

September 29, 2025

The Mayor and Council
Municipality of North Middlesex
229 Parkhill Main Street
Parkhill, ON
N0M 2K0

Gentlemen and Mesdames:

Re: Spruytte-Cunningham Drain (2025)

In accordance with your instructions, R. Dobbin Engineering has undertaken an examination with regards to improving the lower end of the drain in the Municipality of North-Middlesex.

Authorization under the Drainage Act

This Engineers Report that has been prepared under Section 78 of the Drainage Act.

R. Dobbin Engineering Inc. was appointed by council on January 17th, 2024.

Under Section 78 of the Drainage Act, Council may undertake and complete the maintenance or repair of any drainage works constructed under a bylaw passed under this Act or its predecessor. Section 78 is to be used where it is considered expedient to change the course of the drainage works, or to make a new outlet for the whole or any part of the drainage works, or to construct a tile drain under the bed of the whole or any part of the drainage works as ancillary thereto, or to construct, reconstruct or extend embankments, walls, dykes, dams, reservoirs, bridges, pumping stations, or other protective works as ancillary to the drainage works, or to otherwise improve, extend to an outlet or alter the drainage works or to cover the whole or any part of it, or to consolidate two or more drainage works, the Council whose duty it is to maintain and repair the drainage works or any part thereof may, without a petition required under Section 4 but on the report of an Engineer appointed by it, undertake and complete the drainage works as set forth in such report.

Existing Conditions

The Spruytte-Cunningham Drain is a combination of open and closed drains. The drain outlets into the Little Ausable River in Lot 23, Concession 4. It continues southeasterly to the east side of Neil Road and includes Branches "A" to "C".

The Spruytte-Cunningham was originally constructed under an Engineer's Report dated February 15, 1979. Under this report the Main Drain and Branch "B" were constructed. The Main Drain consisted of 1,130m of 250mm to 350mm dia. tile drain from the east side of Neil Road and the construction of 180m of open channel in Lot 25, Concession 4. Branch "B" includes a 200mm dia. tile drain.

Under an Engineer's Report dated June 11, 1992 the Main Drain was extended downstream to the Little Ausable River, the lower end was cleaned out and 40m of a 600mm dia. HDPE pipe was installed at the outlet to the Little Ausable River.

Under an Engineer's Report dated September 25, 2012 103m of 200mm dia. plastic tile was incorporated and 45m of 250mm dia. HDPE pipe was constructed, all to be known as Branch "A" of the Spruytte-Cunningham Drain.

On-Site Meeting

A site meeting was held on March 12, 2024.

The following were present at the meeting:

- Josh Warner (R. Dobbin Engineering)
- Joanne Sadler (Municipality of North Middlesex)
- Doug Richards (Landowner)
- Paul Vanneste (Landowner)
- Don Cunningham (Landowner)
- Ruth Ann Cunningham (Landowner)
- Allan Cunningham (Landowner)
- Lois Noland (Landowner)
- Fred Lewis (Landowner)

The following is a brief summary of the meeting:

- General discussion of the Drainage Act and Landowners rights under the Drainage Act.
- Owners of the property with Roll Number 000-020-032 expressed concern with the current outlet pipe into the Little Ausable River. They stated that it is too small and causes flooding upstream. The pipe was installed under a drainage report in 1992.
- Discussed option of a closed or open drain.
- No other concerns on the drain were brought forward.
- No adverse soil conditions were noted at the site meeting.

Drain Classification

The Spruytte-Cunningham Drain and Little Ausable River are currently "Not Rated" Drains according to the Department of Fisheries and Oceans (DFO) classification as presented by the Ontario Ministry of Agriculture, Food and Rural Affairs' Agricultural Information Atlas.

The proposed work shall be carried out during low flows in the channel. The work area is to be maintained in a dry condition during construction by the Contractor.

Approvals

The drain will require approval from the Ausable Bayfield Conservation Authority and the Department of Fisheries and Oceans. Construction cannot commence without necessary approvals.

Draft Report

A draft report dated December 12th, 2024 was circulated to all the Landowners and a meeting was held on January 14th, 2025. The draft report included a 1200mm dia. Sanitite Pipe from the south limit of the property with Roll Number 000-020-032 to the Little Ausable River. The total estimated cost for the project was \$85,110.

The following were present at the meeting:

- Josh Warner (R. Dobbin Engineering)
- Joanne Sadler (Drainage Superintendent, Municipality of North Middlesex)
- Glen Bullock (Municipality of North Middlesex)
- Kristyn Wilson (Drainage Clerk, Municipality of North Middlesex)
- Doug Richards (Landowner)
- Jane Sadler Richards (Landowner)
- Fred Lewis (Landowner)
- Brian Lewis (Landowner)
- Don Cunningham (Landowner)
- Ruth Ann Cunningham (Landowner)
- Sarah Bassett Vanneste (Landowner)
- Paul Vanneste (Landowner)
- Allan Cunningham (Landowner)
- Lois Noland (Landowner)

The following is a brief summary of the meeting:

- The Landowners expressed concerns with a portion of the proposed pipe being permanently under water. Josh Warner explained that due to the elevations of the Little Ausable River and the upstream ditch on the Spruytte-Cunningham Drain that the only options to completely eliminate the water in the culvert bottom would be to pump the water or fill in a portion of the Spruytte-Cunningham Drain in order to elevate the pipe. The Landowners did not wish to further evaluate these options.
- The Landowners requested that a larger pipe be considered. Josh Warner stated that this could be evaluated, however that would likely result in a corrugated steel pipe (CSP) and the lifespan would be reduced when compared with a sanitite product, specifically when a portion of the culvert will be permanently under water. Landowners requested that the obvert of the pipe be above the immediately upstream top of bank and that the CSP option be presented.

- The Landowner of the property with Roll Number 000-020-032 requested that the culvert be extended to provide a small access on their property.
- Landowners requested that an open channel be evaluated as a cost savings measure.
 - The owners of the property with Roll Number 000-020-031 were to touch base with R. Dobbin Engineering about the required width of the access.
 - The Landowners later reached out to the Drainage Superintendent and stated that they did not want an open drain in this section.

Second Draft Report

A second draft report dated May 30th, 2025 was circulated to all the Landowners and a meeting was held on July 29th, 2025. The draft report included a 1400mm dia. CSP from its to currently outlet for 47m to the south. The total estimated cost for the project was \$94,270.

The following were present at the meeting:

- | | |
|--|-----------------------------------|
| • Josh Warner (R. Dobbin Engineering) | • Doug Richards (Landowner) |
| • Joanne Sadler (Drainage Superintendent, Municipality of North Middlesex) | • Don Cunningham (Landowner) |
| • Kristyn Wilson (Drainage Clerk, Municipality of North Middlesex) | • Ruth Ann Cunningham (Landowner) |
| | • Paul Vanneste (Landowner) |
| | • Lois Noland (Landowner) |

The following is a brief summary of the meeting:

- No major concerns were brought forward
- Landowners wished to have a completion date of September 15, 2026

Design

With the increased culvert size as a result of the request of Landowners the proposed culvert will accommodate a 1 in 10-year storm event (93.4mm in 24 hrs) with a fixed outfall elevation in the Little Ausable River of 237.70m. The drain will not function to the design storm when water levels in the Little Ausable River are higher.

Recommendations

It is therefore recommended that the following work be carried out:

1. The existing culvert outletting the Spruytte-Cunningham Drain into the Little Ausable River shall be replaced with a 1400mm dia. CSP pipe. This pipe shall be installed to

provide as much of the pipe above the water level in the Little Ausable River as possible.

Estimate of Cost

It is recommended that the work be carried out in accordance with the accompanying Specification of Work and Profile that forms part of this Report. There has been prepared an Estimate of Cost in the amount of \$96,310, including engineering of the report, attending the Meeting to Consider the Report, attending the Court of Revision, and an estimate for tendering, contract administration and inspection. Appearances before appeal bodies have not been included in the cost estimate.

A Plan has been prepared showing the location of the work and the approximate drainage area. A profile is included showing the depths and grades of the proposed work.

Assessment

As per Section 21 of the Drainage Act, the Engineer in their Report shall assess for benefit and outlet for each parcel of land and road liable for assessment. Lands, roads, buildings, utilities, or other structures that are increased in value or are more easily maintained as a result of the construction, improvement, maintenance, or repair of a drainage works may be assessed for benefit. (Section 22)

Lands and roads that use a drainage works as an outlet, or for which, when the drainage works is constructed or improved, an improved outlet is provided either directly or indirectly through the medium of any other drainage works or of a swale, ravine, creek, or watercourse may be assessed for outlet. The assessment for outlet shall be based on the volume and rate of flow of the water artificially caused to flow into the drainage works from the lands and roads liable for such assessments. (Section 23)

The Engineer may assess for special benefit any lands for which special benefits have been provided by the drainage works. (Section 24)

A Schedule of Assessment for the lands and roads affected by the work and therefore liable for the cost thereof will be prepared as per the Drainage Act. Also, assessments may be made against any public utility or road authority, as per Section 26 of the Drainage Act, for any increased cost for the removal or relocation of any of its facilities and plant that may be necessitated by the construction or maintenance of the drainage works.

The cost of any approvals, permits or any extra work, beyond that specified in this Report that is required by any utility, government ministry or organization (federal or provincial), or road authority shall be assessed to that organization requiring the permit, approval, or extra work.

The estimated cost of the drainage works has been assessed in the following manner:

1. The cost of the drainage improvements has been assessed with 16% of the cost applied as a benefit assessment to the property with roll number 000-020-032, 25% of the cost applied as a benefit assessment to the property with roll number 000-020-031, and the remainder applied as outlet assessment to the upstream lands and roads based on equivalent hectares.

All final costs included in the cost estimate of this report shall be pro-rated based on the Schedule of Assessment. Any additional costs shall be assessed in a manner as determined by the Engineer in accordance with the Drainage Act.

If a Landowner intends to sell their property they shall disclose this project to any potential purchasers.

Allowances

Under Section 29 of the Drainage Act, the Engineer in his Report shall estimate and allow in money to the Landowner of any land that it is necessary to use for the construction or improvement of a drainage works or for the disposal of material removed from drainage works. This shall be considered an allowance for right-of-way.

Under Section 30 of the Drainage Act, the Engineer shall determine the amount to be paid to persons entitled thereto for damage, if any, to ornamental trees, lawns, fences, land and crops occasioned by the disposal of material removed from a drainage works. This shall be considered an allowance for damages.

Allowances have been made, where appropriate, as per Section 29 of the Drainage Act for right-of-way and as per Section 30 of the Drainage Act for damages to lands and crops. Allowances for right of way are based on a land value of \$50,000.00 per hectare. Allowances for crop loss are based on \$2,000.00 per hectare for the first year, \$1,000.00 for the second year (\$3,000.00 per hectare total).

Access and Working Area

Access to the work site for construction and future maintenance shall be from Maguire Road and along the existing access at the south limit of the property with Roll Number 000-020-031. Access shall generally be restricted to a width of 6 metres. The working area shall extend 15m past the extents of the proposed culvert in all directions.

Restrictions

No trees and shrubs shall be planted nor shall permanent structures be erected within 15m of either side of the proposed drain without prior written permission of Council.

Attention is also drawn to Sections 80 and 82 of the Drainage Act, which refer to the removal of obstructions in a drain and damage caused to a drain.

Agricultural Grant

If available, it is recommended that application for subsidy be made for eligible agricultural properties. Any assessments against non-agricultural properties are shown separately in the Schedule of Assessment.

Maintenance

Upon completion of the work, the proposed culvert and channel downstream to the Little Ausable River shall be repaired and maintained in same proportions as the Schedule of Assessment included in this report, unless otherwise altered under provisions of the Drainage Act.

The proposed culvert and channel shall be maintained as per the specifications and drawings contained in this Engineers Report.

Yours truly,



Josh Warner, P. Eng.
R. Dobbin Engineering Inc.



Spruytte-Cunningham Drain
Municipality of North Middlesex
September 29, 2025

ALLOWANCES

Allowances have been made as per Sections 29 & 30 of the Drainage Act for Right of Way and damages to lands and crops

Conc.	Lot or part	Roll No.	Owner	Section 29 (\$)	Section 30 (\$)	Total (\$)
4	Lot 23	000-020-031	P. Vanneste	-	500	500
	Lot 24	000-020-032	D. Richards	-	100	100
TOTAL ALLOWANCES				\$0	\$600	\$600

Estimate of Cost

<u>Item Description (Supply and Install New)</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Cost (\$)</u>	<u>Total (\$)</u>
Pre-Construction Meeting	1	LS	200	200
De-Watering c/w Turbidity Curtain	1	LS	8,000	8,000
Removal and Disposal of Existing Culvert and Level Excess Material	1	LS	5,000	5,000
Remove and Reinstall Concrete Blocks at Outlet	1	LS	2,000	2,000
Supply and Install 1400mmø CSP Pipe	47	m	800	37,600
Clear Stone Bedding	170	tonne	45	7,650
Supply and Install Granular "B"	100	tonne	35	3,500
Supply and Install 100% Crushed Granular "A"	30	tonne	45	1,350
Restoration/Seeding	1	LS	1,500	1,500
Rip Rap	20	tonne	100	2,000
Provisional: Supply and Install Additional Concrete Blocks	5	each	200	1,000
Contingency				<u>3,500</u>
Sub Total				73,300
Allowances				600
Engineering				13,810
Estimate for Environmental Consultant				2,000
Estimate for Tendering, Inspection and Contract Administration				4,500
ABCA Fee				<u>450</u>
Total Estimate excluding HST				94,660
Non-Recoverable HST (1.76%)				<u>1,650</u>
Total Estimate				\$ 96,310

SCHEDULE OF ASSESSMENT

Conc.	Lot or Part	Affected Hectares	Roll No.	Owner	Benefit	Outlet	Total
Public Lands							
	Prince William Street	1.60		Municipality of North Middlesex	-	3,061	3,061
	Neil Road	0.90		Municipality of North Middlesex	-	1,722	1,722
					-	4,783	4,783
Agricultural Lands							
2	Pt. Lot 24	1.60	000-020-070	C & M Genetics Inc.	-	765	765
	N 1/2 Lot 25	14.20	000-020-071	A. & G. Cunningham	-	6,792	6,792
	S 1/2 Lot 25	8.10	000-020-072	D. & R. Cunningham	-	3,874	3,874
3	N 1/2 Lot 25	20.20	000-020-056	Frans Livestock Inc.	-	9,662	9,662
	S 1/2 Lot 25 & Lot 25 Conc. 4	48.10	000-020-033	Vannsons Farms Limited	-	23,007	23,007
	Lot 26	1.20	000-020-055	Vannsons Farms Limited	-	574	574
4	Lot 23	0.00	000-020-031	P. Vanneste	24,077	-	24,077
	Lot 24	15.40	000-020-032	D. Richards	15,410	7,366	22,776
	Total Area	111.30			39,487	52,040	91,527
				Total - Public Lands	4,783		
				Total Agricultural Lands	91,527		
				Total Assessment	\$96,310		

Estimated Net Assessment

Net assessment subject to OMAFRA ADIP Policy and actual construction costs.

Conc.	Lot or Part	Affected Hecatares	Roll No.	Owner	Total Assessment (\$)	Estimated Grant (\$)	Allowances (\$)	Estimated Net Assessment (\$)
Public Lands								
	Prince William Street	1.60		Municipality of North Middlesex	3,061			3,061
	Neil Road	0.90		Municipality of North Middlesex	1,722			1,722
Agricultural Lands								
2	Pt. Lot 24	1.60	000-020-070	C & M Genetics Inc.	765	255		510
	N 1/2 Lot 25	14.20	000-020-071	A. & G. Cunningham	6,792	2,264		4,528
	S 1/2 Lot 25	8.10	000-020-072	D. & R. Cunningham	3,874	1,291		2,583
3	N 1/2 Lot 25	20.20	000-020-056	Frans Livestock Inc.	9,662	3,221		6,441
	S 1/2 Lot 25 & Lot 25 Conc. 4	48.10	000-020-033	Vannsons Farms Limited	23,007	7,669		15,338
	Lot 26	1.20	000-020-055	Vannsons Farms Limited	574	191		383
4	Lot 23	0.00	000-020-031	P. Vanneste	24,077	8,026	500	15,551
	Lot 24	15.40	000-020-032	D. Richards	22,776	7,592	100	15,084
					96,310	30,509	600	65,201

Spruytte-Cunningham Drain
Municipality of North Middlesex
September 29, 2025

SPECIFICATION OF WORK

1. Location

The Spruytte-Cunningham improvements is located in Lot 23, Concession 4 in The Municipality of North Middlesex.

2. Scope of Work

The work included in this specification includes, but is not limited to, the following:

- Culvert replacement

3. General

Each tenderer must inspect the site prior to submitting their tender and satisfy themselves by personal examination as to the local conditions that may be encountered during this project. The Contractor shall make allowance in their tender for any difficulties which they may encounter. Quantities or any information supplied by the Engineer is not guaranteed and is for reference only.

All work and materials shall be to the satisfaction of the Drainage Superintendent who may vary these specifications as to minor details but in no way decrease the proposed capacity of the drain.

The Contractor shall be responsible for the notification of all utilities prior to the start of construction.

4. Plans and Specifications

This Specification of Work shall take precedence over all plans and general conditions pertaining to the Contract. The Contractor shall provide all labour, equipment, and supervision necessary to complete the work as shown in the Plans and described in these specifications. Any work not described in these specifications shall be completed according to the Ontario Provincial Standard Specifications and Standard Drawings.

5. Health and Safety

The Contractor at all times shall be responsible for health and safety on the worksite including ensuring that all employees wear suitable personal protective equipment including safety boots and hard hats.

When applicable the Contractor shall be responsible for traffic control as per the Ontario Traffic Manual Book 7 – Temporary Conditions (latest revision).

The Contractor shall be responsible to ensure that all procedures are followed under the Occupational Health and Safety Act to ensure that work sites are safe and that accidents are prevented. In the event of a serious or recurring problem, a notice of non-compliance will be issued. The Contractor will be responsible for reacting immediately to any deficiency and correcting any potential health and safety risk. Continuous disregard for any requirement of the Occupational Health and Safety Act could be cause for the issuance of a stop work order or even termination of the Contract.

The Contractor shall also ensure that only competent workers are employed onsite and that appropriate training and certification is supplied to all employees.

6. Utilities

The Contractor is responsible for organizing locates and exposing all the utilities along the length of the drainage works. If any utilities interfere with the proposed drainage works in a manner not shown on the accompanying Estimate of Cost or profile the Contractor shall notify the Drainage Superintendent and Engineer.

The Contractor is responsible for coordinating the replacement of additional utilities with the utility company if they interfere with the proposed drain. All costs for the utility to replace their services will be outside of this report and shall be borne by the utility as per Section 26 of the Drainage Act.

All additional costs to work around and organize replacement of the utilities not included in the estimate shall be tracked separately and the cost plus a portion of the engineering (25% of the cost) shall be borne by that utility.

7. Pre-Construction Meeting

There is a requirement for a pre-construction meeting to be held prior to any construction taking place. The meeting shall be scheduled by the Contractor. The Landowners, Engineer, and the Municipality of North-Middlesex shall be notified of the pre-construction meeting at least 48 hours prior.

8. Benchmarks

The benchmarks are based on geodetic elevations. Elevations are available at the locations shown on the Plan and Profile drawings. Where these elevations are on existing structures to be replaced, they shall be transferred by the Contractor prior to the removal.

The Contractor is required to complete a benchmark loop prior to construction to verify the benchmarks. If discrepancies exist the Contractor must notify the Drainage Superintendent and Engineer prior to completing any work.

9. Traffic Control

Access and driveways to private properties shall not be obstructed longer than the minimum time necessary for the work and shall be reinstated as soon as possible all to the satisfaction of the Engineer. The contractor shall schedule any obstruction of existing driveways with the owners at least two full working days in advance. Roads must be kept open to local traffic and all obstructions and diversions of traffic must be approved by the Engineer or Drainage Superintendent and Roads Superintendent at least two (2) full working days in advance.

- a) The Contractor shall supply, erect and maintain all detour signs and special signs necessary for detours to divert traffic from the area under construction as directed by the Road Superintendent or Engineer. All this work shall be at the Contractor's expense.
- b) The Contractor shall be responsible for supplying, erecting and maintaining all signs, supports, barricades, flashers, cones, etc. in the construction area and at the boundaries of the work as part of the above detours, all to the satisfaction of the Engineer or Drainage Superintendent. All this work shall be done by the Contractor at their own expense.
- c) The Contractor shall not be allowed to proceed with construction activities unless proper signage and flagmen are present. Flagging procedures, signage and detours shall conform to the recommendations of Book 7, Temporary Conditions, Ontario Traffic Manual, issued by the Ministry of Transportation. Conformance shall be enforced by the Ministry of Labour Inspector.

10. Access and Working Area

Access to the work site for construction and future maintenance shall be from Maguire Road and along the existing access at the south limit of the property with Roll Number 000-020-031. Access shall generally be restricted to a width of 6 metres. The working area shall extend 15m past the extents of the proposed culvert in all directions.

11. De-Watering c/w Turbidity Curtain

De-watering shall be done in order to facilitate construction. The exact methodology for de-watering is up to the Contractor.

The water control plan shall be submitted to the Engineer and Municipality of North Middlesex prior to work commencing.

The turbidity curtain shall be installed by dragging it away from the headwall to scare any fish away from the headwall.

An environmental consultant will be on site to assist with the identification and relocation of any fish.

12. Removals

The existing culvert shall be removed in its entirety. The culvert and the concrete rubble shall be disposed offsite at the expense of the Contractor. Suitable backfill shall be stockpiled adjacent to the site for reuse during installation of the proposed culvert. The concrete blocks shall be removed in order to facilitate the installation of the larger culvert. The concrete blocks shall be re-installed along the Little Ausable River at the direction of the Engineer or Drainage Superintendent in order to protect the new outlet and adjacent drain banks.

13. Installation of Culvert

The Contractor is required to notify the Landowner forty-eight (48) hours prior to the removal of a culvert.

The Contractor shall supply, install, and backfill aluminized corrugated steel pipe (CSP) with a minimum wall thickness of 2.8mm. All corrugation profiles shall be of helical lock seam manufacture using 68 x 13mm corrugations for 1600mm dia. pipe and smaller and 125 x 25mm corrugations for 1800mm dia. pipe and larger. Pipe with 125 x 25mm corrugations shall be used if 68 x 13mm corrugations are not available.

The culverts shall be installed generally in the same location or as approved by the Drainage Superintendent or Engineer. It is the Contractors responsibility to ensure that the minimum cover is achieved when backfilling the culverts. The minimum cover is 300mm.

Any tile outlets extended as a result of a culvert shall be extended at the landowner's expense. The pipes that shall be extended upstream or downstream of the proposed culvert shall be done with non-perforated HDPE agricultural tubing with a manufactured coupling, elbow and rodent grate.

The bottom of the excavation shall be 100mm below the proposed invert or to the bottom of the excavation caused by the removed pipe, whichever is lower. The pipe shall be bedded with $\frac{3}{4}$ " clear stone. When the pipe has been installed to the proper grade and depth, the excavation shall be backfilled with $\frac{3}{4}$ " clear stone and wrapped in filter fabric from the bottom of the excavation to the spring line of the pipe. Care shall be taken to ensure that the backfill on either side of the culvert does not differ by more than 300mm so that the pipe is not displaced. The culvert shall be backfilled from the spring line to within 150mm of finished grade with Granular "B". Where no vehicular traffic is proposed to cross the culvert, the culvert may be backfilled with select native material. If the native material is deemed insufficient by the Drainage Superintendent or Engineer Granular "B" shall be used. The excess excavated material shall be spread within the area

of the proposed culvert to ensure 300mm of cover and shall be spread to the satisfaction of the Engineer or Drainage Superintendent. Where vehicular access is proposed, the top 150mm shall be backfilled with compacted 100% crushed granular “A” material to finished grade. In sections where no vehicular traffic is proposed to cross the culvert, the top 100mm shall be topsoil and seeded as per the restoration specification.

The southerly end wall shall be rip rap. It shall consist of 150mm x 300mm quarry stone or approved equal. The area to receive the rip rap shall be graded to a depth of 400mm below finished grade. Filter fabric (Mirafi P150 or approved equal) shall then be placed with any joints overlapped a minimum 600mm. The quarry stone shall then be placed with the smaller pieces placed in the gaps and voids to give it a uniform appearance. The rip rap on the north end wall shall extend to the proposed channel bottom

If additional concrete blocks are required in the Little Ausable River they shall consist of concrete blocks with dimensions of approx. 600mm x 600mm x 1200mm, 600mm x 600mm x 2400mm or 300mm x 600mm x 1200mm as required. 600mm x 600mm x 2400mm concrete blocks will be paid at twice the unit price established per block, all others will be at a unit of 1. The blocks shall be set at each end of the culvert so that each row of blocks will be offset approx. 100mm from the row below. The blocks shall be imbedded a minimum of 300mm into each bank.

The blocks shall be placed over a layer of filter fabric (Mirafi P150 or approved equal). The culvert shall be backfilled in conjunction with the placement of the blocks. The gaps between the culvert and the blocks shall be filled with concrete cinder blocks/bricks and mortar to give the end wall a finished appearance.

14. Seeding/Restoration

All areas disturbed by construction shall be returned to their pre-construction state. The grassed areas shall be restored 100mm of screened topsoil and hand seeded. The side slopes of the open channel shall be restored with hand seed.

If the hand seed or hydroseed has not germinated, at the discretion of the Engineer or Drainage Superintendent, prior to the one-year maintenance period, 100mm of topsoil shall be placed and hydroseeded in accordance with the seed mixture, fertilizer and application rate as shown below.

Seed mixture, fertilizer and application rates are as follows:

- Canada Wild Rye (*Elymus Canadensis*), Virginia Wild Rye (*Elymus virginicus*), or Indian grass (*Sorghastrum nutans*)
- Fertilizer (300 kg/ha.) consisting of 8-32-16.
- Hydraulic mulch (2,999 kg/ha.) type “B” and water (52,700 litres/ha.) in accordance with OPSS 572 (hydroseed).

The above seed mixture shall apply unless otherwise approved by the Drainage Superintendent or Engineer.

15. Environmental Considerations

The Contractor shall take care to adhere to the following considerations.

- Operate machinery in a manner that minimizes disturbance to the banks of the watercourse.
- Erosion and sediment control measures must be installed prior to construction to prevent sediment from entering the water body.
- Material shall not be in areas regulated by the Conservation Authority or Ministry of Natural Resources.
- All granular and erosion control materials shall be stockpiled a minimum of 3.0m from the top of the bank or excavation. Material shall not be placed in surface water runs or open inlets that enter the channel.
- All activities, including maintenance procedures, shall be controlled to prevent the entry of petroleum products, debris, rubble, concrete, or other deleterious substances into the water. Vehicle and equipment refuelling and maintenance shall be conducted away from the channel, any surface water runs, or open inlets. All waste materials shall be stockpiled well back from the top of the bank and all surface water runs and open inlets that enter the drain.
- When possible, all construction within the open channel shall be carried out during periods of low flow or in dry conditions.
- The Contractor shall conduct regular inspections and maintain erosion and sediment control measures and structures during the course of construction.
- The Contractor shall repair erosion and sediment control measures and structures if damage occurs.
- The Contractor shall remove non-biodegradable erosion and sediment control materials once site is stabilized.
- Remove all construction materials from site upon project completion.



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Ontario and Prairie Region
Fish and Fish Habitat Protection Program
867 Lakeshore Rd.
Burlington, ON
L7S 1A1

Région de l'Ontario et des Prairies
Programme de protection du poisson et de son habitat
867 chemin Lakeshore
Burlington, ON
L7S 1A1

September 12, 2025

Our file Notre référence
24-HCAA-02996

Municipality of North Middlesex
Joanne Sadler
229 Parkhill Main Street
Parkhill, ON, N0M 2K0

Subject: Culvert Replacement, Spruytte-Cunningham Drain, Municipality of North Middlesex (24-HCAA-02996) – Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat

Dear Joanne Sadler:

The Fish and Fish Habitat Protection Program (the Program) of Fisheries and Oceans Canada (DFO) received your proposal on December 12, 2024. We understand that you propose to:

- Replace the existing 0.6m diameter by 40m long HDPE culvert with a 1.4m diameter by 47m long CSP Culvert at the downstream extent of Spruytte-Cunningham Drain, resulting in an approximate footprint of 84 square meters (m²) below the High Water Mark (HWM).
- Rehabilitate the existing concrete retaining wall at the outlet of the replacement culvert (no increase in footprint below the HWM).
- Work in isolation of flow to avoid sedimentation of the watercourse.

We understand the following aquatic species listed under the *Species at Risk Act* may use the area in the vicinity of where your proposal is to be located:

- Black Redhorse (*Moxostoma duquesnei*) listed as Threatened.

Our review considered the following information:

- Request for Review form and associated documents submitted on December 12, 2024; and
- Email correspondence with R. Dobbin Engineering Inc. on September 3, 2025 confirming additional project details.

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*; and
- 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*.

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:

- Carry out the project in accordance with [timing windows](#);
- Limit the duration of in-water works, undertakings and activities;
- Use fish scare techniques prior to installing silt curtains to ensure the work area is isolated from fish;
- Capture fish trapped within an isolated or enclosed area and relocate them to the same watercourse or water body;
 - Dewater gradually to reduce the potential for stranding fish;
 - Capture and relocate any fish as per applicable permits;
 - Exclude fish from the work area using a turbidity curtain dragged outward from shore;
 - **If a Black Redhorse is captured, and/or any other SAR**, stop work and contact DFO at DFO.OPHabitat.MPO@dfo-mpo.gc.ca with a digital voucher of the species. Photo vouchers shall be taken while SAR are fully submersed in a net or viewing box and the species released unharmed to the watercourse;
- Screen intake pipes during all phases of the project;
 - Use interim code of practice: [End-of-pipe fish protection screens for small water intakes in freshwater](#);
- Avoid obstructing or interfering with the movement and migration of fish;
- Maintain fish passage during all phases of project;
- Maintain a functioning vegetated riparian zone between the project site and the ordinary high water mark;
 - Use existing trails, roads, access points of cut lines;
 - Limit vegetation removal, pruning and grubbing to the area required for accessing the project site;
 - Re-vegetate the affected riparian zone with native species suitable for the project site;
- Restore the bed and banks, gradient and contour affected by the project;
- Develop and implement an erosion and sediment control plan for all phases of the project;
 - Conduct all operations in isolation of open or flowing water;

- Follow [Interim in-water site isolation](#);
 - Regularly observe the watercourse or water body for signs of suspended sediment during all phases of the project and take corrective action when and where required;
 - Remove all non-biodegradable erosion and sediment controls once the site has been stabilized;
 - Dispose of, and stabilize, all excavated material above the ordinary high water mark or top of bank of nearby watercourses or water bodies;
 - Operate machinery on land, from barges or on ice during all phases of the project;
 - Use only clean materials;
 - Avoid introducing sediment in the water, like silt, clay and sand;
- Develop a plan to prevent deleterious substances from entering a watercourse or water body;
- Aquatic invasive species are introduced and spread through transporting water, sands and sediments and using contaminated construction equipment. To prevent the spread of aquatic invasive species during construction in aquatic environments:
 - Ensure all equipment arrives on site clean and free of invasive species;
 - 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*, and 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.

We recommend that you notify this office at least 10 days before starting your project and that a copy of this letter be kept on site while the work is in progress. Send your notification to the DFO 10 day notification mailbox: DFO.OP.10DayNotification-Notification10Jours.OP.MPO@dfo-mpo.gc.ca. 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 Tyler Peat at Tyler.Peat@dfo-mpo.gc.ca. Please refer to the file number referenced above when corresponding with the Program.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Tyler Peat". The signature is fluid and cursive, with a long horizontal stroke extending from the end.

Tyler Peat
Biologist, Triage and Planning
Fish and Fish Habitat Protection Program



September 27, 2025

Municipality of North Middlesex
Attn: Joanne Sadler, Drainage Superintendent
229 Parkhill Main Street
Parkhill, ON, N0M 2K0

Dear Ms. Sadler:

**Re: Engineers Report for the Spruytte-Cunningham Drain 2025
Lot 23 Concession 4
Municipality of North Middlesex (former ward of McGillivray)
ABCA File Reference #25541**

This office is in receipt of correspondence from R. Dobbin Engineering Inc., and an Engineer's Report concerning proposed Section.78 Improvements to the above-referenced drain. The ABCA offers the following:

On April 1, 2024, Ontario Regulation 41/24: Prohibited Activities, Exemptions and Permits and Part VI of the *Conservation Authorities Act* came into effect. This regulation replaces the Ausable Bayfield Conservation Authority's previous regulation, Ontario Regulation 147/06: Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses.

Ontario Regulation 41/24 (Prohibited Activities, Exemptions and Permits)

As we understand from the documentation received, the following works are being proposed under Ontario Regulations 41/24:

A) The replacement of one (1) 600mm dia. culvert with one (1) 1400mm dia. culvert; The proposed culvert is to be extend 7.0 metre south of the existing culvert; A new private access is to be constructed over the proposed culvert.

B) The remediation of the existing outlet protection within the Little Ausable River; Isolation and de-watering of the area is to be designed and performed by the contractor in order to facilitate the rehabilitation of the existing erosion protection.

We have no concerns with the scope of the work as presented in the report submitted to this office with regards to Ontario Regulation 41/24. To avoid any negative environmental impacts of the works, Specifications of Work Section 15. Environmental Considerations as outlined in the R. Dobbin Engineering report shall be followed, as well as the following mitigation measures in accordance with Ontario Regulation 41/24:

- (i) All excavated materials and debris are to be removed from within ABCA regulation limit unless prior written consent of the Ausable Bayfield Conservation Authority has been granted for it to be stockpiled or to remain.
- (ii) To minimize potentially negative impacts to the downstream water quality and in the receiving watercourse, works should take place during low to no flow conditions.
- (iii) Erosion and sediment control measures should be installed prior to construction, inspected and remain in place until vegetation cover and work site become stabilized.
- (iv) There will be no increase in flows resulting from this drainage works.
- (v) Erosion protection at the inlet of the proposed culvert should be angular quarry stone rip-rap as per the profile drawing as shown on page 2 of 2 of the Spruytte-Cunningham Drain Report drawing package.

Section 35: Federal Fisheries Act

This ABCA advice shall not be construed as any form of review or advice in regards to compliance with requirements under the Federal Fisheries Act.

Please refer to the following links for additional information in regard to the requirements of the Federal Fisheries Act.

<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>
fisheriesprotection@dfo-mpo.gc.ca

Phone: 1-855-852-8320

We also remind the municipality, this correspondence does not release the proponent of the responsibility for obtaining any other permits that may be required under federal, provincial or municipal legislation. Please be advised that Endangered Species could be present in this area and are protected under the *Endangered Species Act* (ESA 2007). Contact your local Ontario Ministry of the Environment, Conservation and Parks office to ensure your proposal does not contravene the ESA 2007. Additional information on species at risk can be found at:

<https://www.ontario.ca/page/species-risk>

We respectfully remind you that the ABCA has been charging a review fee of \$450 for reviews under Section 28 of the Conservation Authorities Act pertaining to new Municipal Drain Reports. An invoice pertaining to this review will follow.

We wish to thank the municipality for circulation of the new Municipal Drain Report proposal to this office for our review and comment. If you have any questions regarding the above, please do not hesitate to contact the undersigned at our office.

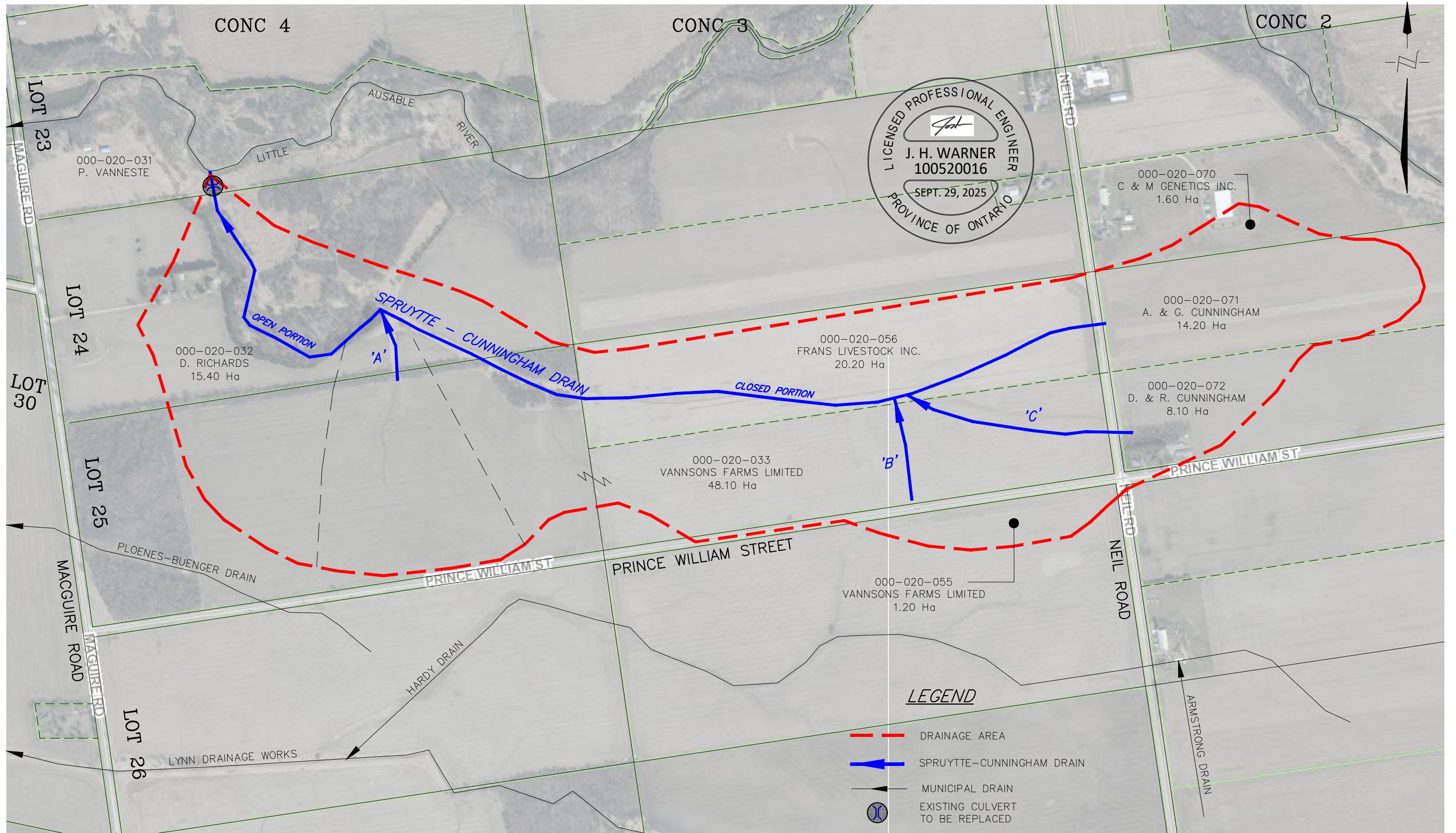
Yours truly,

AUSABLE BAYFIELD CONSERVATION AUTHORITY

A handwritten signature in blue ink that reads "Jaden Schoelier". The signature is fluid and cursive, with the first name "Jaden" and last name "Schoelier" clearly distinguishable.

Jaden Schoelier
Water and Planning Technician

cc. R. Dobbin Engineering Inc, Josh Warner P. Eng



4218 Oil Heritage Road
Petrolia Ontario, N0N 1R0
Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME:
Spruytte-Cunningham Drain Plan

PROJECT No.
2024-1591

APPROVED
J. WARNER

CHECKED
B. VAN RUITENBURG

DRAWN
C. SAUNDERS

NO.	REVISIONS	DATE	BY
1	FINAL REPORT	SEPT. 29, 2025	CS

SCALE: 1:7500

0 100 200 300m

MUNICIPALITY of NORTH MIDDLESEX

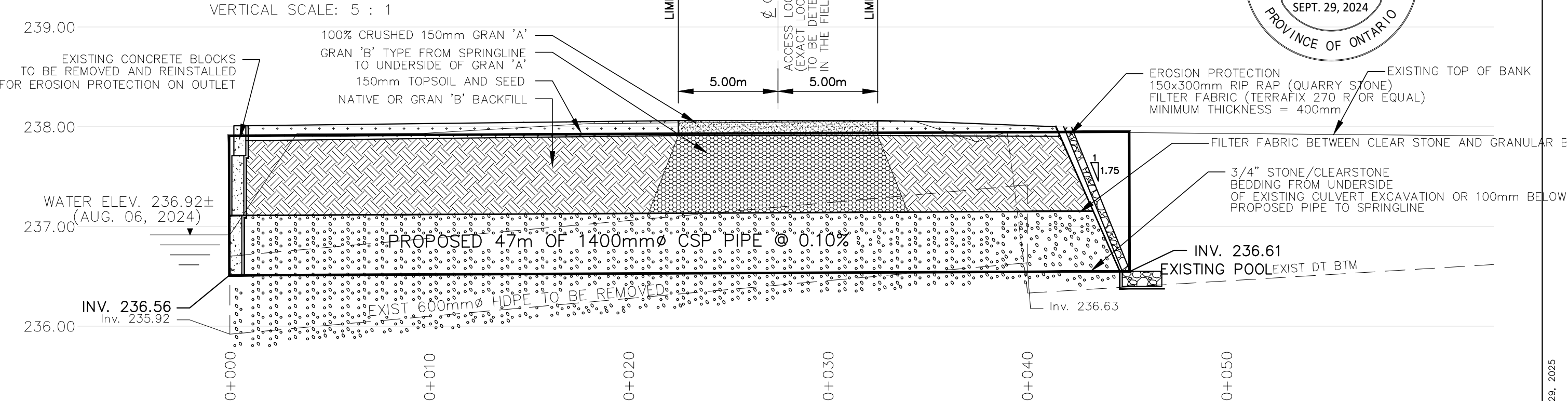
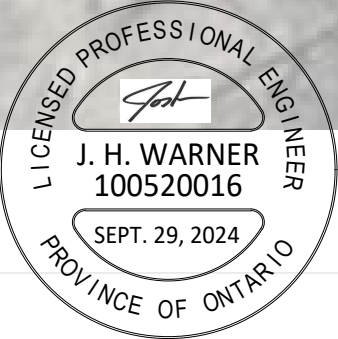
SPRUYTTE - CUNNINGHAM DRAIN

PLAN

1
OF 2

GENERAL NOTES

1. CONTRACTOR TO ENSURE MINIMUM COVER OF 300mm ABOVE PROPOSED 1400mmØ CSP PIPE.
2. EXISTING CONCRETE BLOCKS TO BE REMOVED AND REINSTALLED ARE LOCATED IN THE LITTLE AUSABLE RIVER, MOST BEING SUBMERGED AND EXISTING CONDITION NOT KNOWN.
3. ANY EXCESS MATERIAL FROM EXCAVATION TO BE REUSED ON SITE.



4218 Oil Heritage Road
Petrolia Ontario, N0N 1R0
Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME:
Spruytte - Cunningham Drain Detailed Plan & Profile

PROJECT No.
2024-1591

APPROVED J. WARNER	NO.	REVISIONS	DATE	BY
CHECKED C. SAUNDERS	1	FINAL REPORT	SEPT. 29, 2025	CS
DRAWN B. VAN RUITENBURG	SCALE 1:200 0 2 4 6m			

MUNICIPALITY of NORTH MIDDLESEX

SPRUYTTE - CUNNINGHAM DRAIN

DETAILED PLAN & PROFILE

2
OF 2

Last Updated: September 29, 2025