OF PR. CULVERT
END OF PIPE MUST BE MIN. 20m
FROM BEND AT STATION 29+25

EXISTING 600mm Ø CULVERT

0+00
9+52
10+75
14+60
21+73
29+25
30+93
34+79



SITE LOCATION MAP N.T.S.

SCALE BAR 0 50 100 200m

ALL DIMENSIONS ARE IN METRES. DO NOT SCALE DRAWING

PAGE SIZE	11" x 17"	SCALE	1:5000

SHADE GROUP INC.
4625 MARCH ROAD
ALMONTE, ONTARIO
K0A 1A0

SHADE GROUP INC

LEGEND

- APPROX. PROPERTY LINES (GIS DATA)
- APPROX. SUBJECT PROPERTY LINES (GIS DATA)
- ROAD
- REAL DIOTTE BRANCH OF R.A. McLENNAN DRAIN
- PROPOSED CROSSING CONTRIBUTING AREA
- WATERCOURSES
- 70 CONTOUR LINES
- 30+93 STATIONS FROM 1979 ENGINEER'S REPORT (FT)
- RAILWAY
- CULVERT

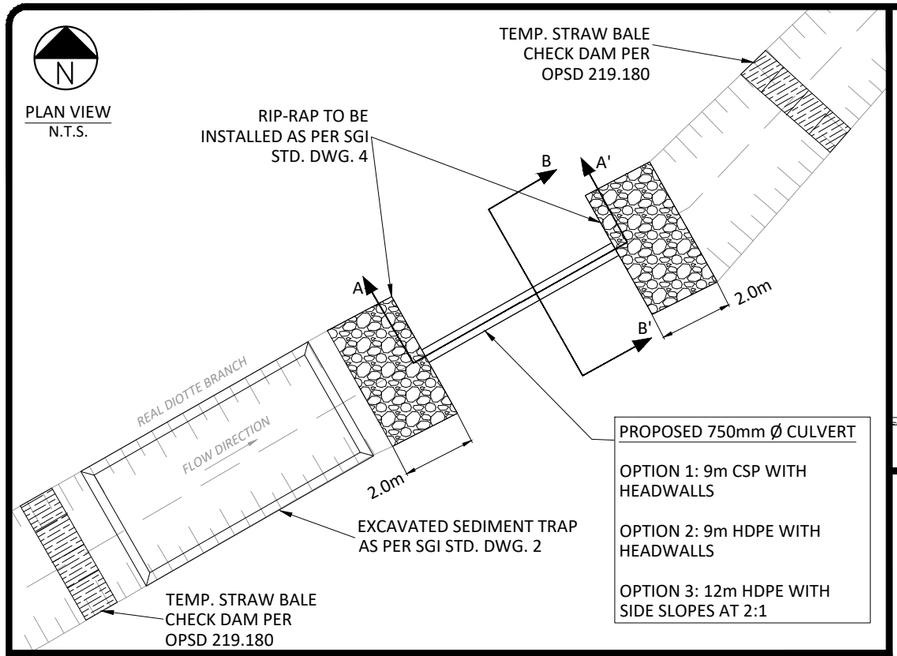
REV.	DESCRIPTION	DATE
01	ISSUED WITH FINAL REPORT	NOV. 22, 2024
00	ISSUED FOR PERMIT	SEPT. 10, 2024

STAMP

LICENSED PROFESSIONAL ENGINEER
M. K. SHADE
100170995
NOV 22, 2024
PROVINCE OF ONTARIO

PROJECT TITLE	REAL DIOTTE BRANCH CROSSING DESIGN
DRAWING TITLE	WATERSHED MAP
DRAWING NO.	1 OF 1

PLAN VIEW
N.T.S.



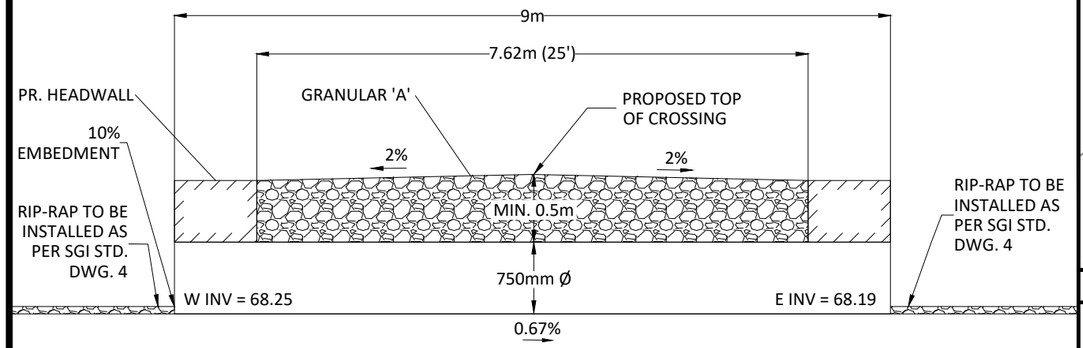
PROPOSED 750mm Ø CULVERT

OPTION 1: 9m CSP WITH HEADWALLS

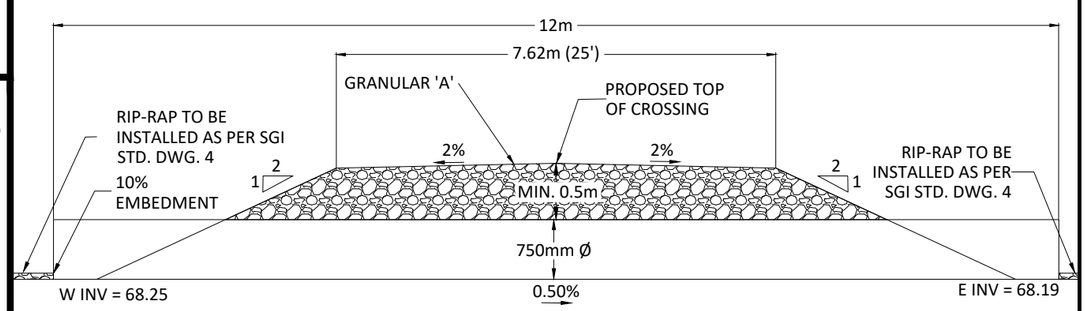
OPTION 2: 9m HDPE WITH HEADWALLS

OPTION 3: 12m HDPE WITH SIDE SLOPES AT 2:1

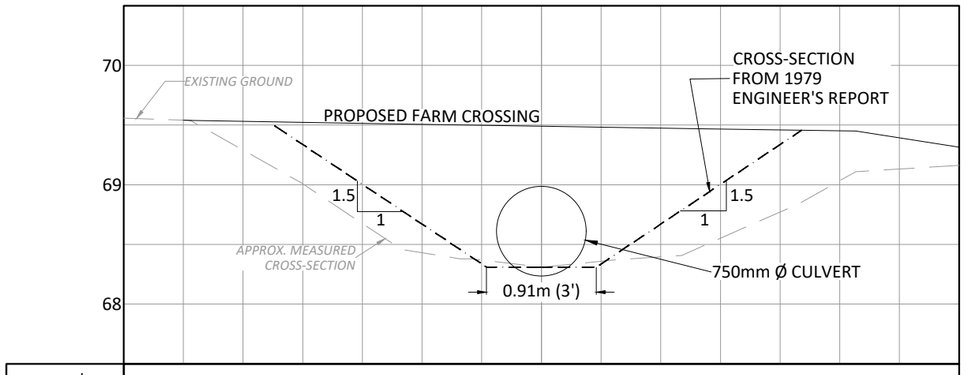
CROSS-SECTION VIEW - A-A'
OPTION 1 or 2: HEADWALLS
N.T.S



CROSS-SECTION VIEW - A-A'
OPTION 3: PROJECTING END
N.T.S



CROSS-SECTION VIEW B-B'
N.T.S



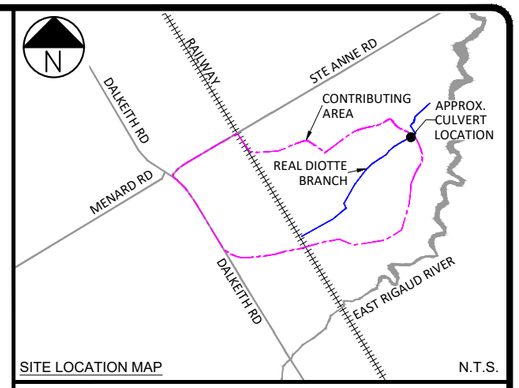
EXISTING	69.54	69.01	68.43	68.31	68.40	68.77	69.11	69.13
PROP CL		69.52	69.51	69.49	69.47	69.46	69.45	
OFFSET FROM DITCH C/L (m)	-3.0	-2.0	-1.0	0.0	1.0	2.0	2.6	3.0

GENERAL NOTES

1. ALL TOPOGRAPHY, GROUND ELEVATIONS AND SURVEY DATA ARE SHOWN FOR INFORMATION PURPOSES ONLY AND IMPLY NO GUARANTEE OF ACCURACY. ALL DIMENSIONS AND ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IF THERE ARE ANY DISCREPANCIES THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
2. ALL ELEVATIONS AND DIMENSIONS SHOWN ARE IN METERS UNLESS OTHERWISE SPECIFIED.
3. THE OWNER IS RESPONSIBLE FOR ALL PERMITS AND APPROVALS FROM THE APPLICABLE AGENCIES PRIOR TO CONSTRUCTION.
4. LAYOUT BY OTHERS.
5. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
6. WORK TO BE COMPLETED IN THE DRY.
7. ANY CHANGES MADE TO THIS PLAN ARE TO BE VERIFIED AND APPROVED BY SHADE GROUP INC.

EROSION AND SEDIMENT CONTROL NOTES

1. THIS PLAN INCLUDES PERMANENT AND TEMPORARY EROSION CONTROL MEASURES WHICH ARE TO BE APPLIED DURING THE INITIAL CONSTRUCTION AND DURING FUTURE MAINTENANCE WORKS.
2. EROSION AND SEDIMENT CONTROL PLANS ARE CONSIDERED TO BE LIVING DOCUMENTS, AND ADDITIONAL MEASURES MAY BE REQUIRED AT THE DIRECTION OF THE ENGINEER, MUNICIPALITY, SNCA OR DFO, AS NEEDED TO ADDRESS SITE CONDITIONS AT THE TIME OF CONSTRUCTION (BOTH DURING THE INITIAL CONSTRUCTION AND FUTURE MAINTENANCE).
3. MAINTENANCE OF THE TEMPORARY EROSION CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR DURING AND IMMEDIATELY FOLLOWING CONSTRUCTION. THE CONTRACTOR SHOULD REVIEW AND DOCUMENT THE CONDITION OF THE TEMPORARY EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION, AT THE START OF EACH DAY OF ON-SITE WORKS AND AFTER EVERY RAINFALL EVENT (>10mm). CORRECTIVE MEASURES TO REMOVE SEDIMENT BUILD UP, RESTORE EROSION CONTROL MEASURES, ETC. SHALL BE PERFORMED WITHIN NO MORE THAN 24 HOURS FOLLOWING THE RAINFALL EVENT, FOLLOWING OBSERVATION OF THE FAILED MEASURE, OR FOLLOWING NOTIFICATION FROM THE DRAINAGE SUPERINTENDENT, ENGINEER OR CONSERVATION AUTHORITY OVER A MEASURE REQUIRING MAINTENANCE. CONTINUED MAINTENANCE OF TEMPORARY MEASURES MAY STILL BE REQUIRED IMMEDIATELY FOLLOWING FUTURE MAINTENANCE AND/OR THE INITIAL CONSTRUCTION, UP UNTIL SUCH A TIME AS THE SITE CONDITIONS ARE DEEMED TO BE ADEQUATELY STABILIZED AS PER THE ENGINEER, SNCA, DFO OR MUNICIPALITY.
4. THE ON-GOING MONITORING AND CORRECTIVE ACTION ASSOCIATED WITH THE PERMANENT EROSION CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE LANDOWNERS ADJACENT THE DRAIN, AND THE MUNICIPALITY (DRAINAGE SUPERINTENDENT). IT IS EXPECTED THAT LANDOWNERS WOULD PROVIDE NOTIFICATION TO THE MUNICIPALITY WHEN CORRECTIVE ACTION IS REQUIRED, WHILE THE MUNICIPALITY WOULD LOOK AFTER HIRING A CONTRACTOR TO COMPLETE MAINTENANCE WORKS AS REQUIRED, IN FITTING WITH THE DIRECTIVES OF THE DRAINAGE ACT.
5. CONSTRUCTION WORKS (INITIAL + FUTURE MAINTENANCE) ARE TO BE COMPLETED IN LOW OR NO FLOW CONDITIONS, OUTSIDE OF ANY TIMING WINDOW RESTRICTIONS.
6. SCHEDULING OF CONSTRUCTION WORKS SHOULD AVOID WET, WINDY OR RAINY PERIODS (AND HEED WEATHER ADVISORIES) AS THESE MAY RESULT IN HIGH FLOW VOLUMES AND/OR INCREASED EROSION AND SEDIMENTATION.
7. THE CONTRACTOR SHALL OPERATE MACHINERY ON LAND IN STABLE, DRY AREAS.
8. THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A RESPONSE PLAN TO AVOID A SPILL OF DELETERIOUS SUBSTANCES.



SITE LOCATION MAP N.T.S.

PAGE SIZE 11" x 17"

SHADE GROUP INC.
4625 MARCH ROAD
ALMONTE, ONTARIO
K0A 1A0

NOTE

CORRUGATED STEEL PIPE: MIN. WALL THICKNESS 2.0mm
HIGH DENSITY POLY ETHYLENE PIPE: MIN. 320kPa

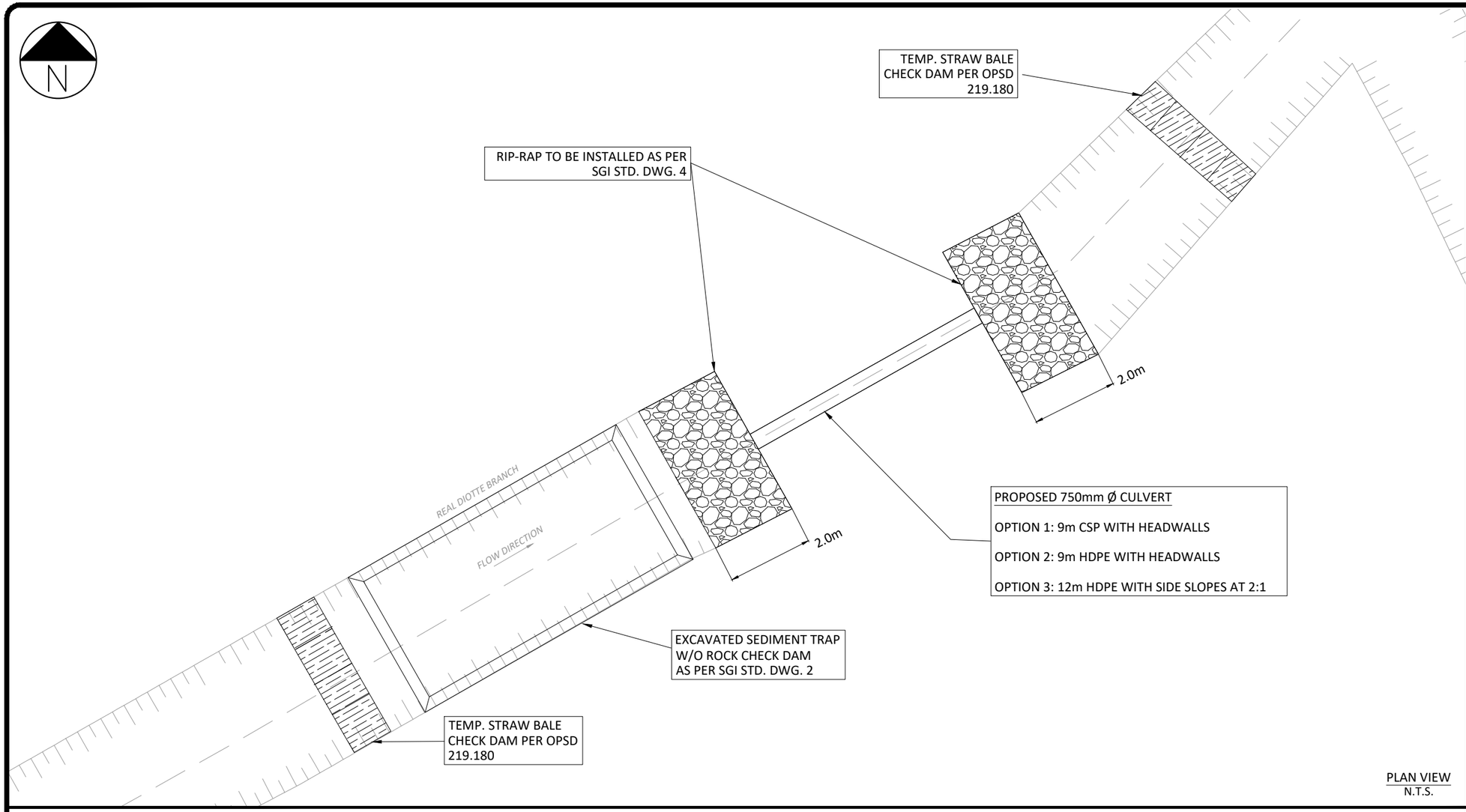
REV.	DESCRIPTION	DATE
01	ISSUED WITH FINAL REPORT	NOV. 22, 2024
00	ISSUED FOR PERMIT	SEPT. 10, 2024

STAMP

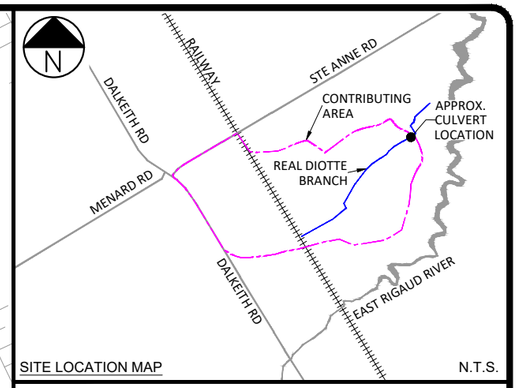
PROJECT TITLE: REAL DIOTTE BRANCH CROSSING DESIGN

DRAWING TITLE: CROSSING DETAILS PLAN

DRAWING NO.: 1 OF 1



PLAN VIEW
N.T.S.



SITE LOCATION MAP N.T.S.

PAGE SIZE 11" x 17"

SHADE GROUP INC.
4625 MARCH ROAD
ALMONTE, ONTARIO
K0A 1A0

NOTE

CORRUGATED STEEL PIPE: MIN. WALL THICKNESS 2.0mm
HIGH DENSITY POLY ETHYLENE PIPE: MIN. 320kPa

REV.	DESCRIPTION	DATE
00	ISSUED WITH FINAL REPORT	NOV. 22, 2024

EROSION AND SEDIMENT CONTROL NOTES

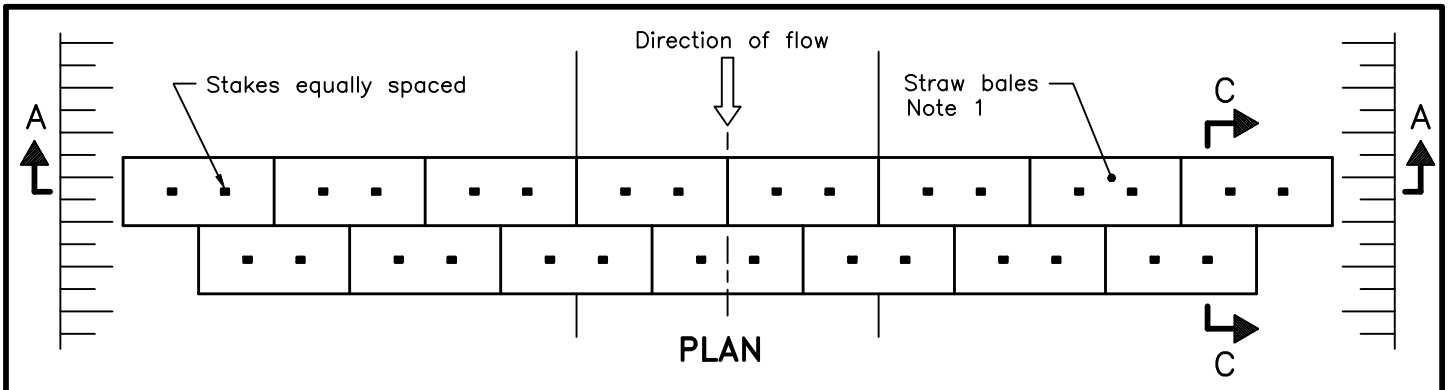
1. THIS PLAN INCLUDES PERMANENT AND TEMPORARY EROSION CONTROL MEASURES WHICH ARE TO BE APPLIED DURING THE INITIAL CONSTRUCTION AND DURING FUTURE MAINTENANCE WORKS.
2. EROSION AND SEDIMENT CONTROL PLANS ARE CONSIDERED TO BE LIVING DOCUMENTS, AND ADDITIONAL MEASURES MAY BE REQUIRED AT THE DIRECTION OF THE ENGINEER, MUNICIPALITY, SNCA OR DFO, AS NEEDED TO ADDRESS SITE CONDITIONS AT THE TIME OF CONSTRUCTION (BOTH DURING THE INITIAL CONSTRUCTION AND FUTURE MAINTENANCE).
3. MAINTENANCE OF THE TEMPORARY EROSION CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR DURING AND IMMEDIATELY FOLLOWING CONSTRUCTION. THE CONTRACTOR SHOULD REVIEW AND DOCUMENT THE CONDITION OF THE TEMPORARY EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION, AT THE START OF EACH DAY OF ON-SITE WORKS AND AFTER EVERY RAINFALL EVENT (>10mm). CORRECTIVE MEASURES TO REMOVE SEDIMENT BUILD UP, RESTORE EROSION CONTROL MEASURES, ETC. SHALL BE PERFORMED WITHIN NO MORE THAN 24 HOURS FOLLOWING THE RAINFALL EVENT, FOLLOWING OBSERVATION OF THE FAILED MEASURE, OR FOLLOWING NOTIFICATION FROM THE DRAINAGE SUPERINTENDENT, ENGINEER OR CONSERVATION AUTHORITY OVER A MEASURE REQUIRING MAINTENANCE. CONTINUED MAINTENANCE OF TEMPORARY MEASURES MAY STILL BE REQUIRED IMMEDIATELY FOLLOWING FUTURE MAINTENANCE AND/OR THE INITIAL CONSTRUCTION, UP UNTIL SUCH A TIME AS THE SITE CONDITIONS ARE DEEMED TO BE ADEQUATELY STABILIZED AS PER THE ENGINEER, SNCA, DFO OR MUNICIPALITY.
4. THE ON-GOING MONITORING AND CORRECTIVE ACTION ASSOCIATED WITH THE PERMANENT EROSION CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE LANDOWNERS ADJACENT THE DRAIN, AND THE MUNICIPALITY (DRAINAGE SUPERINTENDENT). IT IS EXPECTED THAT LANDOWNERS WOULD PROVIDE NOTIFICATION TO THE MUNICIPALITY WHEN CORRECTIVE ACTION IS REQUIRED, WHILE THE MUNICIPALITY WOULD LOOK AFTER HIRING A CONTRACTOR TO COMPLETE MAINTENANCE WORKS AS REQUIRED, IN FITTING WITH THE DIRECTIVES OF THE DRAINAGE ACT.
5. CONSTRUCTION WORKS (INITIAL + FUTURE MAINTENANCE) ARE TO BE COMPLETED IN LOW OR NO FLOW CONDITIONS, OUTSIDE OF ANY TIMING WINDOW RESTRICTIONS.
6. SCHEDULING OF CONSTRUCTION WORKS SHOULD AVOID WET, WINDY OR RAINY PERIODS (AND HEED WEATHER ADVISORIES) AS THESE MAY RESULT IN HIGH FLOW VOLUMES AND/OR INCREASED EROSION AND SEDIMENTATION.
7. THE CONTRACTOR SHALL OPERATE MACHINERY ON LAND IN STABLE, DRY AREAS.
8. THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A RESPONSE PLAN TO AVOID A SPILL OF DELETERIOUS SUBSTANCES.

STAMP

PROJECT TITLE: REAL DIOTTE BRANCH CROSSING DESIGN

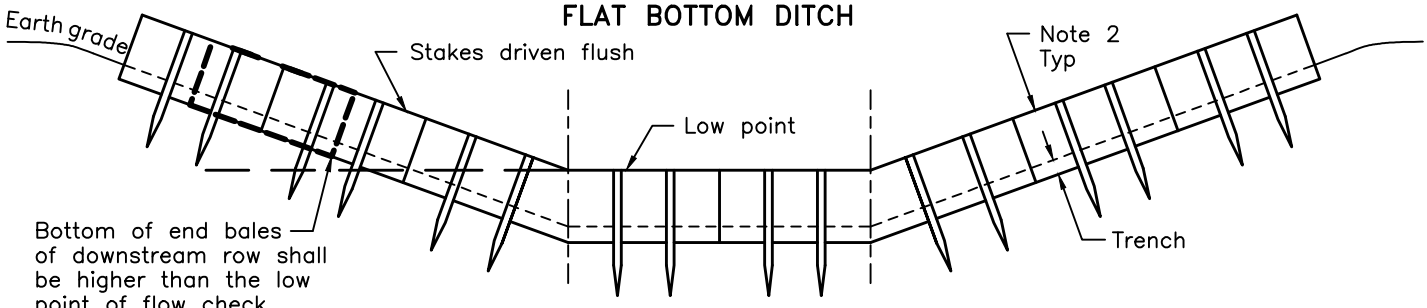
DRAWING TITLE: EROSION AND SEDIMENT CONTROL PLAN

DRAWING NO.: 1 OF 1



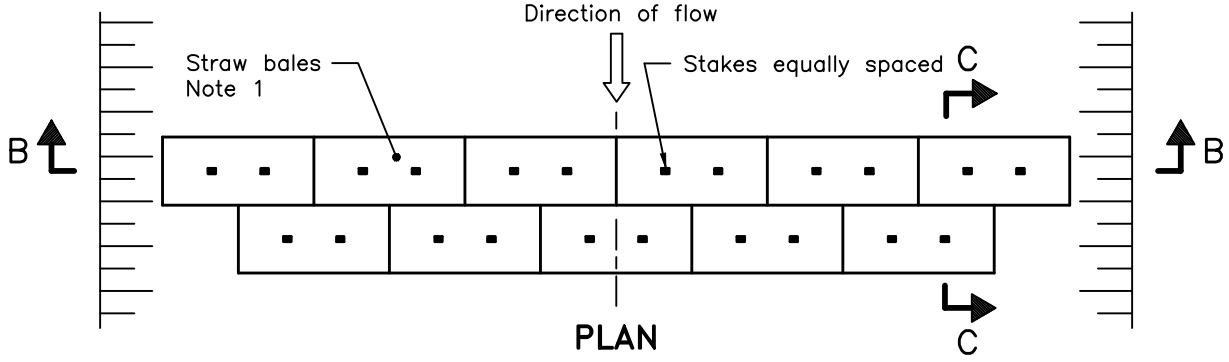
PLAN

FLAT BOTTOM DITCH



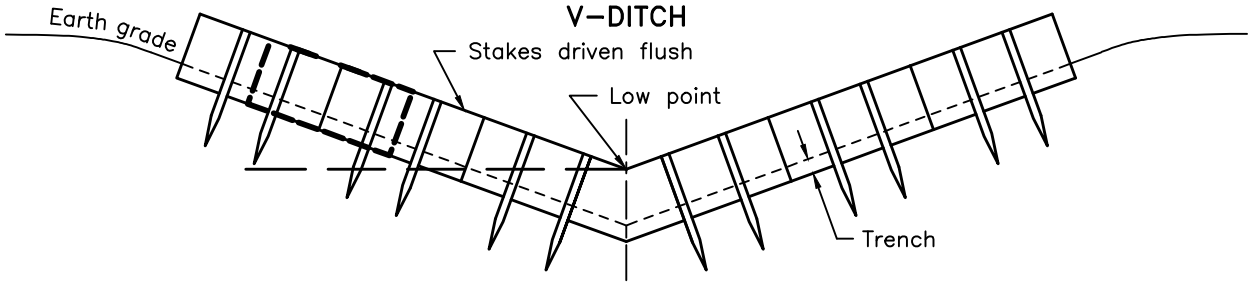
Bottom of end bales of downstream row shall be higher than the low point of flow check. Downstream bale position outlined. Typ

SECTION A–A

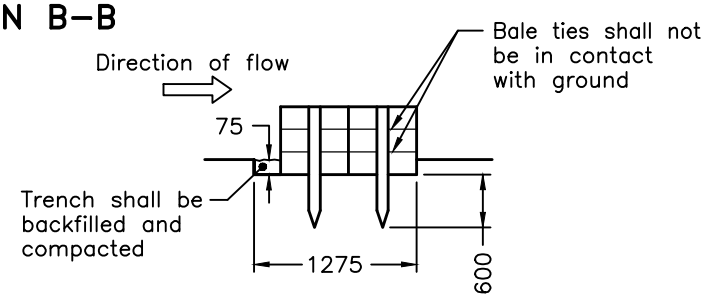


PLAN

V–DITCH



SECTION B–B



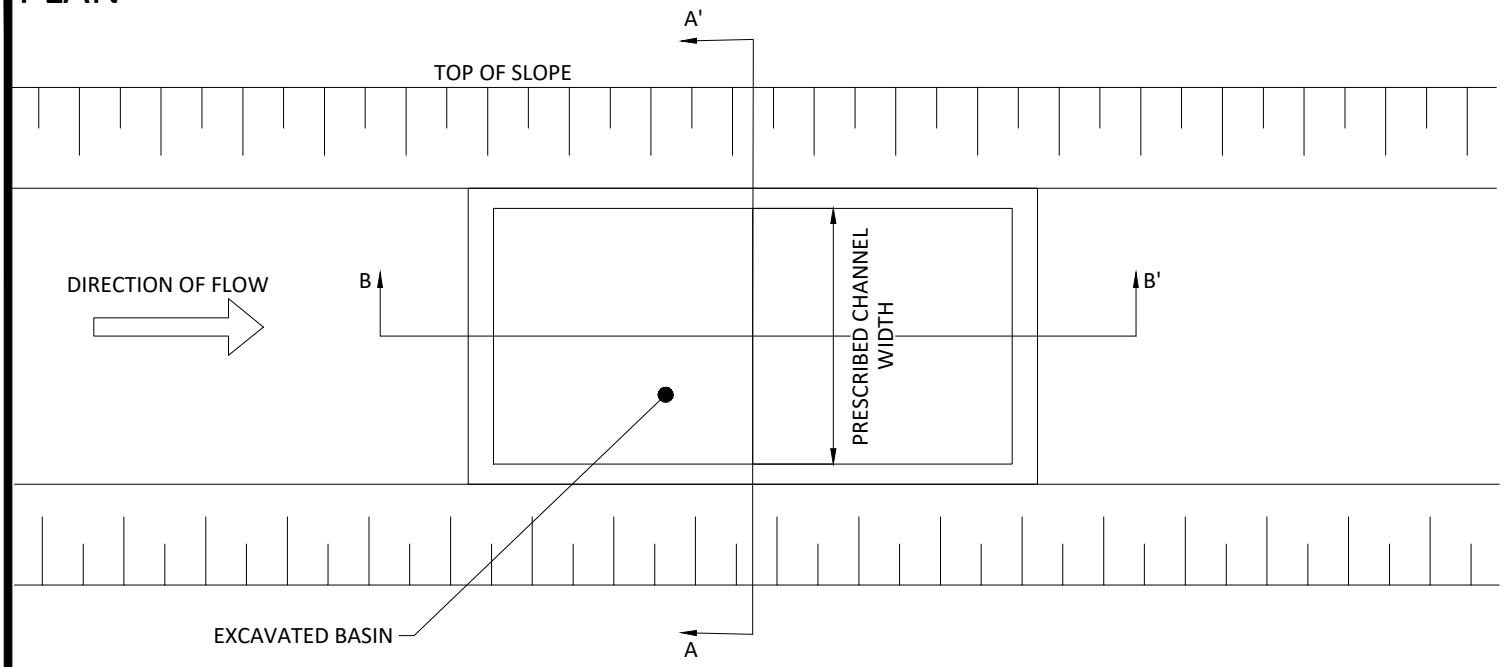
SECTION C–C

NOTES:

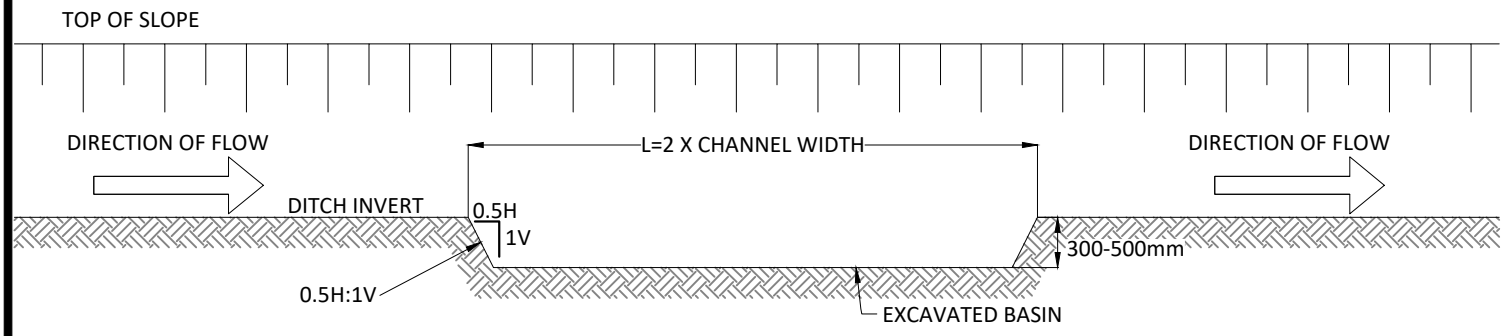
1 Number of bales varies and shall suit ditch.
2 Straw bales shall be butted tightly against adjoining bales and shaped to conform to the sides of the ditch to prevent water flow through barrier.
A Fill and compact gaps with loose straw.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2021	Rev	3
STRAW BALE FLOW CHECK DAM			
	OPSD 219.180		

PLAN



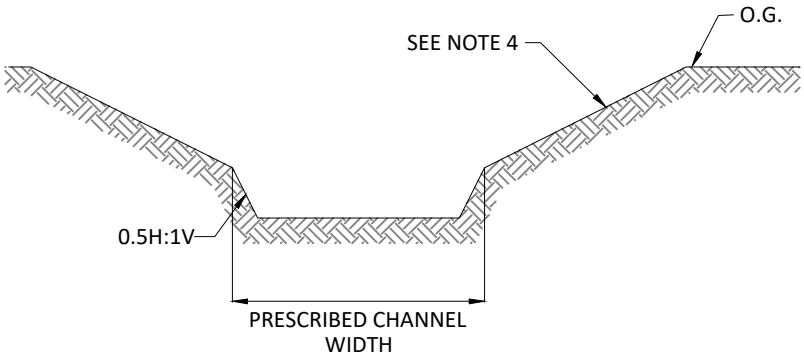
SECTION B-B'



NOTES:

1. THIS DRAWING MODIFIES OPSD 219.220
2. DITCH CROSS-SECTION UPSTREAM OR DOWNSTREAM OF SEDIMENT TRAP MAY BE FLAT BOTTOM OR V-SHAPED, FLAT BOTTOM SHOWN.
3. MIN. SIDE SLOPES AS SPECIFIED IN ENGINEER'S REPORT OR CONTRACT DRAWINGS
4. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.

SECTION A-A'



PETITION DRAIN STANDARD DRAWING

EXCAVATED SEDIMENT TRAP

DETAIL DWG.NO.	REVISION	DATE	SCALE
SGI STD. DWG. 2	1.0	Jan/24	N.T.S

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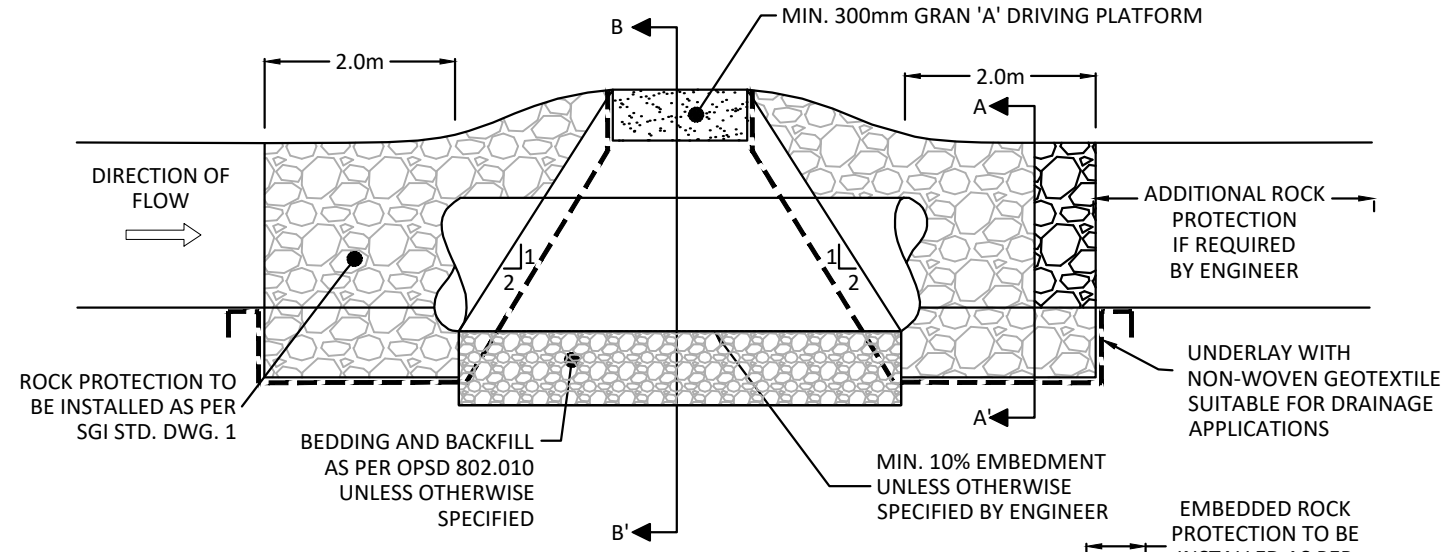
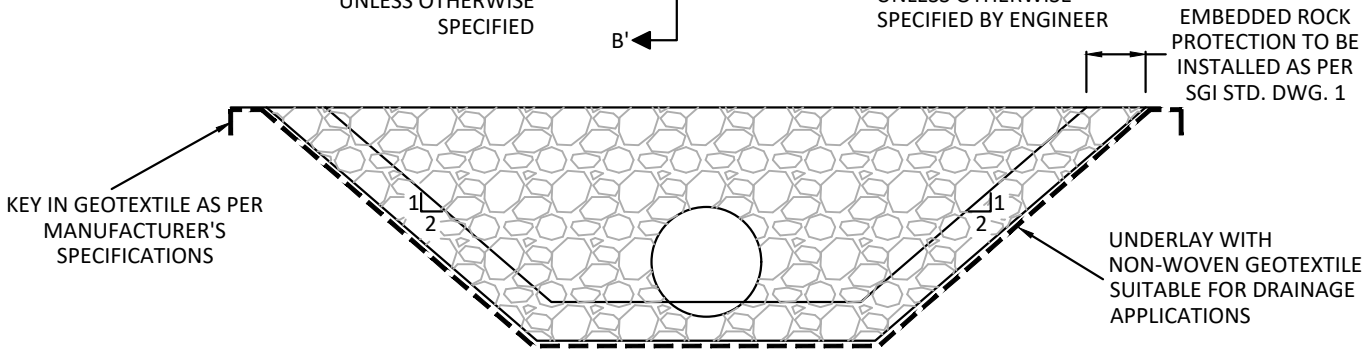
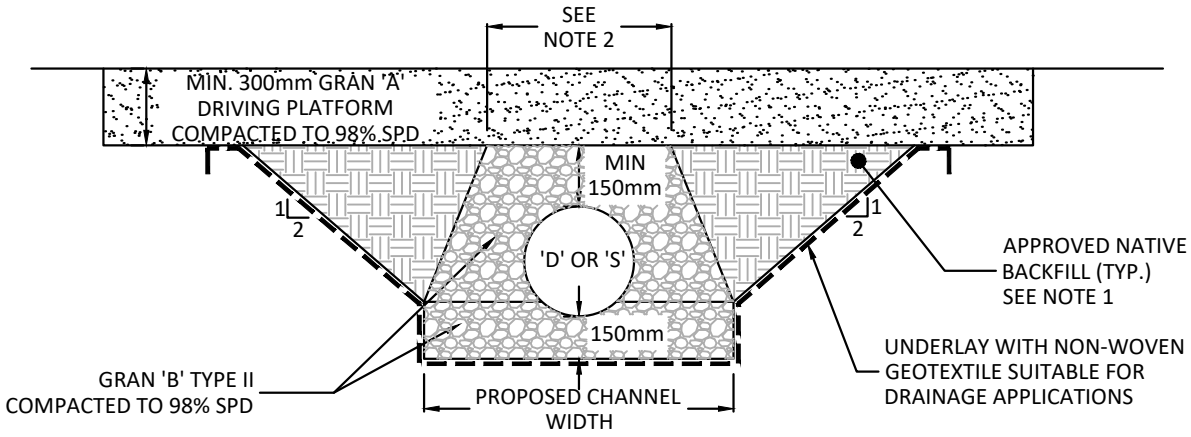




SECTION A-A'



SECTION B-B'

NOTES:

1. APPROVED NATIVE BACKFILL MATERIAL MAY CONSIST OF DRY CLAY, SAND OR GRANULAR MATERIAL WITH NO LARGE STONES, BOULDERS, DEBRIS OR ORGANIC MATERIAL. BACKFILL MUST BE PLACED IN LIFTS NOT EXCEEDING 300mm IN THICKNESS AND COMPACTED. ALL REQUIREMENTS FOR GRANULAR BEDDING, COVER AND SURFACE COURSE MUST BE MET PRIOR TO PLACING ANY BACKFILL.
2. FOR CIRCULAR CULVERTS, THE TOP-WIDTH OF COVER MATERIAL SHALL BE A MINIMUM OF THE DIAMETER OF THE PIPE ('D') PLUS 0.5 X 'D' EACH WAY FOR A TOTAL OF 2.0 X 'D'. FOR ARCH CULVERTS, THE TOP-WIDTH OF COVER MATERIAL SHALL BE A MINIMUM OF THE SPAN OF THE PIPE ('S') PLUS 0.75 X 'S' EACH WAY FOR A TOTAL OF 2.5 X 'S'. THE MINIMUM BOTTOM WIDTH SHALL CONFORM WITH THE PROPOSED CHANNEL WIDTH UPSTREAM/DOWNSTREAM OF THE CULVERT.
3. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ALL PIPES.

PETITION DRAIN STANDARD DRAWING

DETAIL DWG.NO.
SGI STD. DWG. 4

SHADE GROUP INC

CULVERT INLET/END PROTECTION

REVISION	DATE
00	FEB/24

SCALE
N.T.S

APPENDIX C

REFERENCE FILES

Active coordinate

45° 23' 45" N, 74° 30' 45" W (45.395833,-74.512500)

Retrieved: Thu, 22 Aug 2024 16:02:22 GMT

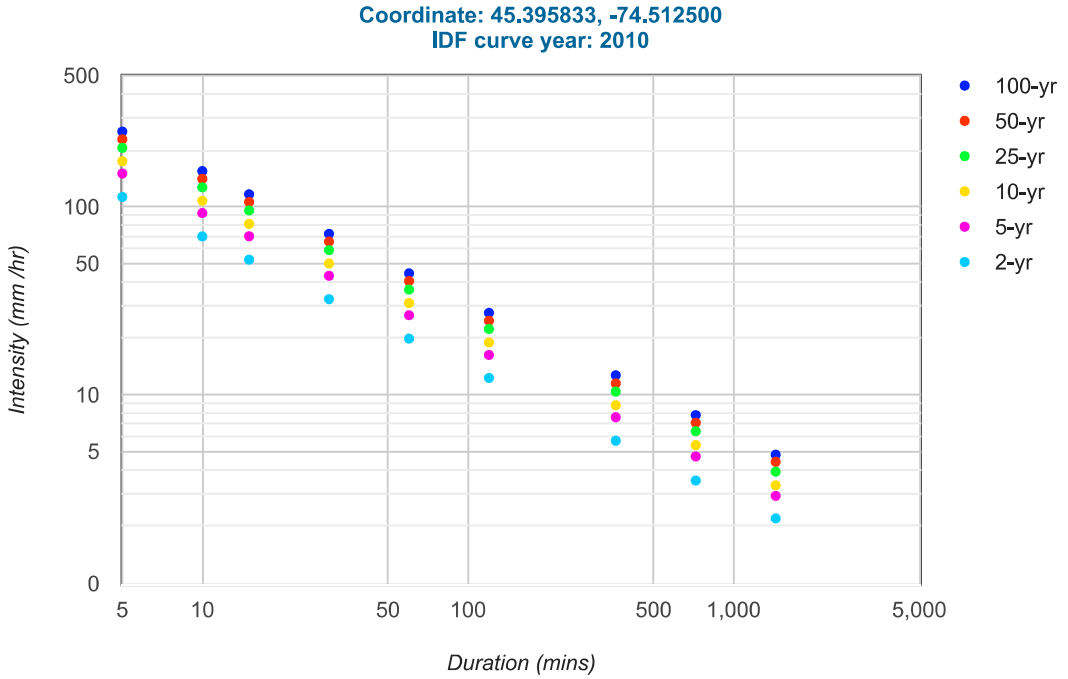
Location summary

These are the locations in the selection.

IDF Curve: 45° 23' 45" N, 74° 30' 45" W (45.395833,-74.512500)

Results

An IDF curve was found.



Coefficient summary

IDF Curve: 45° 23' 45" N, 74° 30' 45" W (45.395833,-74.512500)

Retrieved: Thu, 22 Aug 2024 16:02:22 GMT

Data year: 2010
IDF curve year: 2010

Return period	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
A	19.9	26.5	30.8	36.3	40.3	44.3
B	-0.699	-0.699	-0.699	-0.699	-0.699	-0.699

Statistics

Rainfall intensity (mm hr^{-1})

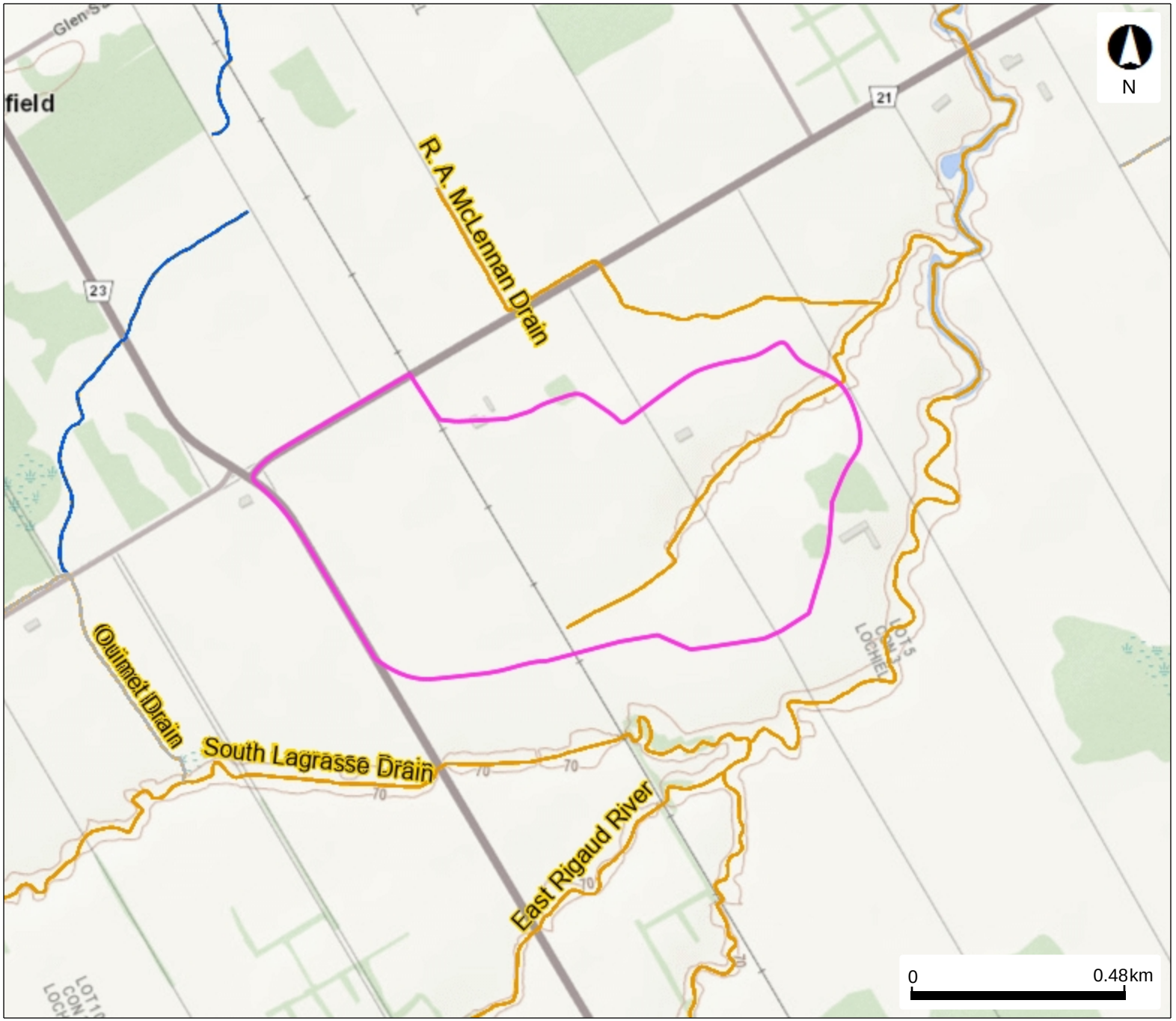
Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	113.0	69.6	52.4	32.3	19.9	12.3	5.7	3.5	2.2
5-yr	150.5	92.7	69.8	43.0	26.5	16.3	7.6	4.7	2.9
10-yr	174.9	107.8	81.2	50.0	30.8	19.0	8.8	5.4	3.3
25-yr	206.2	127.0	95.7	58.9	36.3	22.4	10.4	6.4	3.9
50-yr	228.9	141.0	106.2	65.4	40.3	24.8	11.5	7.1	4.4
100-yr	251.6	155.0	116.7	71.9	44.3	27.3	12.7	7.8	4.8

Rainfall depth (mm)

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	9.4	11.6	13.1	16.2	19.9	24.5	34.1	42.0	51.8
5-yr	12.5	15.5	17.5	21.5	26.5	32.6	45.4	56.0	69.0
10-yr	14.6	18.0	20.3	25.0	30.8	37.9	52.8	65.1	80.2
25-yr	17.2	21.2	23.9	29.5	36.3	44.7	62.2	76.7	94.5
50-yr	19.1	23.5	26.6	32.7	40.3	49.6	69.1	85.1	104.9
100-yr	21.0	25.8	29.2	36.0	44.3	54.6	76.0	93.6	115.3

Terms of Use

DFO Drain Classification Map



Legend

Drain Classification

- A
- B
- C
- D
- E
- F
- Closed/Tiled
- Not Rated

Constructed Drains

- Open or Unknown
- Closed/Tiled

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Agriculture, Food and Agribusiness (OMAFA) shall not be liable in any way for the use or any information on this map. of, or reliance upon, this map.

Map Created: 8/29/2024
Map Center: 45.39331 N, -74.52177 W

Hydrologic Soil Group Map

Legend

Constructed Drains

- Open or Unknown
- Closed/Tiled

Hydrologic Soil Group

- A - High
- B - Moderate
- C - Slow
- D - Very Slow

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Agriculture, Food and Agribusiness (OMAFA) shall not be liable in any way for the use or any information on this map. of, or reliance upon, this map.

Map Created: 8/29/2024
Map Center: 45.39331 N, -74.52177 W

Soil Classification Map

Legend

Constructed Drains

- Open or Unknown
- Closed/Tiled

Soil Name Label

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Agriculture, Food and Agribusiness (OMAFA) shall not be liable in any way for the use or any information on this map. of, or reliance upon, this map.

Map Created: 8/29/2024
Map Center: 45.39331 N, -74.52177 W

APPENDIX D

HYDROLOGIC & HYDRAULICS CALCULATIONS

Real Diotte Branch
New Farm Crossing

Methodology	**VISUAL OTTHYMO**
Unit Hydrograph	**NasHYD**
Description	**Real Diotte Branch - New Farm Crossing**
Use	**Farm Crossing**
Design Storm	5-Year HW/D < 1.5

Watershed Area A= 68.5 ha

Curve Number

Land Use	Curve Number	Area (ha)	Balanced Curve Number
Marsh	50	0	
Swamp	50	0	
Treed	79	1	
Gravel/Mine	98	0	86.0
Urban/Community	90	1	
Rural	86	66	
Water	50	0	

*Reference Source: MTO Drainage Management Manual, Table 1.09 & Central Oregon Stormwater Manual, Table 5-1

Runoff Coefficient

Land Use	Runoff Coefficient	Area (ha)	Balanced Runoff Coefficient
Marsh	0.05	0	
Swamp	0.05	0	
Treed	0.12	1	
Gravel/Mine	0.89	0	0.72
Urban/Community	0.82	1	
Rural	0.73	66	
Water	0.14	0	

*Reference Source: Hydrological Analysis + Design, Richard McCuen, 2006, Table 7.9

Initial Abstraction

CN > 80<90	Ia = 0.15S
S =	41.48
Ia =	6.22

Time of Concentration

Total Overland Flow Distance (m)	Slope of Land (%)	Overland Flow Tc (min)
500	0.60	149

Ditch Length (m)	Ditch Slope (%)	Ditch Velocity (m/s)	Ditch Tc (min)
610	0.100	0.14	70
259	0.150	0.18	24

Total Tc (min)	Total Tp (hr)
244	**2.72**

Peak Flow

Return Period	Results (m^3/s)	
2-Year	0.38	
5-Year	0.65	Design Storm
10-Year	0.84	
25-Year	1.11	
50-Year	1.31	
100-Year	1.52	

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Real Diotte Branch
New Farm Crossing

Methodology **HY-8 RESULTS**
Description **Real Diotte Branch - New Crossing**
Culvert Details **750mm CSP - 9m**
Design Storm 5-Year HW/D < 1.5

Total Discharge (cms)	Culvert Discharge (cms)	Headwater Elevation (m)	Inlet Control Depth(m)	Outlet Control Depth(m)	Normal Depth (m)	Critical Depth (m)	Outlet Depth (m)	Tailwater Depth (m)	Outlet Velocity (m/s)	Tailwater Velocity (m/s)
0.38	0.38	68.93	0.53	0.61	0.61	0.33	0.48	0.46	1.15	0.56
0.49	0.49	69.06	0.64	0.73	0.68	0.39	0.55	0.52	1.33	0.60
0.65	0.65	69.30	0.79	0.97	0.68	0.45	0.63	0.60	1.59	0.64
0.72	0.72	69.44	0.88	1.11	0.68	0.48	0.68	0.64	1.73	0.66
0.83	0.75	69.54	0.92	1.21	0.68	0.49	0.68	0.68	1.81	0.69
0.95	0.75	69.57	0.92	1.25	0.68	0.49	0.68	0.73	1.80	0.71
1.06	0.74	69.61	0.91	1.28	0.68	0.49	0.68	0.77	1.78	0.73
1.18	0.73	69.63	0.90	1.31	0.68	0.48	0.68	0.81	1.76	0.75
1.29	0.72	69.66	0.88	1.33	0.68	0.48	0.68	0.85	1.73	0.77
1.40	0.71	69.68	0.87	1.35	0.68	0.48	0.68	0.88	1.71	0.79
1.52	0.70	69.70	0.86	1.37	0.68	0.47	0.68	0.92	1.69	0.80

5-Year Check
Design Criteria HW/D < 1.5
HW = 1.05 m
D = 0.75 m
HW/D = 1.40 **Pass**

5-Year
100-Year

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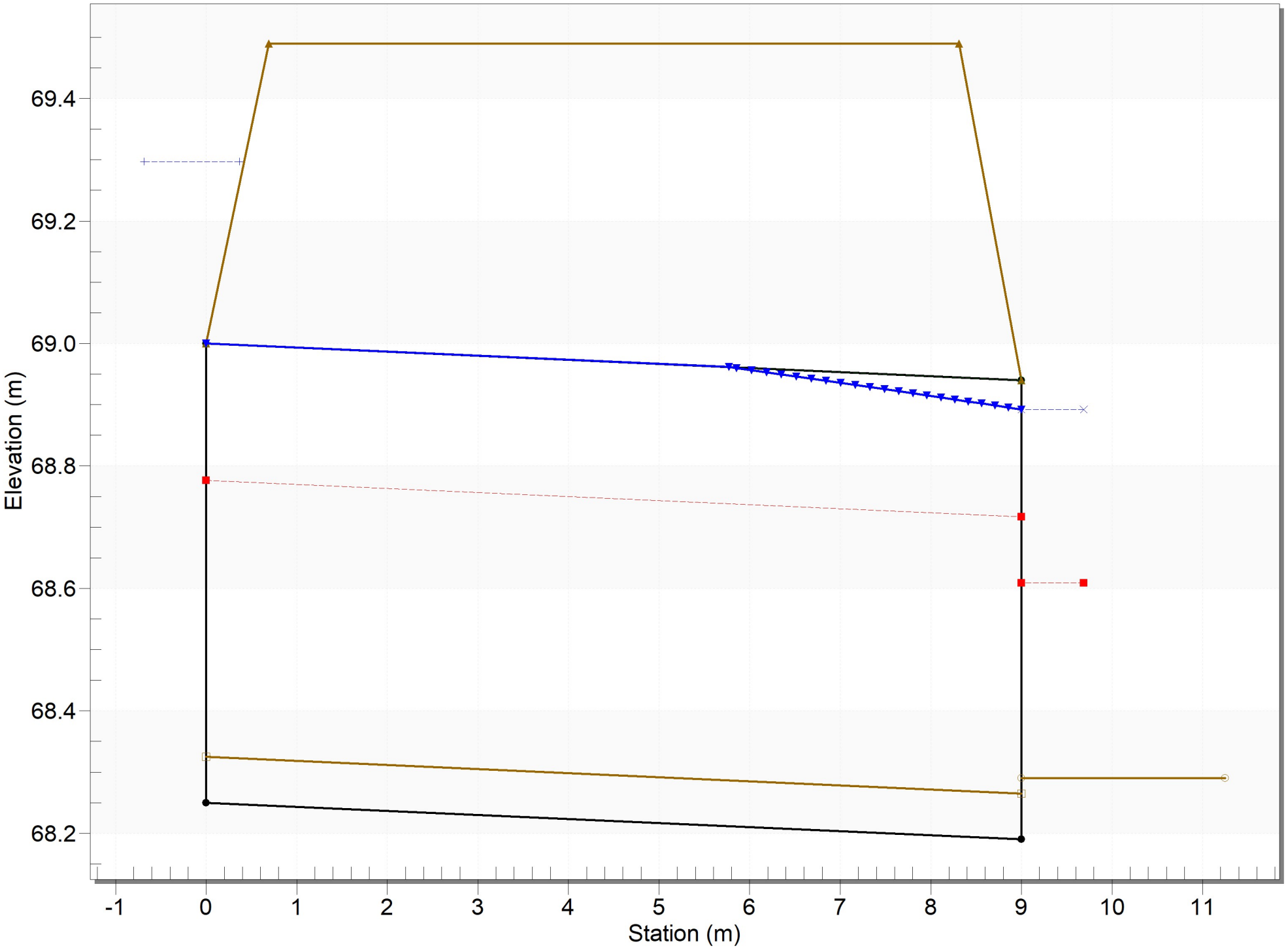
Crossing - Crossing, Design Discharge - 0.65 cms

Culvert - CSP - 9m, Culvert Discharge - 0.65 cms



Real Diotte Branch
New Farm Crossing

Methodology **HY-8 RESULTS**
Description **Real Diotte Branch - New Crossing**
Culvert Details **750mm HDPE - 9m**
Design Storm 5-Year HW/D < 1.5

Total Discharge (cms)	Culvert Discharge (cms)	Headwater Elevation (m)	Inlet Control Depth(m)	Outlet Control Depth(m)	Normal Depth (m)	Critical Depth (m)	Outlet Depth (m)	Tailwater Depth (m)	Outlet Velocity (m/s)	Tailwater Velocity (m/s)
0.38	0.38	68.93	0.53	0.60	0.54	0.33	0.48	0.46	1.15	0.56
0.49	0.49	69.04	0.64	0.71	0.68	0.39	0.55	0.52	1.33	0.60
0.65	0.65	69.25	0.79	0.92	0.68	0.45	0.63	0.60	1.59	0.64
0.72	0.72	69.40	0.88	1.07	0.68	0.48	0.68	0.64	1.73	0.66
0.83	0.78	69.53	0.95	1.20	0.68	0.50	0.68	0.68	1.86	0.69
0.95	0.77	69.57	0.95	1.24	0.68	0.50	0.68	0.73	1.86	0.71
1.06	0.77	69.60	0.94	1.27	0.68	0.50	0.68	0.77	1.84	0.73
1.18	0.76	69.63	0.93	1.30	0.68	0.49	0.68	0.81	1.82	0.75
1.29	0.75	69.65	0.92	1.33	0.68	0.49	0.68	0.85	1.80	0.77
1.40	0.74	69.67	0.90	1.35	0.68	0.49	0.68	0.88	1.77	0.79
1.52	0.73	69.70	0.89	1.37	0.68	0.48	0.68	0.92	1.74	0.80

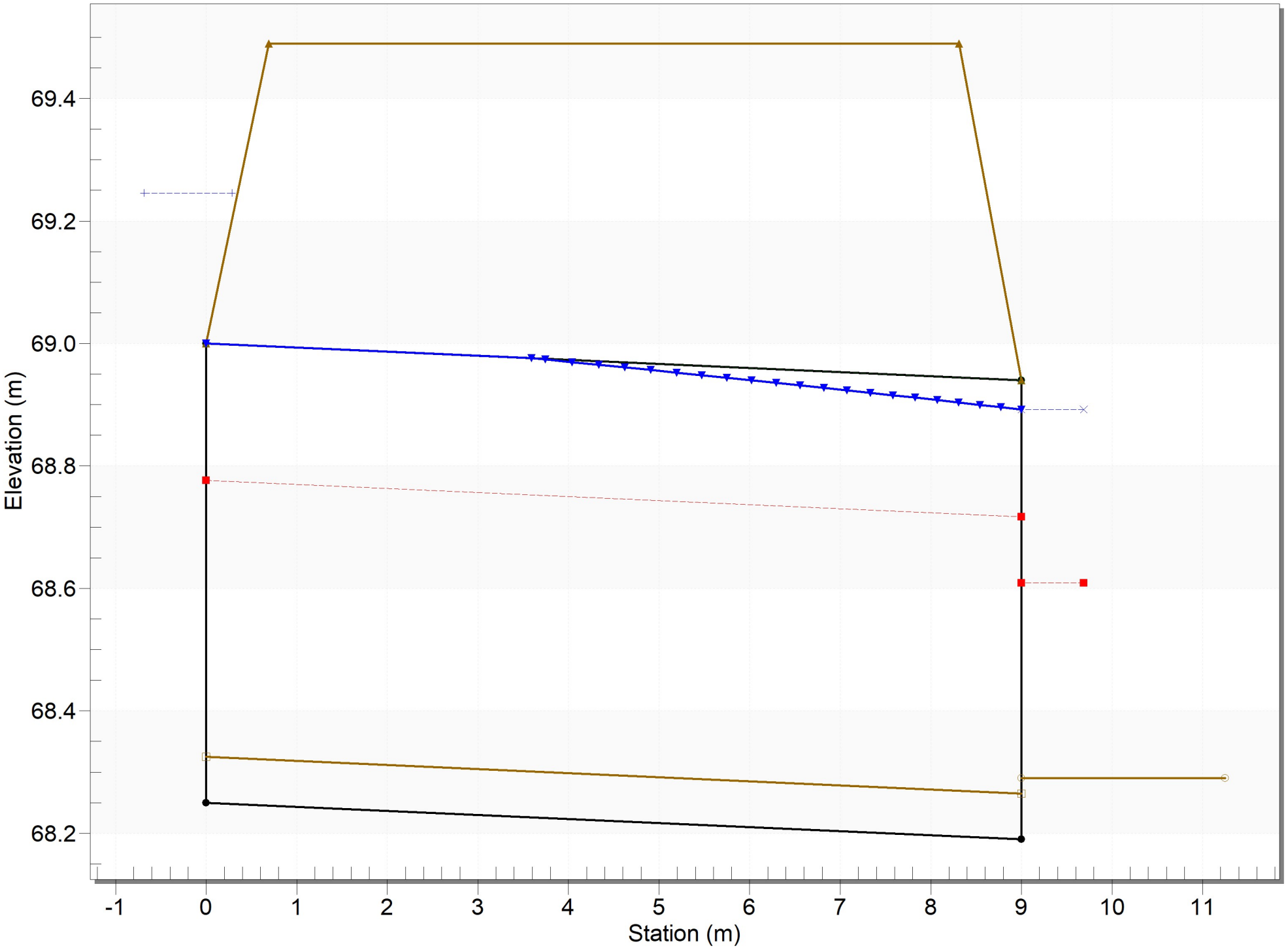
5-Year Check
Design Criteria HW/D < 1.5
HW = 1.00 m
D = 0.75 m
HW/D = 1.33 **Pass**

5-Year
100-Year

SHADE GROUP INC

Crossing - Crossing, Design Discharge - 0.65 cms

Culvert - HDPE - 9m, Culvert Discharge - 0.65 cms



Real Diotte Branch
New Farm Crossing

Methodology **HY-8 RESULTS**
Description **Real Diotte Branch - New Crossing**
Culvert Details **750mm HDPE - 12m**
Design Storm 5-Year HW/D < 1.5

Total Discharge (cms)	Culvert Discharge (cms)	Headwater Elevation (m)	Inlet Control Depth(m)	Outlet Control Depth(m)	Normal Depth (m)	Critical Depth (m)	Outlet Depth (m)	Tailwater Depth (m)	Outlet Velocity (m/s)	Tailwater Velocity (m/s)
0.38	0.38	68.94	0.53	0.62	0.62	0.33	0.48	0.46	1.15	0.56
0.49	0.49	69.06	0.64	0.74	0.68	0.39	0.55	0.52	1.33	0.60
0.65	0.65	69.32	0.80	1.00	0.68	0.45	0.63	0.60	1.59	0.64
0.72	0.66	69.39	0.81	1.06	0.68	0.46	0.68	0.64	1.58	0.66
0.83	0.64	69.43	0.79	1.11	0.68	0.45	0.68	0.68	1.55	0.69
0.95	0.63	69.46	0.78	1.14	0.68	0.45	0.68	0.73	1.51	0.71
1.06	0.62	69.49	0.77	1.17	0.68	0.44	0.68	0.77	1.49	0.73
1.18	0.61	69.52	0.76	1.19	0.68	0.44	0.68	0.81	1.46	0.75
1.29	0.60	69.54	0.74	1.21	0.68	0.43	0.68	0.85	1.44	0.77
1.40	0.58	69.56	0.73	1.24	0.68	0.43	0.68	0.88	1.40	0.79
1.52	0.57	69.58	0.72	1.26	0.68	0.42	0.68	0.92	1.37	0.80

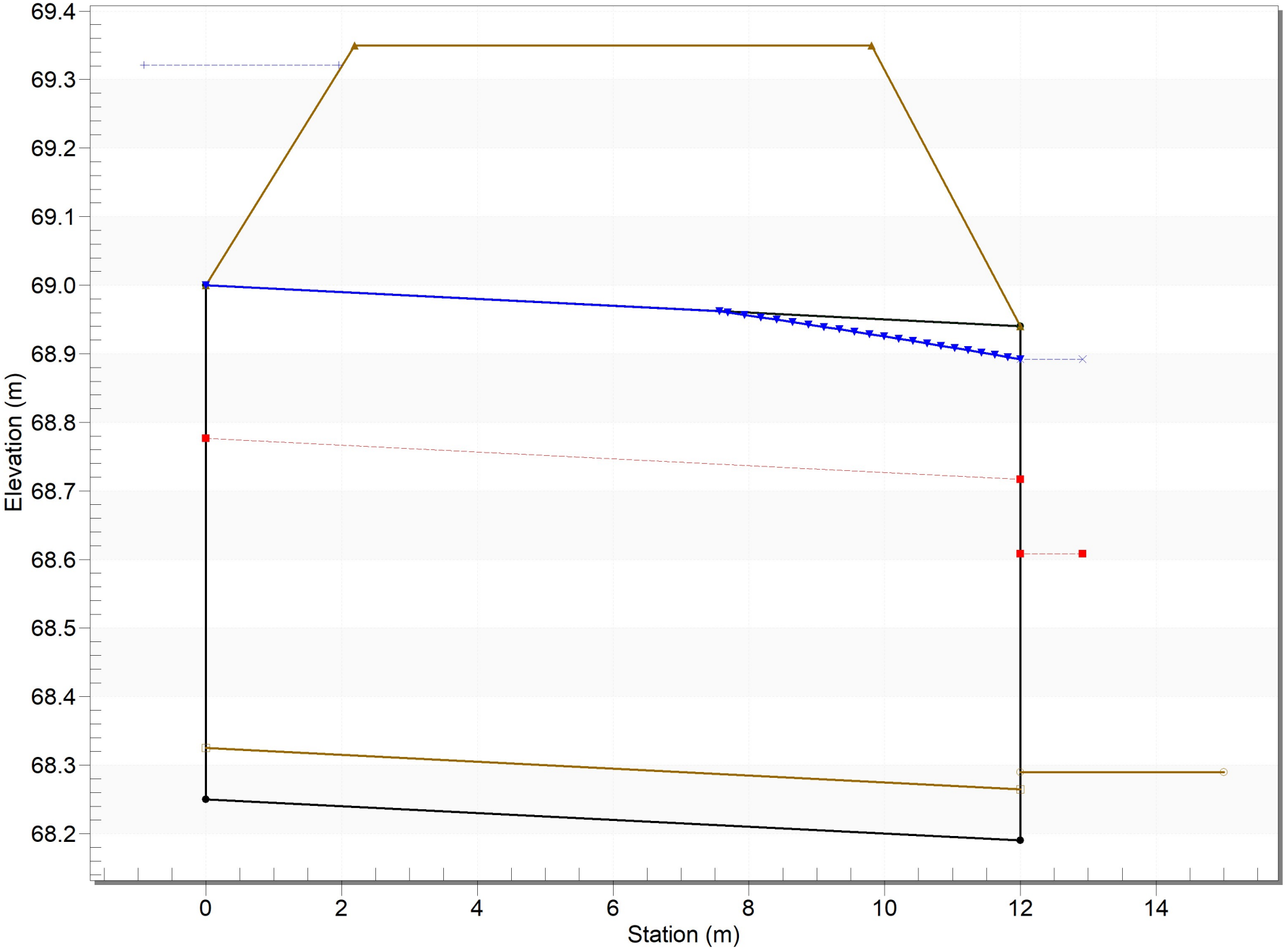
5-Year Check
Design Criteria HW/D < 1.5
HW = 1.07 m
D = 0.75 m
HW/D = 1.43 **Pass**

5-Year
100-Year

SHADE GROUP INC

Crossing - Crossing, Design Discharge - 0.65 cms

Culvert - HDPE - 12m, Culvert Discharge - 0.65 cms



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**************************************************
** SIMULATION:002yr 12hr 15min SCS Type II (MTO) **
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|    READ STORM    |    Filename: C:\Users\monic\AppD
|                  |              ata\Local\Temp\
|                  |              8773fb24-6756-4e16-a24f-9e4d20071147\7d683aa9
| Ptotal= 42.04 mm |    Comments: 002yr 12hr 15min SCS Type II (MTO)
--------------------
```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	1.68	6.50	7.57	9.75	1.47
0.25	1.05	3.50	1.68	6.75	3.36	10.00	1.47
0.50	1.05	3.75	1.68	7.00	3.36	10.25	0.84
0.75	1.05	4.00	1.68	7.25	2.52	10.50	0.84
1.00	1.05	4.25	2.52	7.50	2.52	10.75	0.84
1.25	1.05	4.50	2.52	7.75	2.52	11.00	0.84
1.50	1.05	4.75	3.36	8.00	2.52	11.25	0.84
1.75	1.05	5.00	3.36	8.25	1.47	11.50	0.84
2.00	1.05	5.25	5.04	8.50	1.47	11.75	0.84
2.25	1.26	5.50	5.04	8.75	1.47	12.00	0.84
2.50	1.26	5.75	20.18	9.00	1.47		
2.75	1.26	6.00	55.49	9.25	1.47		
3.00	1.26	6.25	7.57	9.50	1.47		

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| CALIB            |
| NASHYD   (  0001)|   Area    (ha)=  68.50   Curve Number   (CN)= 80.0
|ID= 1 DT=10.0 min |   Ia      (mm)=   6.22   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   2.72

        NOTE:  RAINFALL WAS TRANSFORMED TO  10.0 MIN. TIME STEP.
```

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.167	0.00	3.333	1.47	6.500	7.57	9.67	1.47
0.333	0.53	3.500	1.68	6.667	7.57	9.83	1.47
0.500	1.05	3.667	1.68	6.833	5.47	10.00	1.47
0.667	1.05	3.833	1.68	7.000	3.36	10.17	1.47
0.833	1.05	4.000	1.68	7.167	3.36	10.33	1.16
1.000	1.05	4.167	1.68	7.333	2.94	10.50	0.84
1.167	1.05	4.333	2.10	7.500	2.52	10.67	0.84
1.333	1.05	4.500	2.52	7.667	2.52	10.83	0.84
1.500	1.05	4.667	2.52	7.833	2.52	11.00	0.84
1.667	1.05	4.833	2.94	8.000	2.52	11.17	0.84
1.833	1.05	5.000	3.36	8.167	2.52	11.33	0.84
2.000	1.05	5.167	3.36	8.333	2.00	11.50	0.84
2.167	1.05	5.333	4.20	8.500	1.47	11.67	0.84
2.333	1.16	5.500	5.04	8.667	1.47	11.83	0.84
2.500	1.26	5.667	5.04	8.833	1.47	12.00	0.84
2.667	1.26	5.833	12.61	9.000	1.47	12.17	0.84
2.833	1.26	6.000	20.18	9.167	1.47	12.33	0.42
3.000	1.26	6.167	55.49	9.333	1.47		
3.167	1.26	6.333	31.53	9.500	1.47		

```
     Unit Hyd Qpeak  (cms)=   0.962

     PEAK FLOW       (cms)=   0.376 (i)
     TIME TO PEAK    (hrs)=   9.500
     RUNOFF VOLUME    (mm)=  12.918
     TOTAL RAINFALL   (mm)=  42.040
     RUNOFF COEFFICIENT   =   0.307

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

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**************************************************
** SIMULATION:005yr 12hr 15min SCS Type II (MTO) **
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|    READ STORM    |    Filename: C:\Users\monic\AppD
|                  |              ata\Local\Temp\
|                  |              8773fb24-6756-4e16-a24f-9e4d20071147\aeb4fd69
| Ptotal= 55.99 mm |    Comments: 005yr 12hr 15min SCS Type II (MTO)
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```

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	2.24	6.50	10.08	9.75	1.96

0.25	1.40	3.50	2.24	6.75	4.48	10.00	1.96
0.50	1.40	3.75	2.24	7.00	4.48	10.25	1.12
0.75	1.40	4.00	2.24	7.25	3.36	10.50	1.12
1.00	1.40	4.25	3.36	7.50	3.36	10.75	1.12
1.25	1.40	4.50	3.36	7.75	3.36	11.00	1.12
1.50	1.40	4.75	4.48	8.00	3.36	11.25	1.12
1.75	1.40	5.00	4.48	8.25	1.96	11.50	1.12
2.00	1.40	5.25	6.72	8.50	1.96	11.75	1.12
2.25	1.68	5.50	6.72	8.75	1.96	12.00	1.12
2.50	1.68	5.75	26.88	9.00	1.96		
2.75	1.68	6.00	73.91	9.25	1.96		
3.00	1.68	6.25	10.08	9.50	1.96		

CALIB					
NASHYD (0001)	Area (ha)=	68.50	Curve Number (CN)=	80.0
ID= 1 DT=10.0 min	Ia (mm)=	6.22	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	2.72		

NOTE: RAINFALL WAS TRANSFORMED TO 10.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.167	0.00	3.333	1.96	6.500	10.08	9.67	1.96
0.333	0.70	3.500	2.24	6.667	10.08	9.83	1.96
0.500	1.40	3.667	2.24	6.833	7.28	10.00	1.96
0.667	1.40	3.833	2.24	7.000	4.48	10.17	1.96
0.833	1.40	4.000	2.24	7.167	4.48	10.33	1.54
1.000	1.40	4.167	2.24	7.333	3.92	10.50	1.12
1.167	1.40	4.333	2.80	7.500	3.36	10.67	1.12
1.333	1.40	4.500	3.36	7.667	3.36	10.83	1.12
1.500	1.40	4.667	3.36	7.833	3.36	11.00	1.12
1.667	1.40	4.833	3.92	8.000	3.36	11.17	1.12
1.833	1.40	5.000	4.48	8.167	3.36	11.33	1.12
2.000	1.40	5.167	4.48	8.333	2.66	11.50	1.12
2.167	1.40	5.333	5.60	8.500	1.96	11.67	1.12
2.333	1.54	5.500	6.72	8.667	1.96	11.83	1.12
2.500	1.68	5.667	6.72	8.833	1.96	12.00	1.12
2.667	1.68	5.833	16.80	9.000	1.96	12.17	1.12
2.833	1.68	6.000	26.88	9.167	1.96	12.33	0.56
3.000	1.68	6.167	73.91	9.333	1.96		
3.167	1.68	6.333	41.99	9.500	1.96		

Unit Hyd Qpeak (cms)= 0.962

PEAK FLOW (cms)= 0.645 (i)
TIME TO PEAK (hrs)= 9.333
RUNOFF VOLUME (mm)= 21.868
TOTAL RAINFALL (mm)= 55.990
RUNOFF COEFFICIENT = 0.391

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

****
** SIMULATION:010yr 12hr 15min SCS Type II (MTO) **
****

READ STORM	Filename: C:\Users\monic\AppData\Local\Temp\8773fb24-6756-4e16-a24f-9e4d20071147\77ab80c0
Ptotal= 65.07 mm	Comments: 010yr 12hr 15min SCS Type II (MTO)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	2.60	6.50	11.71	9.75	2.28
0.25	1.63	3.50	2.60	6.75	5.21	10.00	2.28
0.50	1.63	3.75	2.60	7.00	5.21	10.25	1.30
0.75	1.63	4.00	2.60	7.25	3.90	10.50	1.30
1.00	1.63	4.25	3.90	7.50	3.90	10.75	1.30
1.25	1.63	4.50	3.90	7.75	3.90	11.00	1.30
1.50	1.63	4.75	5.21	8.00	3.90	11.25	1.30
1.75	1.63	5.00	5.21	8.25	2.28	11.50	1.30
2.00	1.63	5.25	7.81	8.50	2.28	11.75	1.30
2.25	1.95	5.50	7.81	8.75	2.28	12.00	1.30
2.50	1.95	5.75	31.23	9.00	2.28		
2.75	1.95	6.00	85.89	9.25	2.28		
3.00	1.95	6.25	11.71	9.50	2.28		

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| CALIB            |
| NASHYD   (  0001)|   Area    (ha)=  68.50   Curve Number   (CN)= 80.0
|ID= 1 DT=10.0 min |   Ia      (mm)=   6.22   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   2.72

         NOTE:  RAINFALL WAS TRANSFORMED TO  10.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
 0.167    0.00 | 3.333    2.28 | 6.500   11.71 |  9.67    2.28
 0.333    0.81 | 3.500    2.60 | 6.667   11.71 |  9.83    2.28
 0.500    1.63 | 3.667    2.60 | 6.833    8.46 | 10.00    2.28
 0.667    1.63 | 3.833    2.60 | 7.000    5.21 | 10.17    2.28
 0.833    1.63 | 4.000    2.60 | 7.167    5.21 | 10.33    1.79
 1.000    1.63 | 4.167    2.60 | 7.333    4.55 | 10.50    1.30
 1.167    1.63 | 4.333    3.25 | 7.500    3.90 | 10.67    1.30
 1.333    1.63 | 4.500    3.90 | 7.667    3.90 | 10.83    1.30
 1.500    1.63 | 4.667    3.90 | 7.833    3.90 | 11.00    1.30
 1.667    1.63 | 4.833    4.55 | 8.000    3.90 | 11.17    1.30
 1.833    1.63 | 5.000    5.21 | 8.167    3.90 | 11.33    1.30
 2.000    1.63 | 5.167    5.21 | 8.333    3.09 | 11.50    1.30
 2.167    1.63 | 5.333    6.51 | 8.500    2.28 | 11.67    1.30
 2.333    1.79 | 5.500    7.81 | 8.667    2.28 | 11.83    1.30
 2.500    1.95 | 5.667    7.81 | 8.833    2.28 | 12.00    1.30
 2.667    1.95 | 5.833   19.52 | 9.000    2.28 | 12.17    1.30
 2.833    1.95 | 6.000   31.23 | 9.167    2.28 | 12.33    0.65
 3.000    1.95 | 6.167   85.89 | 9.333    2.28 |
 3.167    1.95 | 6.333   48.80 | 9.500    2.28 |

     Unit Hyd Qpeak  (cms)=   0.962

     PEAK FLOW       (cms)=   0.840 (i)
     TIME TO PEAK    (hrs)=   9.333
     RUNOFF VOLUME    (mm)=  28.307
     TOTAL RAINFALL   (mm)=  65.070
     RUNOFF COEFFICIENT   =   0.435

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

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************************************************
** SIMULATION:025yr 12hr 15min SCS Type II (MTO) **
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|    READ STORM    |    Filename: C:\Users\monic\AppD
|                  |              ata\Local\Temp\
|                  |              8773fb24-6756-4e16-a24f-9e4d20071147\12f0751a
| Ptotal= 76.69 mm |    Comments: 025yr 12hr 15min SCS Type II (MTO)
--------------------
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
   hrs   mm/hr |   hrs   mm/hr |'   hrs   mm/hr |   hrs   mm/hr
  0.00    0.00 |  3.25    3.07 |  6.50   13.80 |  9.75    2.68
  0.25    1.92 |  3.50    3.07 |  6.75    6.14 | 10.00    2.68
  0.50    1.92 |  3.75    3.07 |  7.00    6.14 | 10.25    1.53
  0.75    1.92 |  4.00    3.07 |  7.25    4.60 | 10.50    1.53
  1.00    1.92 |  4.25    4.60 |  7.50    4.60 | 10.75    1.53
  1.25    1.92 |  4.50    4.60 |  7.75    4.60 | 11.00    1.53
  1.50    1.92 |  4.75    6.14 |  8.00    4.60 | 11.25    1.53
  1.75    1.92 |  5.00    6.14 |  8.25    2.68 | 11.50    1.53
  2.00    1.92 |  5.25    9.20 |  8.50    2.68 | 11.75    1.53
  2.25    2.30 |  5.50    9.20 |  8.75    2.68 | 12.00    1.53
  2.50    2.30 |  5.75   36.81 |  9.00    2.68 |
  2.75    2.30 |  6.00  101.23 |  9.25    2.68 |
  3.00    2.30 |  6.25   13.80 |  9.50    2.68 |

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| CALIB            |
| NASHYD   (  0001)|   Area    (ha)=  68.50   Curve Number   (CN)= 80.0
|ID= 1 DT=10.0 min |   Ia      (mm)=   6.22   # of Linear Res.(N)= 3.00
--------------------   U.H. Tp(hrs)=   2.72

         NOTE:  RAINFALL WAS TRANSFORMED TO  10.0 MIN. TIME STEP.


                          ---- TRANSFORMED HYETOGRAPH ----
  TIME    RAIN |  TIME    RAIN |'  TIME    RAIN |  TIME    RAIN
```

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.167	0.00	3.333	2.68	6.500	13.80	9.67	2.68
0.333	0.96	3.500	3.07	6.667	13.80	9.83	2.68
0.500	1.92	3.667	3.07	6.833	9.97	10.00	2.68
0.667	1.92	3.833	3.07	7.000	6.14	10.17	2.68
0.833	1.92	4.000	3.07	7.167	6.14	10.33	2.11
1.000	1.92	4.167	3.07	7.333	5.37	10.50	1.53
1.167	1.92	4.333	3.83	7.500	4.60	10.67	1.53
1.333	1.92	4.500	4.60	7.667	4.60	10.83	1.53
1.500	1.92	4.667	4.60	7.833	4.60	11.00	1.53
1.667	1.92	4.833	5.37	8.000	4.60	11.17	1.53
1.833	1.92	5.000	6.14	8.167	4.60	11.33	1.53
2.000	1.92	5.167	6.14	8.333	3.64	11.50	1.53
2.167	1.92	5.333	7.67	8.500	2.68	11.67	1.53
2.333	2.11	5.500	9.20	8.667	2.68	11.83	1.53
2.500	2.30	5.667	9.20	8.833	2.68	12.00	1.53
2.667	2.30	5.833	23.01	9.000	2.68	12.17	1.53
2.833	2.30	6.000	36.81	9.167	2.68	12.33	0.77
3.000	2.30	6.167	101.23	9.333	2.68		
3.167	2.30	6.333	57.52	9.500	2.68		

Unit Hyd Qpeak (cms)= 0.962

PEAK FLOW (cms)= 1.106 (i)
TIME TO PEAK (hrs)= 9.333
RUNOFF VOLUME (mm)= 37.068
TOTAL RAINFALL (mm)= 76.690
RUNOFF COEFFICIENT = 0.483

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

****
** SIMULATION:050yr 12hr 15min SCS Type II (MTO) **
****

READ STORM	Filename: C:\Users\monic\AppData\Local\Temp\8773fb24-6756-4e16-a24f-9e4d20071147\af58a26a
Ptotal= 85.14 mm	Comments: 050yr 12hr 15min SCS Type II (MTO)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	3.41	6.50	15.33	9.75	2.98
0.25	2.13	3.50	3.41	6.75	6.81	10.00	2.98
0.50	2.13	3.75	3.41	7.00	6.81	10.25	1.70
0.75	2.13	4.00	3.41	7.25	5.11	10.50	1.70
1.00	2.13	4.25	5.11	7.50	5.11	10.75	1.70
1.25	2.13	4.50	5.11	7.75	5.11	11.00	1.70
1.50	2.13	4.75	6.81	8.00	5.11	11.25	1.70
1.75	2.13	5.00	6.81	8.25	2.98	11.50	1.70
2.00	2.13	5.25	10.22	8.50	2.98	11.75	1.70
2.25	2.55	5.50	10.22	8.75	2.98	12.00	1.70
2.50	2.55	5.75	40.87	9.00	2.98		
2.75	2.55	6.00	112.38	9.25	2.98		
3.00	2.55	6.25	15.33	9.50	2.98		

CALIB NASHYD (0001) ID= 1 DT=10.0 min	Area (ha)= 68.50	Curve Number (CN)= 80.0
	Ia (mm)= 6.22	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 2.72	

NOTE: RAINFALL WAS TRANSFORMED TO 10.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.167	0.00	3.333	2.98	6.500	15.33	9.67	2.98
0.333	1.06	3.500	3.41	6.667	15.33	9.83	2.98
0.500	2.13	3.667	3.41	6.833	11.07	10.00	2.98
0.667	2.13	3.833	3.41	7.000	6.81	10.17	2.98
0.833	2.13	4.000	3.41	7.167	6.81	10.33	2.34
1.000	2.13	4.167	3.41	7.333	5.96	10.50	1.70
1.167	2.13	4.333	4.26	7.500	5.11	10.67	1.70
1.333	2.13	4.500	5.11	7.667	5.11	10.83	1.70
1.500	2.13	4.667	5.11	7.833	5.11	11.00	1.70
1.667	2.13	4.833	5.96	8.000	5.11	11.17	1.70
1.833	2.13	5.000	6.81	8.167	5.11	11.33	1.70
2.000	2.13	5.167	6.81	8.333	4.04	11.50	1.70

2.167	2.13	5.333	8.51	8.500	2.98	11.67	1.70
2.333	2.34	5.500	10.22	8.667	2.98	11.83	1.70
2.500	2.55	5.667	10.22	8.833	2.98	12.00	1.70
2.667	2.55	5.833	25.54	9.000	2.98	12.17	1.70
2.833	2.55	6.000	40.87	9.167	2.98	12.33	0.85
3.000	2.55	6.167	112.38	9.333	2.98		
3.167	2.55	6.333	63.86	9.500	2.98		

Unit Hyd Qpeak (cms)= 0.962

PEAK FLOW (cms)= 1.309 (i)
TIME TO PEAK (hrs)= 9.167
RUNOFF VOLUME (mm)= 43.732
TOTAL RAINFALL (mm)= 85.140
RUNOFF COEFFICIENT = 0.514

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

****
** SIMULATION:100yr 12hr 15min SCS Type II (MTO) **
****

READ STORM	Filename: C:\Users\monic\AppData\Local\Temp\8773fb24-6756-4e16-a24f-9e4d20071147\f1776e1d
Ptotal= 93.59 mm	Comments: 100yr 12hr 15min SCS Type II (MTO)

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	0.00	3.25	3.74	6.50	16.85	9.75	3.28
0.25	2.34	3.50	3.74	6.75	7.49	10.00	3.28
0.50	2.34	3.75	3.74	7.00	7.49	10.25	1.87
0.75	2.34	4.00	3.74	7.25	5.62	10.50	1.87
1.00	2.34	4.25	5.62	7.50	5.62	10.75	1.87
1.25	2.34	4.50	5.62	7.75	5.62	11.00	1.87
1.50	2.34	4.75	7.49	8.00	5.62	11.25	1.87
1.75	2.34	5.00	7.49	8.25	3.28	11.50	1.87
2.00	2.34	5.25	11.23	8.50	3.28	11.75	1.87
2.25	2.81	5.50	11.23	8.75	3.28	12.00	1.87
2.50	2.81	5.75	44.92	9.00	3.28		
2.75	2.81	6.00	123.54	9.25	3.28		
3.00	2.81	6.25	16.85	9.50	3.28		

CALIB			
NASHYD (0001)	Area (ha)= 68.50	Curve Number (CN)= 80.0
ID= 1 DT=10.0 min	Ia (mm)= 6.22	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 2.72	

NOTE: RAINFALL WAS TRANSFORMED TO 10.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.167	0.00	3.333	3.28	6.500	16.85	9.67	3.28
0.333	1.17	3.500	3.74	6.667	16.85	9.83	3.28
0.500	2.34	3.667	3.74	6.833	12.17	10.00	3.28
0.667	2.34	3.833	3.74	7.000	7.49	10.17	3.28
0.833	2.34	4.000	3.74	7.167	7.49	10.33	2.57
1.000	2.34	4.167	3.74	7.333	6.55	10.50	1.87
1.167	2.34	4.333	4.68	7.500	5.62	10.67	1.87
1.333	2.34	4.500	5.62	7.667	5.62	10.83	1.87
1.500	2.34	4.667	5.62	7.833	5.62	11.00	1.87
1.667	2.34	4.833	6.55	8.000	5.62	11.17	1.87
1.833	2.34	5.000	7.49	8.167	5.62	11.33	1.87
2.000	2.34	5.167	7.49	8.333	4.45	11.50	1.87
2.167	2.34	5.333	9.36	8.500	3.28	11.67	1.87
2.333	2.57	5.500	11.23	8.667	3.28	11.83	1.87
2.500	2.81	5.667	11.23	8.833	3.28	12.00	1.87
2.667	2.81	5.833	28.08	9.000	3.28	12.17	1.87
2.833	2.81	6.000	44.92	9.167	3.28	12.33	0.94
3.000	2.81	6.167	123.54	9.333	3.28		
3.167	2.81	6.333	70.19	9.500	3.28		

Unit Hyd Qpeak (cms)= 0.962

PEAK FLOW (cms)= 1.518 (i)
TIME TO PEAK (hrs)= 9.167
RUNOFF VOLUME (mm)= 50.597

TOTAL RAINFALL (mm)= 93.590
RUNOFF COEFFICIENT = 0.541

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

APPENDIX G

CONSTRUCTION COST ESTIMATE

Project Cost Estimate
Real Diotte Branch - Proposed Crossing

Construction Estimate				
Item	**Unit**	**Quantity**	**Cost/Unit**	**Total**
Strawbale Check Dam	ea	2	$ 125.00	$ 250.00
750mm HDPE Culvert	m	12	$ 450.00	$ 5,400.00
Granular 'A'	tonne	80	$ 20.00	$ 1,600.00
Sediment Trap	ea	1	$ 500.00	$ 500.00
Rip-rap - end treatment culvert	ea	2	$ 750.00	$ 1,500.00
Sub-Total - Construction Costs				**$ 9,250.00**
Contingency Allowance - Construction		10%		$ 925.00
Sub-Total - Construction Costs (Pre-Tax)				**$ 10,175.00**

Administration/Engineering Estimate				
Item	**Unit**	**Quantity**	**Cost/Unit**	**Total**
Permitting				
RRCA	Lump Sum	100%	$ 600.00	$ 600.00
Engineering				
Engineer's Report	Lump Sum	1	$ 11,000.00	$ 11,000.00
Sub-Total - Administration/Engineering Costs (Pre-Tax)				**$ 11,600.00**

Summary	
Sub-Total - Construction Costs (Pre-Tax)	$ 10,175.00
Sub-Total - Administration/Engineering Costs (Pre-Tax)	$ 11,600.00
Estimated Project Total	**$ 21,775.00**

SHADE GROUP INC

APPENDIX F

PERMITS

SHADE GROUP INC

Monica Shade <monica@shadegroup.ca>

Culvert Installation, R.A. McLellan Drai, Alexandria (24-HCAA-02075) – Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

1 message

OP Habitat (DFO/MPO) <DFO.OPHabitat.MPO@dfo-mpo.gc.ca> Fri, Oct 11, 2024 at 12:07 PM
To: Monica Shade <monica@shadegroup.ca>
Cc: Shana Lavigne <jpshana@gmail.com>

Fisheries and Oceans Canada	Pêches et Océans Canada
Ontario and Prairie Region	Région de l'Ontario et des Prairies
Fish and Fish Habitat Protection Program	Programme de protection du poisson et de son habitat
867 Lakeshore Rd.	867 chemin Lakeshore
Burlington, ON	Burlington, ON
L7S 1A1	L7S 1A1

Dear Jean-Pierre Lavigne,

Subject: Culvert Installation, R.A. McLellan Drai, Alexandria (24-HCAA-02075) – Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

The Fish and Fish Habitat Protection Program (the Program) of Fisheries and Oceans Canada (DFO) received your proposal on August 22, 2024. We understand that you propose to:

- Install a new single culvert meeting **one** of the following dimensions over R.A. McLellan Drain, Real Diotte Branch:
  - 9 m long by 750 mm diameter corrugated steel pipe with headwalls;
  - 9 m long by 750 mm diameter high-density polyethylene pipe with headwalls; or
  - 12 m long by 750 mm diameter high-density polyethylene pipe with 2:1 slopes.
- Install riprap for a footprint below the high water mark of approximately 30 m^2;
- Embed culvert a minimum of 10% to allow for fish passage under low flow conditions; and,
- Work in isolation of flow or open water to avoid sedimentation of the watercourse.

Our review considered the following information:

- Request for Review form and associated documents.

Your proposal has been reviewed to determine whether it is likely to result in:

- the death of fish by means other than fishing and the harmful alteration, disruption or destruction of fish habitat which are prohibited under subsections 34.4(1) and 35(1) of the *Fisheries Act*;
- effects to listed aquatic species at risk, any part of their critical habitat or the residences of their individuals in a manner which is prohibited under sections 32, 33 and subsection 58(1) of the *Species at Risk Act*; and,

The aforementioned impacts are prohibited unless authorized under their respective legislation and regulations.

To avoid and mitigate the potential for prohibited effects to fish and fish habitat (as listed above), we recommend implementing the measures listed below:

- Plan in-water works, undertakings and activities to respect timing windows to protect fish, including their eggs, juveniles, spawning adults and/or the organisms upon which they feed and migrate;
  - No in-water work between March 15 to July 15;
- Capture, relocate and monitor for fish trapped within isolated, enclosed, or dewatered areas;
  - Dewater gradually to reduce the potential for stranding fish;
- Screen intake pipes to prevent entrainment or impingement of fish;
  - Use the code of practice for water intake screens;
- Limit impacts on riparian vegetation to those approved for the work, undertaking or activity;
  - Limit access to banks or areas adjacent to waterbodies;
  - Construct access points and approaches perpendicular to the watercourse or waterbody;
  - Re-vegetate the disturbed area with native species suitable for the site;
- Restore stream geomorphology (i.e., restore the bed and banks, gradient and contour of the waterbody) to its initial state;
- Develop and implement an erosion and sediment control plan to avoid the introduction of sediment into any waterbody during all phases of the work, undertaking or activity;
  - Conduct all in-water works, undertakings or activities in isolation of open or flowing water to reduce the introduction of sediment into the watercourse;
    - Use the code of practice for temporary cofferdams and diversion channels;
  - Schedule work to avoid wet, windy and rainy periods (and heed weather advisories) that may result in high flow volumes and/ or increase erosion and sedimentation;
  - Monitor the watercourse to observe signs of sedimentation during all phases of the work, undertaking or activity and take corrective action; and,
- Develop and implement a response plan to avoid a spill of deleterious substances.
- Aquatic invasive species are introduced and spread through transporting sands and sediments and using contaminated construction equipment. To prevent the spread of aquatic invasive species during construction in aquatic environments:
  - Clean, drain and dry any equipment used in the water; and,
  - Never move organisms or water from one body of water to another

Provided that you incorporate these measures into your plans, the Program is of the view that your proposal is not likely to result in the contravention of the above mentioned prohibitions and

requirements.

Should your plans change or if you have omitted some information in your proposal, further review by the Program may be required. Consult our website (Projects near water (dfo-mpo.gc.ca)) or consult with a qualified environmental consultant to determine if further review may be necessary. It remains your responsibility to remain in compliance with the *Fisheries Act*, the *Species at Risk Act*.

It is also your *Duty to Notify* DFO if you have caused, or are about to cause, the death of fish by means other than fishing and/or the harmful alteration, disruption or destruction of fish habitat. Such notifications should be directed to DFO.OPHabitat.MPO@dfo-mpo.gc.ca or 1-855-852-8320.

Please notify this office at least 10 days before starting any in-water works. Send your notification to the assessor (contact information below) and the DFO 10 notification mailbox: DFO.OP.10DayNotification-Notification10Jours.OP.MPO@dfo-mpo.gc.ca. We recommend that a copy of this letter be kept on site while the work is in progress. It remains your responsibility to meet all other federal, territorial, provincial and municipal requirements that apply to your proposal.

If you have any questions with the content of this letter, please contact Filipe Aguiar at Filipe.Aguiar@dfo-mpo.gc.ca. Please refer to the file number referenced above when corresponding with the Program.

Thanks,

Fil Aguiar (he/him)

Biologist | Biologiste

Fisheries and Oceans Canada | Pêche et Océan Canada

From: Monica Shade <monica@shadegroup.ca>
Sent: Thursday, August 22, 2024 10:12 AM
To: OP Habitat (DFO/MPO) <DFO.OPHabitat.MPO@dfo-mpo.gc.ca>
Cc: Shana Lavigne <jpshana@gmail.com>; Zoe Bougie <treasurer@northglengarry.ca>
Subject: 24-HCAA-02075 - Real Diotte Drain, North Glengarry - New Culvert

Good morning,

Please find attached the Request for Review form for a proposed new culvert installation on the Real Diotte Branch of the R.A. McLennan Drain in North Glengarry Township. The culvert installation is being proposed on a drain adopted under the Drainage Act and proceedings will follow the process outlined in the Drainage Act. The reason for the culvert is so that the landowner can access a part of their property that is currently not accessible without trespassing on the neighbouring property.

A concurrent application will be submitted to the Conservation Authority.

The project is proposed to include the installation of a 30 ft long culvert with end walls, and the installation of permanent inlet and outlet protection measures. Detailed design works are underway - and can be provided upon request once a reviewer has been assigned, if required.

In the meantime, please find attached photos from the site to support the proposed application. Please let me know if you require more information.

All the best,

Monica Shade, P. Eng.

V.P. of Engineering & Sales

Shade Group Inc.

Shade Group Inc. is also the parent company to

Nepean General Contractors

image001.jpg
3K

Raisin Region
Conservation Authority

Application for a Permit

under section 28.1 of the *Conservation Authorities Act*

For use by the Raisin Region Conservation Authority		
Date received: September 10, 2024	Roll number:	Permit number:
Date complete: October 21, 2024		2024-PT-061-NGL

A. Project location

Location of project, building number, street name, or lot/concession and township

LOT 5, CON 3 (Lochiel) - See Location Map in attached report.

Municipality: ☐ City of Cornwall ☐ South Glengarry ☐ South Stormont ☑ North Glengarry ☐ North Stormont

B. Purpose of application (check all that apply)

☑ Work within a watercourse	☐ Shoreline/Bank stabilization	☐ Work within or adjacent to a wetland
☑ Construct a new structure	☐ Alter an existing structure	☐ Sewage disposal system
☐ Placement of fill	☐ Site alterations (incl. grading)	☐ Other: _____

Description of proposed work

Construction of new culvert on Real Diotte Branch of the R.A. McLennan Drain

Name of watercourse (if appl.)	Purpose of work and/or Proposed use of buildings (if appl.)	
Real Diotte Branch	To allow access to lands for farming	
Anticipated Start Date (m/d/y)	Anticipated Finish Date (m/d/y)	**Please be advised of provincial timing windows restricting in-water work, typically from March 15 to July 15.**
09/30/2024	09/30/2025	

C. Applicant Applicant is ☐ Owner ☑ Authorized agent of owner (please attach authorization)

Last name	First name		Corporation or partnership (if appl.)
Monica	Shade		Shade Group Inc.
Street address			E-mail
4625 March Road			monica@shadegroup.ca
Municipality	Province	Postal code	Telephone
Almonte	Ontario	K0A 1A0	613-889-9733

D. Owner (if different from applicant)

Last name	First name		Corporation or partnership (if appl.)
Lavigne	Jean-Pierre		Ferme Lavigne Inc.
Street address			E-mail
270 Concession Road 9			jpshana@gmail.com
Municipality	Province	Postal code	Telephone
North Glengarry	Ontario	K0B1M0	438-874-1592

E. Supplemental Information

Please indicate the required supplemental information included with this application to assist with the evaluation of this application, as per Ontario Regulation 41/24.

☑ Site Plan	A drawing showing the location of the proposed development activity on the subject property and other important features such as property lines, drainage swales, ditches, watercourses, wetlands, septic systems, wells, roadways, and buildings.
☐ Cross-Sections	Cross-section details of proposed shoreline work, or any other activity to straighten, change, divert or interfere with a channel of a river, creek, stream, or watercourse.
☐ Elevations	The elevations of existing structures, and the proposed elevations of new or altered structures. Please clearly indicate the geodetic datum (e.g. CGVD2013).
☐ Grading Plan	A drawing or sketch showing the before and after site elevations and drainage details.
☐ Erosion Control	Details on managing and controlling on-site erosion.
☐ Fill Details	Type of fill: _____ Quantity of fill: _____ ☐ m^3 ☐ yd^3
☐ Other Studies	Other applicable studies (e.g. hydraulic, geotechnical, slope stability etc.)

F. Declaration of Applicant

I, MONICA SHADE (print name), the landowner/acting agent declare that:

1. The information contained in this application, and any attached supplemental information or documentation is true to the best of my knowledge.
2. If the owner is a corporation or partnership, I have the authority to bind the corporation or partnership.

The owner hereby gives permission to employees or agents of the Raisin Region Conservation Authority to enter onto the land in question to survey, monitor, or inspect the construction of a building or structure, the placement of fill and/or work within a watercourse, and agrees to pay the applicable fee, as listed on the current fee schedule.

Sept 10, 2024
Date

Monica Shade
Digitally signed by Monica Shade
DN: cn=Monica Shade, c=CA, o=Shade Group Inc., email=monica@shadegroup.ca
Date: 2024.09.10 12:05:33 -04'00'
Signature of applicant

Personal information contained in this form is collected under the authority of regulations made under the *Conservation Authorities Act* and may be shared with departments or agencies of local, provincial, or the federal government having an interest in same. Questions about this collection should be directed to the General Manager of the RRCA.

Permission is hereby granted to undertake the work described in this application.

☑ This permit is subject to conditions specified in **Schedule 1**, attached.

November 20, 2024
Date of issue

Signature of authorized officer

This permit is not valid unless signed by the applicant and an authorized officer of the Raisin Region Conservation Authority. This permit will expire two (2) years from the date of issue, unless specified in Schedule 1.

This permit is issued to indicate compliance with Part IV of the *Conservation Authorities Act* and O. Reg. 41/24.

This permit does the not release the applicant/owner of the responsibility to obtain any other approvals that may be required from the municipal, provincial, or federal government.

Raisin Region
Conservation Authority

Schedule 1
For a permit issued under the Conservation Authorities Act

This Schedule is attached to and forms the conditions of permit # **2024-PT-061-NGL** issued under section 28.1 of the Conservation Authorities Act.

Conditions

1. This permit is limited to the following scope of work:

   New Farm Crossing located on the Real Diotte Branch of the R.A. Mclennan in North Glengarry, Ontario.

   As described in the following documents:

   1. Proposed New Farm Crossing Real Diotte Branch of The R.A. Mclennan Drain S. 78 (5) Engineer's Report Township of North Glengarry" prepared by Shade Group Inc., dated September 2024.
   2. Landowner Authorization dated August 30, 2024.
   3. RRCA Application signed by Monica Shade dated September 10, 2024.
   4. E-mail response from Monica Shade to RRCA questions October 21, 2024.

2. Excavated excess material shall be transported off site or spread outside of the floodplain.

3. The permit holder shall ensure adequate measures are in place to prevent erosion to the drain (e.g. protection from rain or wind).

4. The permit holder shall notify the RRCA when work has started, email: permits@rrca.on.ca or telephone: 613-938-3611.

Monica Shade <monica@shadegroup.ca>

Re: Real Diotte Farm Crossing

1 message

Monica Shade <monica@shadegroup.ca> Mon, Oct 21, 2024 at 11:50 AM
To: Lissa Deslandes <lissa.deslandes@rrca.on.ca>

Hi Lissa,

My initial responses and some request for further clarification is below:

1) Acknowledged - correction has been made in the report that will be resubmitted.

2) The slope on the ditch is only 0.15% and 0.10%, so yes, any change in headwater elevation is going to extend upstream. That said - there is a 600mm diameter culvert approximately 200m upstream that would similarly be expected to pond upstream during larger storm events. Given that the requirement is to only convey the 5-year storm event through a culvert, it is expected that there will be some changes to the system caused by the installation of a circular pipe in a trapezoidal channel - just by the nature of the geometry - and particularly in storm events like the 100-year. Short of sizing the culvert for the 100-year conveyance, it's not reasonable to expect zero changes from a culvert installation, though I would consider the overall impact to be negligible given the rural nature of the surrounding lands.
If more clarification on what exactly is being sought here could be provided, that would be appreciated. What level of change is acceptable - particularly given that design of the system to a 100-year storm event is not generally a requirement? Is the requirement that there is zero changes to the system upstream - or is some level of change acceptable as long as it can be noted that the impacts/risk are considered?

3) The erosion and sediment control notes and a plan showing the information as well as OPSD references was provided in the last submission - but as a courtesy we can prepare it as a standalone plan. The reference to a dewatering plan will be removed from the report - as it is my opinion that based on the site conditions and the proposed works, there is no reason that the construction works should require dewatering. The installation of the crossing can be completed in 1-2 days, and as such, it would be expected that a contractor could monitor weather conditions to avoid conducting the works during or right before a significant rainfall event.
The Erosion and Sediment Control notes provided on the plan specify that works are to be completed in low or no flow conditions; and scheduling of works should avoid wet, windy or rainy periods. With that - and combined with our observations of field conditions, dewatering should not be required and instead, scheduling of works can be completed to avoid any dewatering requirements.

4) Acknowledged. Typically when working with other CAs we provide a draft of the report for review; address any comments - and then the final stamped copy is provided as part of the formal submission under the Drainage Act. Given that the report is intended to continue to be referenced for future maintenance long past the initial installation, we generally prefer not to submit stamped copies until formal Drainage Act submission, as it helps to avoid confusion in the future (20-30 years) when determining what the governing report is.

We would be happy to attend a call with RRCA staff if it's easier to address / discuss concerns over a call.

Talk soon,

Monica Shade, P. Eng.
V.P. of Engineering & Sales
Shade Group Inc.

Shade Group Inc. is also the parent company to
Nepean General Contractors

On Mon, Oct 21, 2024 at 9:27 AM Lissa Deslandes <lissa.deslandes@rrca.on.ca> wrote:

> Hi Monica,

We have completed our technical review of the report titled "*Proposed New Farm Crossing Real Diotte Branch Of The R.A. Mclennan Drain S. 78 (5) Engineer's Report Township Of North Glengarry*" prepared by Shade Group Inc., dated September 2024, and have the following comments.

1. The estimated peak flows in Table 4 (page 6) do not match the results calculated in Appendix D. The report should be revised accordingly.
2. It is noted that the design storm used is the 5-year event. It is understood that the design of the crossing is not required to use the 100-year event, however the report should still address how the new crossing may impact the water elevations and velocities upstream and downstream of the structure during major flow events. It is assumed water will overtop the proposed crossing however, could the increased water level back up and impact upstream properties?
3. A separate, signed stamped and dated Sediment and Erosion Control plan should be provided identifying the location of the proposed control measures as well as their respective OPSD numbers/details. It is noted that the report states "*Should dewatering be required at the time of construction, it shall be the responsibility of the Contractor to provide the Conservation Authority with a dewatering plan for approval*." A dewatering plan should be prepared and submitted for review to address the possibility of a heavy rain event occurring during the proposed works.
4. It is noted that this report is considered draft. A final signed, stamped and dated report should be provided.

Regards,

Lissa Deslandes

Regulations Officer

Raisin Region Conservation Authority

613-938-3611 www.rrca.on.ca

APPENDIX G

RESOLUTION + BY-LAW

CORPORATION OF THE
TOWNSHIP OF NORTH GLENGARRY

Council Meeting

Resolution # ٦

Date: Monday, May 27, 2024

Moved by: Brian Caddell

Seconded by: Michael Madden

THAT the Council of the Township of North Glengarry receives report DR-2024-03, Request for a Minor Improvement on the R.A. McLennan Drain, Real Diotte Branch and Appointment of an Engineer; and

THAT the Council of the Township of North Glengarry accept the request for a minor improvement on the R.A. McLennan Drain, Real Diotte Branch;

AND THAT Shade Group be appointed as the Drainage Engineer for this project.

Carried **Deferred** **Defeated**

Mayor / Deputy Mayor

STAFF REPORT TO COUNCIL **Report No: DR-2024-07**

December 9, 2024

From: Zoe Bougie – Director of Finance/Treasurer

RE: Court of Revision Appointment – County Road Branch of the Cumming Drain

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Recommended Motion:

THAT the Council of the Township of North Glengarry receives report DR-2024-07 Court of Revision Appointment – County Road Branch of the Cumming Drain;

AND THAT By-Law 55-2024 be read a first, second and third time and enacted in open Council this 9th day of December 2024.

Background / Analysis:

The County Road Branch of the Cumming Drain is located in the Township of North Stormont and runs along County Road 22 outletting into the Cumming Drain. The drain affects a small number of properties in the Township of North Glengarry off of County Road 22 in Maxville.

In 2023, a Section 78 project was initiated to update the existing Engineer's Report. The report will be updated to reflect the alterations required to the above drains, as a result of the SDG County Road 22 widening and improvement project. All engineering and construction costs associated with the SDG County Road 22 project will be borne by SDG Counties, including the costs associated with the Drainage Act process.

As land in North Glengarry is implicated, a Council representative must be appointed to the Court of Revision for the Township of North Glengarry.

The Engineer's Report is anticipated to be completed in January with the Meeting to Consider following in February. Due to this, the date for the Court of Revision has not yet been set. Additional information will be circulated to the representatives when more information is known.

Alternatives:
N/A

Financial Implications:
N/A

Attachments & Relevant Legislation:
By-Law 55-2024
County Road Branch Map

Others Consulted:

_____

Reviewed and approved by:
Sarah Huskinson, CAO/Clerk

THE CORPORATION OF THE TOWNSHIP OF NORTH GLENGARRY

BY-LAW NO 56-2024

BEING A BY-LAW TO ADOPT THE ENGINEER'S REPORT REGARDING THE REAL DIOTTE BRANCH OF THE R.A. MCLENNAN DRAIN UNDER SECTION 78(5) OF THE DRAINAGE ACT, R.S.O. 1990 c. D, 17

REFERENCE: Sections 78(5) of the Drainage Act, R.S.O. 1990, c. d.17

WHEREAS the Real Diotte Municipal Drain was constructed under a report prepared by Stidwell & Associates Limited, dated April 10, 1979.

AND WHEREAS Shade Group Inc. was appointed as the engineer for the Real Diotte Branch of the R.A. McLennan Drain by resolution on May 27, 2024, with the request to undertake a Section 78(5) project;

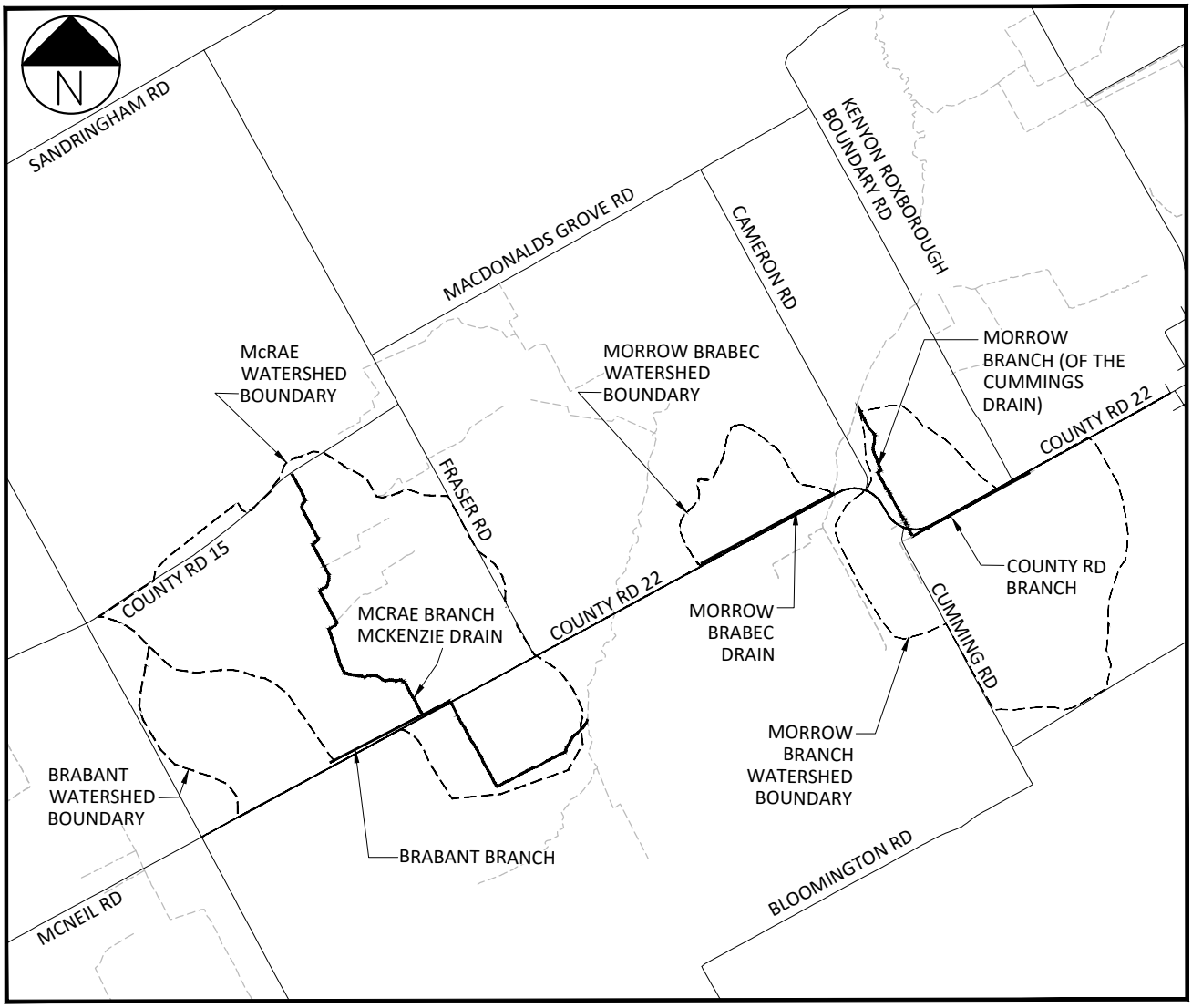
AND WHEREAS the Council of the Township of North Glengarry held a Meeting to Consider the Engineer's Report regarding the Real Diotte Branch of the R.A. McLennan Drain on December 9, 2024 and that the members of the public, including the properties affected by the report, were invited to participate, ask questions and submit comments.

THEREFORE the Council of the Corporation of the Township of North Glengarry enacts as follows:

1. THAT the Engineer's Report be provisionally adopted as presented.

READ a first and second time and provisionally adopted in Open Council this 9th day of December, 2024.

CAO/Clerk/Deputy Clerk	**Mayor/Deputy Mayor**



LOCATION PLAN
N.T.S.

NOTE

THIS MAP HAS BEEN PREPARED TO HIGHLIGHT THE DRAINS IMPACTED BY THE PROPOSED RECONSTRUCTION OF COUNTY ROAD 22. IT IS ACKNOWLEDGED THAT THERE ARE ADDITIONAL DRAINS IN THE AREA - HOWEVER THEY ARE NOT EXPECTED TO BE IMPACTED BY THE PROPOSED SCOPE. IMPACTED DRAINS INCLUDE:

- The Brabant Branch of the McKenzie Drain
- McRae Branch of the McKenzie Drain
- Morrow Brabec Drain
- Morrow Brabec Branch of the Cummings Drain
- County Road Branch of the Cummings Drain

SHADE GROUP INC

COUNTY ROAD 22
TOWNSHIP OF NORTH STORMONT 2023

THE CORPORATION OF THE TOWNSHIP OF NORTH GLENGARRY

BY-LAW 57-2024
FOR THE YEAR 2024

BEING A BY-LAW TO ADOPT, CONFIRM AND RATIFY MATTERS DEALT WITH BY RESOLUTION.

WHEREAS s. 5(3) of the *Municipal Act, 2001*, provides that the powers of municipal corporation are to be exercised by its Council by by-law; and

WHEREAS it is deemed expedient that the proceedings, decisions and votes of the Council of the Corporation of the Township of North Glengarry at this meeting be confirmed and adopted by by-law;

THEREFORE, the Council of the Corporation of the Township of North Glengarry enacts as follows:

1. **THAT** the action of the Council at its regular meeting of Monday December 9th 2024, in respect to each motion passed and taken by the Council at its meetings, is hereby adopted, ratified and confirmed, as if each resolution or other action was adopted, ratified and confirmed by its separate by-law and;

2. **THAT** the Mayor and the proper officers of the Township of North Glengarry are hereby authorized and directed to do all things necessary to give effect to the said action, or to obtain approvals where required, and except where otherwise provided, The Mayor and the Clerk are hereby directed to execute all documents necessary in that behalf and to affix the corporate seal of the Township to all such documents.

3. **THAT** if due to the inclusion of a particular resolution or resolutions this By-law would be deemed invalid by a court of competent jurisdiction then Section 1 to this By-law shall be deemed to apply to all motions passed except those that would make this By-law invalid.

4. **THAT** where a “Confirming By-law” conflicts with other by-laws the other by-laws shall take precedence. Where a “Confirming By-Law” conflicts with another “Confirming By-law” the most recent by-law shall take precedence.

READ a first, second and third time, passed, signed and sealed in Open Council this 9th day of December 2024.

_____ _____

CAO/Clerk / Deputy Clerk **Mayor / Deputy Mayor**

I, hereby certify that the forgoing is a true copy of By-Law No. 57-2024, duly adopted by the Council of the Township of North Glengarry on the 9th day of December 2024

_____ _____**Date**

Certified CAO/Clerk / Deputy Clerk