



**TOWN OF AMHERSTBURG
DRAINAGE BOARD MEETING
MINUTES**

Tuesday, February 24, 2026

6:00 PM

Council Chambers

271 Sandwich Street South, Amherstburg, ON, N9V 2A5

PRESENT	Anthony Campigotto - Chair Allan Major - Vice Chair Brad Laramie Murray Sellars
STAFF PRESENT	Sam Paglia - Drainage Superintendent/Engineering Coordinator Nicole Humber - Recording Secretary Selena Scebba - Policy and Committee Coordinator
ABSENT	Brian Renaud (<i>Regrets</i>)

1. CALL TO ORDER

The Chair called the meeting to order at 6:01 p.m.

2. ROLL CALL

3. DISCLOSURE OF PECUNIARY INTEREST & GENERAL NATURE THEREOF

There were no disclosures noted.

4. LAND ACKNOWLEDGEMENT

The following was read, “We will begin by acknowledging that the land on which we gather is the traditional territory of the Three Fires Confederacy of First Nations (comprising the Ojibway, the Odawa, and the Potawatomie Peoples), and of the Huron-Wendat and Wyandot Peoples. We recognize the land as an expression of gratitude to those whose traditional territory we reside on, and a way of honouring the Indigenous people who have been living and thriving on the land since time immemorial. We value the significant historical and contemporary contributions of local and regional First Nations and all of the Original Peoples of Turtle Island.”

5. MINUTES OF PREVIOUS MEETING

5.1 Drainage Board Meeting Minutes - February 3, 2026

Moved by M. Sellars

Seconded by A. Major

That the Drainage Board meeting minutes of February 3, 2026 **BE ADOPTED.**

The Chair put the motion.

Motion Carried

6. ORDER OF BUSINESS

6.1 Engineering Appointment Appointee - Tremblay Drain

Moved by A. Major

Seconded by B. Laramie

That:

1. The Drainage Board **RECEIVE** the information provided by Rood Engineering Inc. regarding the engineering appointment of David Montingny for the Tremblay Drain; and
2. The Drainage Board **ACCEPT** the information provided herein under S. 8(2) of the Drainage Act.

The Chair put the motion.

Motion Carried

6.2 Engineering Appointment Appointee - Alvin-Bondy Drain (East Branch)

Moved by B. Laramie
Seconded by A. Major

That:

1. The Drainage Board **RECEIVE** the information provided by Dillon Consulting Limited regarding the engineering appointment of Oliver Moir for the Alvin-Bondy Drain (East Branch); and
2. The Drainage Board **ACCEPT** the information provided herein under S. 8(2) of the Drainage Act.

The Chair put the motion.

Motion Carried

6.3 Levying Bylaw

Moved by A. Major
Seconded by M. Sellars

That the levying by-law **BE DEFERRED** to a future meeting.

The Chair put the motion.

Motion Carried

7. **ADJOURNMENT**

Moved by M. Sellars

Seconded by A. Major

That the Drainage Board **ADJOURN** at 6:10 p.m.

The Chair put the motion.

Motion Carried

Anthony Campigotto - Chair

Sam Paglia - Staff Liaison



**TOWN OF AMHERSTBURG
DRAINAGE BOARD MEETING
MINUTES**

Tuesday, March 24, 2026

6:00 PM

Council Chambers

271 Sandwich Street South, Amherstburg, ON, N9V 2A5

PRESENT

Anthony Campigotto - Chair
Allan Major - Vice Chair
Brad Laramie
Brian Renaud
Murray Sellars

STAFF PRESENT

Sam Paglia - Drainage Superintendent/Engineering Coordinator
Nicole Humber - Recording Secretary
Selena Scebba - Policy and Committee Coordinator

1. CALL TO ORDER

The Chair called the meeting to order at 6:04 p.m.

2. ROLL CALL

3. DISCLOSURE OF PECUNIARY INTEREST & GENERAL NATURE THEREOF

Brad Laramie declared a conflict on item 8.1 as he owns land on the drain.

Anthony Campigotto declared a conflict on item 8.5 as he is a property owner on the drainage scheme.

4. LAND ACKNOWLEDGEMENT

The following was read, “We will begin by acknowledging that the land on which we gather is the traditional territory of the Three Fires Confederacy of First Nations (comprising the Ojibway, the Odawa, and the Potawatomie Peoples), and of the Huron-Wendat and Wyandot Peoples. We recognize the land as an expression of gratitude to those whose traditional territory we reside on, and a way of honouring the Indigenous people who have been living and thriving on the land since time immemorial. We value the significant historical and contemporary contributions of local and regional First Nations and all of the Original Peoples of Turtle Island.”

5. MINUTES OF PREVIOUS MEETING

5.1 Drainage Board Meeting Minutes - February 24, 2026

Moved by M. Sellars

Seconded by A. Major

That the Drainage Board Minutes of February 24, 2026 **BE ADOPTED**.

The Chair put the motion.

Motion Carried

6. OPEN COURT OF REVISION

The Court of Revision was opened at 6:07 p.m.

6.1 Appeals - Lakewood Drive Drain No. 3 & Pumping Scheme

Kathryn McNamara commented on the project.

The Board heard an appeal from Robert Smith.

Moved by B. Laramie

Seconded by B. Renaud

That:

1. The appeal submitted verbally to the Court of Revision for improvements to the Lakewood Drive Drain No. 3 & Pumping Scheme **BE RECEIVED**; and
2. The recommended schedule of assessment dated October 30, 2025 from Dillon Consulting Ltd. **BE APPROVED**.

The Chair put the motion.

Motion Carried

6.2 Appeals - Concession Road 3 North Drain (2025)

There were no written or verbal appeals submitted.

Moved by B. Renaud
Seconded by A. Major

That the recommended schedule of assessment dated September 25, 2025 from R. Dobbin Engineering Inc. **BE APPROVED**.

The Chair put the motion.

Motion Carried

7. CLOSE COURT OF REVISION

The Court of Revision was closed at 6:36 p.m.

8. ORDER OF BUSINESS

8.1 Powers Drain - Consideration of Final Drainage Report

Moved by A. Major
Seconded by M. Sellars

That:

1. The engineer's report prepared by R. Dobbin Engineering Inc. dated February 4, 2026 for improvements to the Powers Drain (2026) **BE RECEIVED**;
2. The engineer's report for improvements to the Powers Drain (2026) **BE CONSIDERED**;
3. The **PROVISIONAL ADOPTION** of **By-law 2026-022** which appends the engineer's report for improvements to the Powers Drain (2026) **BE BROUGHT** to the next Regular Council meeting for Council's consideration; and,
4. Administration **BE DIRECTED** to proceed with the scheduling of the Public Meeting of the Court of Revision for improvements to the Powers Drain (2026).

The Chair put the motion.

Motion Carried

8.2 Beneteau, Vollans and Tremblay Drains - Consider Final Drainage Report

Moved by M. Sellars

Seconded by A. Major

That:

1. The engineer's report prepared by R. Dobbin Engineering Inc. dated February 17, 2026 for improvements to the Beneteau, Vollans and Tremblay Drains **BE RECEIVED**;
2. The engineer's report for improvements to the Beneteau, Vollans and Tremblay Drains **BE CONSIDERED**;
3. The **PROVISIONAL ADOPTION** of **By-law 2026-023** which appends the engineer's report for improvements to the Beneteau, Vollans and Tremblay Drains **BE BROUGHT** to the next Regular Council meeting for Council's consideration; and,

4. Administration **BE DIRECTED** to proceed with the scheduling of the Public Meeting of the Court of Revision for improvements to the Beneteau, Vollans and Tremblay Drains.

The Chair put the motion.

Motion Carried

8.3 Levying Bylaw

Moved by B. Renaud

Seconded by M. Sellars

That:

1. The report from the Drainage Superintendent and Engineering Coordinator dated March 16, 2026 regarding the recovery of cost for money spent in 2025 for improvements of a Municipal Drain **BE RECEIVED**;
2. That By-Law 2026-014 **BE READ 3 TIMES** to become the Levying By-Law to allow the collection of cost for which Council has provided to Finance for the improvements to Municipal Drain project herein completed by the Town in 2025.

The Chair put the motion.

Motion Carried

8.4 Drainage Apportionment

Moved by A. Major

Seconded by B. Laramie

That:

1. The report from the Drainage Superintendent and Engineering Coordinator dated March 19, 2026 regarding various drainage apportionments **BE RECEIVED**;
2. The drainage apportionments **BE APPROVED** as listed:
 - Consent **B/18/22** drainage apportionment for a Municipal Drain.

3. Administration **BRING FORWARD** the Drainage Board's recommendation to approve the drainage apportionments at a future Regular Council Meeting.

The Chair put the motion.

Motion Carried

The Vice Chair assumed control of the meeting.

8.5 Engineering Appointment - North Branch and Main Branch of Willow Beach Drainage and Pumping Scheme

Moved by M. Sellars

Seconded by B. Renaud

That:

1. The report from the Drainage Superintendent and Engineering Coordinator dated March 24, 2026 regarding the Recommendation of Josh Warner, P.Eng for the variation of assessment (Section 76) to the North Branch and Main Branch of the Willow Beach Drain and Pumping Scheme. Engineering Appointment **BE RECEIVED**;
2. The Drainage Board recommend that Council **ACCEPT** the request from the Engineers report under Section 65 to satisfy the conditions of consent application B/26-28/25 of the application for Severance; and,
3. The Drainage Board recommend the appointment of Josh Warner, P.Eng, of R. Dobbin Engineering to examination and report the variation of assessments to the repair and improvement to the North Branch and Main Branch of the Willow Beach Drain and Pumping Scheme **BE APPROVED** by Council.

The Vice Chair put the motion.

Motion Carried

The Chair assumed control of the meeting.

9. ADJOURNMENT

Moved by B. Renaud
Seconded by A. Major

That the Drainage Board **ADJOURN** at 6:58 p.m.

The Chair put the motion.

Motion Carried

Anthony Campigotto - Chair

Sam Paglia - Staff Liaison

DRAFT

**Rood
Engineering
Inc.**

Consulting Engineers

February 11th, 2026

The Corporation of the Town of Amherstburg
271 Sandwich Street South
Amherstburg, Ontario
N9V 2A5

Attn: Sam Paglia, P.Eng. Drainage Superintendent / Engineering Coordinator and Members of Council

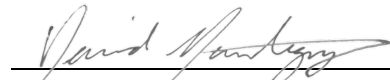
RE: TREMBLAY DRAIN SECTION 78 – ENGINEER APPOINTMENT
Our Project No. REI2026D004
Town of Amherstburg, County of Essex

We would like to thank the Town of Amherstburg for appointing our firm, Rood Engineering Inc., to the above noted project. Please be advised that David Montigny of our firm shall be the individual with charge of the project pursuant to Section 8(2) of the Drainage Act, R.S.O. 1990, Chapter D.17, as amended.

We trust that the above and the enclosed will be found satisfactory for your purposes. Should there be any questions, or any clarifications required with respect to our appointment, our office should be contacted.

Yours truly,

ROOD ENGINEERING INC.



David Montigny, B.A.Sc.

DM/

ROOD ENGINEERING INC.

Consulting Engineers
9 Nelson Street
Leamington, Ontario N8H 1G6

January 29, 2026



Sent Electronically Only

Corporation of the Town of Amherstburg
271 Sandwich Street South
Amherstburg, ON N9V 2A5

Attn: Sam Paglia, P.Eng.
Drainage Superintendent & Engineering Coordinator

10 Fifth Street South
Chatham, Ontario
Canada
N7M 4V4
Telephone
519.354.7802

*Appointment for Engineer of Record
Corporation of the Town of Amherstburg
Section 4 – Petition to Extend the Alvin-Bondy Drain (East Branch) – Engineer Appointment
Dillon Project No. 24-7514*

Dear Sir:

In accordance with the Ontario Drainage Act Section 8(2) R.S.O. 1990, c. D.17, Dillon Consulting Limited is hereby notifying the Town of Amherstburg members of Council that Oliver E. T. Moir, P.Eng. be the engineer of record for the subject drainage project. We anticipate this assignment will be completed in coordination with the ongoing appointment for the Langlois Drain.

Oliver can be reached at 226-542-6802 or via email at omoir@dillon.ca

Yours sincerely,
DILLON CONSULTING LIMITED

A handwritten signature in black ink, appearing to read "Oliver Moir".

Oliver Moir, P.Eng.

OEM:lld

Our Files: 24-7514-2000

February 4, 2026

The Mayor and Council
Town of Amherstburg
271 Sandwich Street South
Amherstburg, Ontario
N9V 2A5

Gentlemen and Mesdames:

Re: Powers Drain (2026)

In accordance with your instructions, R. Dobbin Engineering has undertaken an examination with regards to improving the Powers Drain in the Town of Amherstburg.

Authorization under the Drainage Act

This is an Engineer's Report that has been prepared under Section 78 of the Drainage Act.

R. Dobbin Engineering Inc. was appointed by council on November 15, 2024.

Section 78 of the Drainage Act states that, where, for the better use, maintenance or repair of any drainage works constructed under a bylaw passed under this Act, or of lands or roads, 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 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 Drainage

The Powers Drain outlets into the Long Marsh Drain on the south side of Middle Sideroad approximately 380m west of Concession Road 4 North. The drain continues in a general easterly direction to the southwest corner of Middle Sideroad and Concession Road 5 North as outlined on the plan included in this report.

The last Engineer's Report on the Powers Drain is dated May 28th, 1982. Under this report the Powers Drain was cleaned along its entire length, erosion protection was added at the lower end of the drain and a culvert was removed.

Drain Classification

The Powers Drain is classified as a class "F" drain 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.

Class "F" drains are intermittent or ephemeral (dry for more than two consecutive months).

The Long Marsh Drain is classified as a class "C" drain.

Approvals

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

Site Meeting

A site meeting for this drain was held on March 13, 2024. The following were present:

- Josh Warner (R. Dobbin Engineering)
- Sam Paglia (Drainage Superintendent, Town of Amherstburg)
- Mark Fishleigh (County of Essex)
- Marc Beneteau (Landowner)
- Mary Beneteau (Landowner)
- Don Shaw (Landowner)
- Brad Laramie (Landowner)
- Tony Simon (Landowner)
- Jim Shaw (Landowner)
- Felicity Montgomery (Landowner)
- Jack Chamberlain (Landowner)
- John Tartaro (Landowner)
- Tim McLachlin (Landowner)

The following is a brief summary of the meeting:

- General discussion of the Drainage Act and Landowners rights under the Drainage Act.

- Landowners expressed concerns with significant erosion at the lower end of the drain. It was discussed that the channel can likely not be resloped due to the proximity to the road and the utility poles.
- It was discussed that the drain between 4th Concession Road North and 5th Concession Road North was cleaned in 2013.
- It was discussed that the drain requires maintenance between its outlet and the 4th Concession Road North. Previous reports outlined the north side as the working side but there are significant trees on the north side of the drain.
- Landowners requested that the amount of sediment be reviewed at the culvert crossing Middle Sideroad at the top end of the drain.
 - After surveying, it was determined that there is approximately 150mm of sediment at the culvert.
- No concerns were brought forward regarding the soil conditions.

Existing Conditions

Below is a summary of the condition of the existing culverts from its outlet to Concession Road 4 North:

Culvert Number	Location	Existing Culvert	Condition	Recommendation
1	Middle Sideroad	Concrete Box Culvert	Okay to Poor. Rebar exposed at culvert ends and on bottom end of deck.	Specify Size for Future Replacement with Replacement Timeline determined by County.
2	Parcel Number 3 (Chamberlain)	2130x1400mm dia. CSPA and Multiplate	Poor. Foamed Joints and holes in Multiplate section of the Pipe	Replace
3	Concession Road 4 North	1800mm dia. CSP	Okay. Slight Dent in West end of the Culvert	Leave and Specify for Future Replacement
4	Parcel Number 27 (Tri-B Acres Inc.)	900mm dia. CSP	Poor. Rotten and Collapsed in the Middle	Replace
5	Parcel Number 29 (806574 Ontario Inc.)	900mm dia. CSP	Poor. Rotten Bottom	Replace
6	Middle Sideroad	1600x1000mm CSPA	Rust below Spring Line, but Bottom Condition Unknown as Under Water.	Leave and Specify for Future Replacement. Investigate Condition after Cleanout

Draft Report Meeting #1 (September 23, 2025)

A draft report, dated August 25, 2025, was sent to all the affected Landowners and a meeting was held on September 23, 2025 to go over the report and address any questions and concerns related to the draft report. The following were present at the meeting:

- Josh Warner (R. Dobbin Engineering)
- Sam Paglia (Drainage Superintendent, Town of Amherstburg)
- Marc Beneteau (Landowner)
- Jack Chamberlain (Landowner)
- Bill Lywood (Landowner)
- Brad Laramie (Landowner)
- Marc Beneteau (Landowner)
- Mary Beneteau (Landowner)
- Don Shaw (Landowner)
- Tony Simon (Landowner)
- R. & F. Montgomery (Landowner)

The following is a brief summary of the meeting:

- General discussion of the Drainage Act.
- It was discussed that the culvert sizing will be revised slightly as part of the final report.
- The Landowner of the property with Index Number 35 stated that their main is underwater and the drain requires a cleanout. It was discussed whether this should proceed through maintenance or through this report. It was decided that the culverts upstream of Concession Road 4 North would be investigated to determine if they need to get replaced. Based on this, the whole drain would get completed as part of this report or the culverts would just be specified for future maintenance.
 - Upon investigation it was determined that both access culverts upstream of Concession Road 4 North are in poor condition. Therefore, the drain cleaning to the top end has been included in this report.
- No other major concerns were brought forward.

Draft Report Meeting #2 (January 28, 2026)

A second draft report, dated November 10, 2025, was sent to all the affected Landowners and a meeting was held on January 28, 2026 to go over the report and address any questions and concerns related to the draft report. The following were present at the meeting:

- Josh Warner (R. Dobbin Engineering)
- Sam Paglia (Drainage Superintendent, Town of Amherstburg)

- Nicole Humber (Public Works Clerk, Town of Amherstburg)
- Chris Breault (Landowner)
- Tim McLachlin (Landowner)
- Brad Laramie (Landowner)
- Marc Beneteau (Landowner)
- Don Shaw (Landowner)

The following is a brief summary of the meeting:

- Landowners expressed concerns with the watershed outlined in the draft report. Based on these comments, review of the LIDAR (survey) data, and tile mapping seen through the Town's GIS the drainage area was revised within the parcels with Index Numbers 24, 25, 27 and 35.
- A Landowner expressed concerns with having Culvert #5 replaced. It was discussed that with the culvert condition it cannot be left in the place.
- No other major concerns were brought forward.

Design

The proposed access and driveway culverts have been designed to provide outlet for a 1 in 5-year storm event.

The road culverts have been designed to provide outlet for a 1 in 50-year storm event.

Recommendations

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

1. The Powers Drain from Station 0+011 to 0+110 shall be improved with straightening and re-establishment of the channel cross section with excavation, concrete matting and rip rap.
2. The Powers Drain from Station 0+110 to 0+389 shall be improved with a bottom cleanout and resloping and rip rap as required.
3. The Powers Drain from Station 0+402 to 2+317 shall be improved with a bottom cleanout.
4. A 0.5m buffer strip shall be incorporated as part of the drainage works from Station 0+011 to 0+170.
5. A maintenance schedule shall be developed for the open channel portion of the Powers Drain.

6. Culverts #2, #4 and #5 shall be replaced. Future specifications shall be developed for Culverts #1, #3 and #6.

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 \$391,900.00, including preparation of the report, attending the Meeting to Consider the Report, attending the Court of Revision and estimates for tendering, construction inspection, permitting and contract administration. Appearances before appeal bodies have not been included in the cost estimate.

Assessment

As per Section 21 of the Drainage Act, the Engineer in his 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. Items outside those identified in this report shall be assessed to the utility or road authority as per Section 26 of the Drainage Act plus a portion of the engineering (20% of the construction cost).

The cost of any fees for permits or approvals or any extra work required by any affected utility or road authority shall be assessed to that organization requiring the permit, approval, or extra work.

Assessments are estimates only. The final assessments will be based on the final project costs, which will include the actual construction and engineering costs.

The proposed work has generally been assessed in the following manner, including all estimated fees, taxes and disbursements:

1. The cost of traffic control and the cleanout of the road culverts have been assessed to the road authority as a special benefit assessment as per Section 26 of the Drainage Act. The special benefit assessment to the roads shall be calculated as follows:

Middle Sideroad = (Tendered Amount for Traffic Control + 23/36 x Road Culvert Cleanouts and Trucking) x 1.25 (For Engineering and Taxes)

Concession Road 4 North = (13/36 x Road Culvert Cleanouts and Trucking) x 1.25 (For Engineering and Taxes)

2. The replacement of Culvert #2 has been assessed with 40% of the cost applied as benefit assessment to property, 15% of the cost applied as a benefit assessment to the adjacent road and the remainder of the cost applied as an outlet assessment on upstream lands and roads based on equivalent hectares. The replacement of Culvert #4 and #5 has been assessed with 55% of the cost applied as benefit assessment to property and the remainder of the cost applied as an outlet assessment on upstream lands and roads based on equivalent hectares. The engineering cost for Culvert #1, #3 and #6 has been assessed to the road authority, as per Section 26 of the Drainage Act, as a benefit assessment.
3. The open channel improvements between Station 0+011 and 0+110 has been assessed with 20% of the cost applied to Hydro One, as the owner of the utility poles, as a benefit assessment, 30% applied to Middle Sideroad as a benefit assessment, 10% applied to the abutting farm property as a benefit assessment and the remainder of the cost assessed as an outlet assessment to upstream lands and roads based on equivalent hectares. The cost of trucking excavated material on agricultural lands has been assessed as a special benefit assessment as it will not be eligible for grant.
4. The open channel improvements between Station 0+110 and 2+317 has been assessed with 40% of the cost applied as a benefit assessment to the abutting property(ies) and the remainder of the cost applied as an outlet assessment to upstream lands and roads based on equivalent hectares. The cost of trucking excavated material on agricultural lands has been assessed as a special benefit assessment as it will not be eligible for grant.

All final costs included in the cost estimate of this report, except as identified above, 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.

Allowances

Under Section 29 of the Drainage Act, the Engineer in his report shall estimate and allow in money to the Owner 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 (approximately \$20,000.00 per acre). Allowances for crop loss are based on \$2,000.00 per hectare for the first year and \$1,000.00 for the second year (\$3,000.00 per hectare total).

Access and Working Area

Construction

Access to the work site for construction under this report shall be from Middle Sideroad and Concession Road 4 North. Access shall be restricted to a width of 6m and shall generally be along the length of the drainage works. The working area between Station 0+011 and 0+170 shall be from both sides of the drain and shall be restricted to a width of 15m from the top of bank on the north side and by the centerline of road on the south side of the drain. The working area between Station 0+170 and 0+389 shall be along the south side of the drain and shall be restricted to a width of 6m from the south top of bank. Where permanent structures exist within this working corridor the working area shall be restricted and access shall extend 4m past the south side of the structure to allow for the equipment to go around them. If the structures do not allow for the proposed work to take place they shall be moved by the Contractor at the expense of the drainage works. The working area between Station 0+402 to 2+317 shall be from the west/south side and shall be restricted to a with of 15m from the top of bank. The working area at each culvert shall extend 10 metres from the bank on both sides and for 10 metres along the channel on either side of the culvert.

Future Maintenance

Access for culvert maintenance and channel repair on a single property shall be from the nearest road, within the properties in which the culvert and/or channel is being repaired or maintained and shall be at a location determined by the Drainage Superintendent. If maintenance is being done on multiple properties, access shall be gained from the nearest roadway and shall be along the length of the drainage works. The working area at each culvert shall extend 10 metres from the bank on both sides and for 10 metres along the channel on either side of the culvert.

The working side for future maintenance shall be the north side from Station 0+011 to 0+170, the south side from Station 0+170 to 1+660 and the west/south side from Station 1+660 to 2+317. The working area for maintenance on the open channel shall be restricted to 6m within finished lawns and 15m on agricultural properties from the top of bank. Where permanent structures exist within the working corridor the working area shall be restricted and access shall extend 4m past the south side of the structure to allow for the equipment to go around them. If the structures do not allow for the maintenance work to take place they shall be moved by the Contractor at the expense of the property on which they are located.

If, at the discretion of the Drainage Superintendent, there is erosion or work that needs to be completed from the side opposite the working area, access may be gained along the channel and nearest culvert to maintain the bank and channel.

Any damage caused to gain access to the site shall be restored to its pre-construction state at the expense of the Contractor.

Restrictions

No trees and shrubs shall be planted nor shall permanent structures be erected within 10 metres of the proposed drain without prior consultation with the Town Drainage Superintendent and approved by 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

The Powers Drain shall be maintained and repaired with the specifications and drawings contained in the applicable Engineer’s Report and in the same relative proportions as contained in the Schedule of Maintenance contained in this Engineer’s Report.

The access culverts shall be maintained and repaired with a culvert length required to have a 6.1m top width and a granular surface. With the culverts shown on the profile, including rip rap end walls for access and driveway culverts, they shall be assessed in the following manner:

Culvert Number	Road Authority	Benefitting Property	Upstream Properties Based on Equivalent Hectares as Contained in SoM
1, 3, 6	100%		
2	15%	40%	45%
4, 5		55%	45%

If any owner requests an additional length of culvert beyond that included in the report or an asphalt or concrete travel surface the extra cost shall be borne by the Landowner making the request including the future maintenance and repair. The location of the 6.1m top width shall be determined by the Drainage Superintendent and shall generally be in the primary access location.

The additional costs as a result of a road or utility shall be assessed to the owner of the road or utility as per Section 26 of the Drainage Act.

A secondary access on a property shall be constructed, maintained and repaired with 100% of the cost assessed to the benefitting property.

Properties that wish to have the excavated material trucked shall be assessed the cost of trucking (including any cost associated with testing and disposal of the material) less the cost of levelling. The cost of levelling will form part of the drain maintenance cost.

Yours truly,

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



Powers Drain
 Town of Amherstburg
 February 4, 2026

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	Parcel Number	Owner	Section 29 (\$)	Section 30 (\$)	Total (\$)
3	S 1/4 Lot 7	24	M. & M. Beneteau	1,300	760	2,060
	Pt. Lot 7	1	R. & F. Montgomery	700	330	1,030
	Pt. Lot 7	2	C. & L. Breault	200	90	290
	Pt. Lot 7	3	J. & L. Chamberlain	300	260	560
	S 1/2 Lot 7	28	D. Shaw	-	2,430	2,430
	NW 1/4 Lot 7	27	Tri - B Acres Inc	-	760	760
	NE 1/4 Lot 7	29	806574 Ontario Inc	-	1,960	1,960
TOTAL ALLOWANCES				\$2,500	\$6,590	\$9,090

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
Traffic Control	1	LS	5,000	5,000
Brushing and Tree Removal	1	LS	10,000	10,000
Silt Fence	1	LS	500	500
General Site Restoration/Seeding	1	LS	3,500	3,500
Reconnect Tile Outlets	20	each	150	3,000
Excavation and Placement of Rip Rap between Station 0+011 and 0+019	30	tonne	110	3,300
Cleanout Existing Road Culverts and Truck Material (Middle Side Road (23m) and Concession Road 4 North (13m))	36	m	120	4,320
<u>Open Channel Improvements Between Station 0+019 and 0+110</u>				
Reshape Channel to have straightened bottom and minimum side slopes of 1.5:1 to allow for placement of concrete matting	91	m	60	5,460
Supply and Install CC-35 Cable Concrete Mats	920	sq.m	130	119,600
Side Slope and 0.50m Buffer Strip Hydroseeding	200	sq.m	8	1,600
Levelling of Topsoil	91	m	4	364
Trucking of Excess Material	91	m	20	1,820
<u>Open Channel Improvements Between Station 0+110 and 0+389</u>				
Open Channel Excavation (Bottom Cleanout Only)	199	m	12	2,388
Open Channel Excavation (Bottom Cleanout and Resloping)	80	m	30	2,400
Levelling of Topsoil	60	m	4	240
Trucking of Excess Material	279	m	20	5,580
Side Slope and 0.50m Buffer Strip Hydroseeding	270	sq.m	8	2,160

<u>Item Description (Supply and Install New)</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Cost (\$)</u>	<u>Total (\$)</u>
Rip Rap as Required	100	tonne	110	11,000
<u>Open Channel Improvements Between Station 0+402 and 2+317</u>				
Open Channel Excavation (Bottom Cleanout Only)	1915	m	10	19,150
Levelling of Excavated Material	1915	m	5	9,575
Rip Rap as Required	50	tonne	110	5,500
Culvert #2 (Parcel Number 3, J. & L. Chamberlain)				
Sawcut and Remove Existing Concrete and Curb	1.0	LS	1,200	1,200
Removal of existing structure and Unsuitable Material	1.0	LS	2,000	2,000
Supply & install 1800mm dia. CSP c/w Bedding	15.0	m	1,200	18,000
Supply & install Granular "B"	100.0	tonne	40	4,000
Supply & install Granular "A"	25.0	tonne	50	1,250
Supply & install rip rap endwalls	40.0	tonne	110	4,400
Culvert #4 (Parcel Number 27, Tri-B Acres Inc.)				
Removal of existing structure and Unsuitable Material	1.0	LS	1,200	1,200
Supply & install 1200mm dia. Sanitite c/w Bedding	12.0	m	950	11,400
Supply & install Granular "B"	70.0	tonne	40	2,800
Supply & install Granular "A"	25.0	tonne	50	1,250
Supply & install rip rap endwalls	25.0	tonne	110	2,750
Culvert #5 (Parcel Number 29, 806574 Ontario Inc.)				
Removal of existing structure and Unsuitable Material	1.0	LS	1,200	1,200
Supply & install 1200mm dia. Sanitite c/w Bedding	12.0	m	950	11,400
Supply & install Granular "B"	70.0	tonne	40	2,800
Supply & install Granular "A"	25.0	tonne	50	1,250
Supply & install rip rap endwalls	25.0	tonne	110	2,750
Contingency				25,080
				Sub Total
				311,387
				Allowances
				9,090
				Engineering
				34,613
				Schedule of Maintenance
				2,400
				Future Culvert Design
				7,800
				Estimate for Tendering, Inspection
				and Contract Administration
				19,500
				ERCA Fee
				500
				Total Estimate excluding HST
				385,290
				Non-Recoverable HST (1.76%)
				6,610
				Total Estimate
				\$ 391,900

SCHEDULE OF ASSESSMENT

Conc.	Lot or Part	Affected Hecatares	Parcel Number	Owner	Special Benefit (\$)	Benefit (\$)	Outlet (\$)	Total (\$)
Utilities								
	Overhead Utility			Hydro One		34,614	-	34,614
					-	34,614	-	34,614
Public Lands								
	Middle Sideroad	4.52		County of Essex	9,872	64,801	14,090	88,763
	Concession 5 N	1.65		Town of Amherstbur		3,168	6,811	9,979
	Concession 4 N	0.80		Town of Amherstbur	2,047	2,600	1,685	6,332
					11,919	70,569	22,586	105,074
Agricultural Lands								
3	S 1/4 Lot 7	3.60	24	M. & M. Beneteau	1,456	16,826	1,054	19,336
	N 1/4 S 1/2 Lot 7	9.10	25	P. & M. Beneteau		-	1,606	1,606
4	W 1/2 Lot 6	5.48	36	A. & I. Pace		-	3,206	3,206
	E 1/2 Lot 6	24.00	35	Laramie Farms of McGregor		-	19,657	19,657
	S 1/2 Lot 7	40.01	28	D. Shaw		11,074	33,455	44,529
	NW 1/4 Lot 7	20.66 (16.20)	27	Tri - B Acres Inc		17,806	13,070	30,876
	NE 1/4 Lot 7	20.23	29	806574 Ontario Inc		24,161	20,046	44,207
5	Pt Lot 6	10.12	34	Laramie Farms of McGregor		-	11,604	11,604
	Pt Lot 6	3.01	32	D. Renaud		-	3,451	3,451
	Pt Lot 6	3.24	33	D. & E. Renaud		-	3,715	3,715
	W 3/4 Lot 7	13.92	30	A. & Y. Simon		-	15,961	15,961
	E 1/4 Lot 7	7.00	31	L. & M. Nicodemo		-	8,026	8,026
					1,456	69,867	134,851	206,174

() Denotes Surface Water Only Area

Conc.	Lot or Part	Affected Hecatares	Parcel Number	Owner	Special Benefit (\$)	Benefit (\$)	Outlet (\$)	Total (\$)	
Non Agricultural Lands									
3	Pt. Lot 7	0.38	1	R. & F. Montgomery		4,459	353	4,812	
	Pt. Lot 7	0.38	2	C. & L. Breault		2,976	387	3,363	
	Pt. Lot 7	0.50	3	J. & L. Chamberlain		15,978	438	16,416	
	Pt. Lot 7	1.20	4	J. & T. Tartaro		4,973	1,221	6,194	
	Pt. Lot 7	0.19	5	E. & D. Renaud		-	200	200	
	Pt. Lot 7	0.30	6	V. & N. Burkoski		-	316	316	
	Pt. Lot 7	0.22	7	J. Duggan & J. Jones		-	232	232	
	Pt. Lot 7	0.29	26	T. & D. Mclachlin		-	305	305	
4	Pt. Lot 7	0.14	37	D. Pataky & C. Hunt		-	147	147	
	Pt. Lot 7	0.78	8	A. & J. Deslippe		772	843	1,615	
	Pt. Lot 7	0.33	9	K. Lyons & W. Lywood		-	651	651	
	Pt. Lot 7	0.52	10	D. & T. Bertrand		-	1,026	1,026	
	Pt. Lot 7	0.14	11	D. Shearon		-	276	276	
5	Pt. Lot 6	0.59	18	L. & N. Phillips		-	1,218	1,218	
	Pt. Lot 6	0.59	19	R. Tate		-	1,218	1,218	
	Pt. Lot 6	0.59	20	K. & G. Simard		-	1,218	1,218	
	Pt. Lot 6	0.59	21	J. & M. Huver		-	1,218	1,218	
	Pt. Lot 6	0.68	22	C. & R. Guenther		-	1,403	1,403	
	Pt. Lot 6	0.68	23	T. & J. Rivers		-	1,403	1,403	
	Pt. Lot 7	0.25	12	E. MacDonald		-	516	516	
	Pt. Lot 7	0.26	13	G. & M. Goulet		-	537	537	
	Pt. Lot 7	0.19	14	D. Talbot		-	392	392	
	Pt. Lot 7	0.28	15	R. & M. Beaudoin		-	578	578	
	Pt. Lot 7	0.19	16	C. & K. Lucier		-	392	392	
	Pt. Lot 7	0.19	17	A. & C. Kavanagh		-	392	392	
	Total Area	177.79				-	29,158	16,880	46,038
				Total Non Agricultural Lands	46,038				
				Total Agricultural Lands	206,174				
				Total Public Lands	105,074				
				Total Utilites	34,614				
				Total Assessment	\$391,900				

SCHEDULE OF MAINTENANCE
 To Maintain the Open Channel Portion of the Powers Drain

Conc.	Lot or Part	Affected Hectares	Parcel Number	Owner	Benefit (\$)	Outlet (\$)	Total (\$)	Equivalent Hectares
Public Lands								
	Middle Sideroad	42		County of Essex	147	406	553	4.07
	Concession 5 N	15		Town of Amherstburg	431	269	700	1.49
	Concession 4 N	00		Town of Amherstburg	-	13	13	0.72
					578	688	1,266	
Agricultural Lands								
3	S 1/4 Lot 7	3.60	24	M. & M. Beneteau	317	6	323	0.90
	N 1/4 S 1/2 Lot 7	9.10	25	P. & M. Beneteau	-	17	17	2.28
4	W 1/2 Lot 6	5.48	36	A. & I. Pace	-	25	25	1.37
	E 1/2 Lot 6	24.00	35	Laramie Farms of McGregor	-	517	517	6.00
	S 1/2 Lot 7	40.01	28	D. Shaw	1,314	881	2,195	10.00
	NW 1/4 Lot 7	20.66 (16.20)	27	Tri - B Acres Inc	515	397	912	4.61
	NE 1/4 Lot 7	20.23	29	806574 Ontario Inc	1,188	776	1,964	5.06
5	Pt Lot 6	10.12	34	Laramie Farms of McGregor	-	457	457	2.53
	Pt Lot 6	3.01	32	D. Renaud	-	136	136	0.75
	Pt Lot 6	3.24	33	D. & E. Renaud	-	146	146	0.81
	W 3/4 Lot 7	13.92	30	A. & Y. Simon	-	629	629	3.48
	E 1/4 Lot 7	7.00	31	L. & M. Nicodemo	-	316	316	1.75
					3,34	4,303	7,637	
() Denotes Surface Water Only Area								

Conc.	Lot or Part	Affected Hectares	Parcel Number	Owner	Benefit (\$)	Outlet (\$)	Total (\$)	Equivalent Hectares
Non Agricultural Lands								
3	Pt. Lot 7	0.38	1	R. & F. Montgomery	141	3	144	0.17
	Pt. Lot 7	0.38	2	C. & L. Breault	59	3	62	0.17
	Pt. Lot 7	0.50	3	J. & L. Chamberlain	75	2	77	0.23
	Pt. Lot 7	1.20	4	J. & T. Tartaro	200	10	210	0.54
	Pt. Lot 7	0.19	5	E. & D. Renaud	-	2	2	0.09
	Pt. Lot 7	0.30	6	V. & N. Burkoski	-	3	3	0.14
	Pt. Lot 7	0.22	7	J. Duggan & J. Jones	-	2	2	0.10
	Pt. Lot 7	0.29	26	T. & D. Melachlin	-	2	2	0.13
4	Pt. Lot 7	0.14	37	D. Pataky & C. Hunt	-	1	1	0.06
	Pt. Lot 7	0.78	8	A. & J. Deslippe	105	9	114	0.35
	Pt. Lot 7	0.33	9	K. Lyons & W. Lywood	-	23	23	0.15
	Pt. Lot 7	0.52	10	D. & T. Bertrand	-	36	36	0.23
	Pt. Lot 7	0.14	11	D. Shearon	-	10	10	0.06
	5	Pt. Lot 6	0.59	18	L. & N. Phillips	-	48	48
Pt. Lot 6		0.59	19	R. Tate	-	48	48	0.27
Pt. Lot 6		0.59	20	K. & G. Simard	-	48	48	0.27
Pt. Lot 6		0.59	21	J. & M. Huver	-	48	48	0.27
Pt. Lot 6		0.68	22	C. & R. Guenther	-	55	55	0.31
Pt. Lot 6		0.68	23	T. & J. Rivers	-	55	55	0.31
Pt. Lot 7		0.25	12	E. MacDonald	-	20	20	0.11
Pt. Lot 7		0.26	13	G. & M. Goulet	-	21	21	0.12
Pt. Lot 7		0.19	14	D. Talbot	-	15	15	0.09
Pt. Lot 7		0.28	15	R. & M. Beaudoin	-	23	23	0.13
Pt. Lot 7		0.19	16	C. & K. Lucier	-	15	15	0.09
Pt. Lot 7		0.19	17	A. & C. Kavanagh	-	15	15	0.09
Total Area		177.79			580	517	1,097	
Total Non Agricultural Lands					1,097			
Total Agricultural Lands					7,637			
Total Public Lands					1,266			
Total Assessment					\$10,000			

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

Conc.	Lot or Part	Affected Hectares	Parcel Number	Owner	Total Assessment (\$)	Estimated Grant (\$)	Allowances (\$)	Estimated Net Assessment (\$)
Utilities								
	Overhead Utility			Hydro One	34,614			34,614
Public Lands								
	Middle Sideroad	4.52		County of Essex	88,763			88,763
	Concession 5 N	1.65		Town of Amherstburg	9,979			9,979
	Concession 4 N	0.80		Town of Amherstburg	6,332			6,332
Agricultural Lands								
3	S 1/4 Lot 7	3.60	24	M. & M. Beneteau	19,336	5,960	2,060	11,316
	N 1/4 S 1/2 Lot 7	9.10	25	P. & M. Beneteau	1,606	535		1,071
4	W 1/2 Lot 6	5.48	36	A. & I. Pace	3,206	1,069		2,137
	E 1/2 Lot 6	24.00	35	Laramie Farms of McGregor	19,657	6,552		13,105
	S 1/2 Lot 7	40.01	28	D. Shaw	44,529	14,843	2,430	27,256
	NW 1/4 Lot 7	20.66 (16.20)	27	Tri - B Acres Inc	30,876	10,292	760	19,824
	NE 1/4 Lot 7	20.23	29	806574 Ontario Inc	44,207	14,736	1,960	27,511
5	Pt Lot 6	10.12	34	Laramie Farms of McGregor	11,604	3,868		7,736
	Pt Lot 6	3.01	32	D. Renaud	3,451	1,150		2,301
	Pt Lot 6	3.24	33	D. & E. Renaud	3,715	1,238		2,477
	W 3/4 Lot 7	13.92	30	A. & Y. Simon	15,961	5,320		10,641
	E 1/4 Lot 7	7.00	31	L. & M. Nicodemo	8,026	2,675		5,351

Conc.	Lot or Part	Affected Hectares	Parcel Number	Owner	Total Assessment (\$)	Estimated Grant (\$)	Allowances (\$)	Estimated Net Assessment (\$)
Non Agricultural Lands								
3	Pt. Lot 7	0.38	1	R. & F. Montgomery	4,812		1,030	3,782
	Pt. Lot 7	0.38	2	C. & L. Breault	3,363		290	3,073
	Pt. Lot 7	0.50	3	J. & L. Chamberlain	16,416		560	15,856
	Pt. Lot 7	1.20	4	J. & T. Tartaro	6,194			6,194
	Pt. Lot 7	0.19	5	E. & D. Renaud	200			200
	Pt. Lot 7	0.30	6	V. & N. Burkoski	316			316
	Pt. Lot 7	0.22	7	J. Duggan & J. Jones	232			232
	Pt. Lot 7	0.29	26	T. & D. Mclachlin	305			305
4	Pt. Lot 7	0.14	37	D. Pataky & C. Hunt	147			147
	Pt. Lot 7	0.78	8	A. & J. Deslippe	1,615			1,615
	Pt. Lot 7	0.33	9	K. Lyons & W. Lywood	651			651
	Pt. Lot 7	0.52	10	D. & T. Bertrand	1,026			1,026
	Pt. Lot 7	0.14	11	D. Shearon	276			276
5	Pt. Lot 6	0.59	18	L. & N. Phillips	1,218			1,218
	Pt. Lot 6	0.59	19	R. Tate	1,218			1,218
	Pt. Lot 6	0.59	20	K. & G. Simard	1,218			1,218
	Pt. Lot 6	0.59	21	J. & M. Huver	1,218			1,218
	Pt. Lot 6	0.68	22	C. & R. Guenther	1,403			1,403
	Pt. Lot 6	0.68	23	T. & J. Rivers	1,403			1,403
	Pt. Lot 7	0.25	12	E. MacDonald	516			516
	Pt. Lot 7	0.26	13	G. & M. Goulet	537			537
	Pt. Lot 7	0.19	14	D. Talbot	392			392
	Pt. Lot 7	0.28	15	R. & M. Beaudoin	578			578
	Pt. Lot 7	0.19	16	C. & K. Lucier	392			392
	Pt. Lot 7	0.19	17	A. & C. Kavanagh	392			392
					391,900	68,238	9,090	314,572

Powers Drain
Town of Amherstburg
February 4, 2026

SPECIFICATION OF WORK

1. Location

The location of the proposed and future work outlined in this specification is in Lot 7, Concession 3 and 4 in the Town of Amherstburg.

2. Scope of Work

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

- Open Channel Improvements including rip rap and cable concrete matting
- Culvert Replacements

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 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.

Any equivalents shall be approved in writing by the Engineer or Drainage Superintendent prior to ordering.

The Contractor is responsible for ensuring flows are maintained during construction so lands are not negatively impacted by the works.

4. 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.

The Contractor shall be responsible for traffic control as per the Ontario Traffic Manual Book 7 – Temporary Conditions (latest revision) when working on public road allowances. A copy of a traffic control plan shall be submitted to the Engineer, Drainage Superintendent and kept on site at all times. The Contractor shall maintain suitable barricades, warning lights, and temporary traffic notices, at his expense, in their proper position to protect the public both day and night. Flagmen are the responsibility of the Contractor when working on the road allowance and when entering or exiting a worksite onto a roadway.

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 noncompliance 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.

They shall also ensure that only competent workmen are employed onsite and that appropriate training and certification is supplied to all employees.

5. MNRF Drain Registration

The Contractor is advised that the Town of Amherstburg has conducted an "Endangered Species Act Review" and has registered it's drainage activities with the Ministry of Natural Resources and Forestry.

The Town of Amherstburg, in pursuant to the Endangered Species Act Municipal Agreement, has identified the potential presence of certain species within the project area. It is the responsibility of the Contractor to make certain that necessary provisions are undertaken to ensure the protection of all species at risk and their habitats throughout the course of construction. It is also the responsibility of the Contractor to make itself familiar with the following documents:

1. Town of Amherstburg – Complete Mitigation Documents

2. Town of Amherstburg - Additional Mitigation Measures for Snakes Species
3. Town of Amherstburg - Additional Mitigation Measures for Turtle Species
4. Snakes of Ontario Identifier Guide
5. Turtles of Ontario Identifier Guide

These documents will be provided to the successful bidder.

The Contractor will be responsible for providing the necessary equipment and materials required by the mitigation plans and shall contact the Town of Amherstburg Drainage Superintendent immediately if any endangered species are encountered during construction.

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 due to a utility such as construction delays, time to work around the utility and organize replacement of the utilities not included in the estimate shall be tracked separately and the cost plus a portion of the engineering and taxes (25% of the construction 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, County of Essex and the Town of Amherstburg 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 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 and accesses with the owners at least two full working days in advance. The Traffic Plan must be approved by the Town and/or County of Essex prior to the commencement of any road closures.

- 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 Drainage 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

Construction

Access to the work site for construction under this report shall be from Middle Sideroad and Concession Road 4 North. Access shall be restricted to a width of 6m and shall generally be along the length of the drainage works. The working area between Station 0+011 and 0+170 shall be from both sides of the drain and shall be restricted to a width of 15m from the top of bank on the north side and by the centerline of road on the south side of the drain. The working area between Station 0+170 and 0+389 shall be along the south side of the drain and shall be restricted to a width of 6m from the south top of bank. Where permanent structures exist within this working corridor the working area shall be restricted and access shall extend 4m past the south side of the structure to allow for the equipment to go around them. If the structures do not allow for the proposed work to take place they shall be moved by the Contractor at the expense of the drainage works. The working area between Station 0+402 to 2+317 shall be from the west/south side and shall be restricted to a width of 15m from the top of bank. The working area at each culvert shall extend 10 metres from the bank on both sides and for 10 metres along the channel on either side of the culvert.

Future Maintenance

Access for culvert maintenance and channel repair on a single property shall be from the nearest road, within the properties in which the culvert and/or channel is being repaired or maintained and shall be at a location determined by the Drainage Superintendent. If maintenance is being done on multiple properties, access shall be gained from the nearest roadway and shall be along the length of the drainage works. The working area at each culvert shall extend 10 metres from the bank on both sides and for 10 metres along the channel on either side of the culvert.

The working side for future maintenance shall be the north side from Station 0+011 to 0+170, the south side from Station 0+170 to 1+660 and the west/south side from Station 1+660 to 2+317. The working area for maintenance on the open channel shall be restricted to 6m within finished lawns and 15m on agricultural properties from the top of bank. Where permanent structures exist within the working corridor the working area shall be restricted and access shall extend 4m past the south side of the structure to allow for the equipment to go around them. If the structures do not allow for the maintenance work to take place they shall be moved by the Contractor at the expense of the property on which they are located.

If, at the discretion of the Drainage Superintendent, there is erosion or work that needs to be completed from the side opposite the working area, access may be gained along the channel and nearest culvert to maintain the bank and channel.

Any damage caused to gain access to the site shall be restored to its pre-construction state at the expense of the Contractor.

11. Removals

The existing culverts, where specified, shall be removed in their entirety. The culvert and concrete shall be disposed offsite at the expense of the Contractor. The Contractor shall sawcut the concrete and curb prior to its removal. Suitable backfill shall be stockpiled adjacent to the site for reuse during installation of the proposed culvert. Any broken concrete or rip rap (concrete bags) from the existing structures shall be disposed offsite at the expense of the Contractor.

The Contractor shall work around the existing fences and signs if they are able to. If the existing fences and signs are required to be removed, they shall be removed and re-installed in the same location with the existing materials. All work in connection with fences and signs shall be carried out in a careful manner so they are replaced in as good a condition as the existing materials permit.

12. Brushing and Tree Removal

For construction and future maintenance of the drain, all brush, stumps, trees, vegetation, etc. within the working area, the drain bottom, overhanging the drain, along the bank where the work is taking place and on the opposite side where impeding the flow of the drain, as determined by the Drainage Superintendent or Engineer, shall be removed.

A mechanical grinder attached to an excavator shall be used for the removal of brush and trees. Any brush and trees too large to grind shall be close cut. The Contractor shall stockpile the trees and brush in a single pile on the property in which they were removed or dispose of the trees and brush offsite. The Contractor is responsible for the burning of the trees and brush. The Contractor is responsible for obtaining all necessary permits for any disposal sites. Burning of the trees and brush is subject to local bylaws and guidelines of the Ministry of the Environment Conservation and Parks.

Certain trees may be left in place at the direction of the Drainage Superintendent or Engineer. Trees may be limbed and piled for firewood, instead of burned, at the request of a Landowner.

13. Excavation of Open Channel (including Re-Shaping between Station 0+019 and 0+110)

For construction and future maintenance, the open channel shall be excavated and maintained to the depths and grades as per the profile and drawings as contained in this Engineers Report. The channel shall be excavated to the proper depth using a laser or similar approved device with a labourer onsite to ensure correctness of grade and to confirm location of tile ends. The sediment shall be removed leaving a rounded bottom with the intent not to undercut the existing side slopes.

For construction under this report, excavated topsoil may be spread on the adjacent farmland between Station 0+011 and 0+170 at the discretion of the Engineer. Excavated material, at the direction of the Engineer, may be utilized to fill in the eroded areas of the channel to straighten the channels alignment. These sections shall have rip rap or concrete matting placed over them. All other excavated material downstream of Concession Road 4 North shall be trucked offsite. Upstream of Concession Road 4 North, the excavated material shall be levelled within the working corridor. Excavated material to be levelled shall be cast at least 1.5 metres clear of the bank. Excavated material shall not be placed in low runs or swales out letting surface water to the channel. The excavated material shall be levelled to a maximum depth of 150mm and left in a condition suitable for cultivation. This shall include the removal of any rocks larger than 10cm in diameter and any debris/wood that could damage or plug farm equipment. Leveling shall occur when the material is dry enough to do so as determined by the Drainage Superintendent or Engineer. All high spots above grade shall be removed. All material unfit for placing on farmlands shall be disposed of offsite by the Contractor

For maintenance, the excavated material shall generally be cast on the side it is being excavated from, except across finished lawns (Station 0+170 to 0+389). In these areas the excavated material shall be trucked.

It is R. Dobbin Engineering's opinion that the drainage improvements for this project are exempt from Section 8 of O.Reg 406/19 as per Schedule 2, Item 3.4 of the Regulation.

The bottom width identified in the profile drawings represents the original design bottom width. The intent is to match this at a minimum where possible. If matching this width would cause undermining of the banks or road the drain bottom width shall be reduced at the discretion of the Engineer or Drainage Superintendent.

Where, as determined by the Drainage Superintendent or Engineer, the banks are unstable the banks shall be re-sloped to 2:1.

From Station 0+019 to 0+110 the channel shall be excavated and material shall be placed in order to provide a straightened channel with 1.5:1 side slopes and a 0.90m bottom within the approximate limits of the existing top of banks. The channel shall be excavated in order to provide for the placement of the concrete matting in accordance with the manufacturer's recommendations.

14. Reinforced Concrete Matting

Between Station 0+011 and 0+110 reinforced concrete matting shall be installed from the south top of bank to a point on the north side slope. The matting shall be 2 mats wide across the channel (approximately 9.76m) less two block embedment on both sides and this will dictate the limit of the matting on the north side slope. If the matting on the north side slope does not exceed the elevation of the south side slope additional matting shall be installed at the direction of the Engineer. The matting does not require to be anchored into the ground. The reinforced concrete matting shall be installed as per the drawings, manufacturer's recommendation and at a 1.50:1 side slope.

The reinforced concrete matting shall be CC-35 by International Erosion Control systems c/w steel cable clamps, geotextile, and a 2-block key in as per the manufacturer's recommendations, or an approved equal. Approval of any alternatives must be approved by the Engineer or Drainage Superintendent prior to ordering, manufacturing or installing the approved product. The reinforced concrete matting must be installed in accordance with the manufacturer's recommendations including base materials. General concrete reinforced matting drawings have been included at the end of this report.

15. Installation of Culverts

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. Culverts under roadways shall have a minimum wall thickness of 3.5mm. 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 high-density polyethylene (HDPE) smooth wall pipe (320 kPa) shall be CSA Approved with bell and spigot joints.

Sanitite Pipe shall be SaniTite HP with 320kPa and bell and spigot joints or approved equivalent. The exposed ends of the SaniTite culverts shall be wrapped in filter cloth to prevent UV damage.

The culverts designated to be replaced in the future under this report shall be examined after any cleanout of the open channel as to its condition. If it is found to be in disrepair (i.e. there are holes corroded in the bottom or sides) it shall be replaced as per these specifications.

The culverts shall be installed generally in the same location or as approved by the Drainage Superintendent or Engineer. The culverts shall be installed with the invert 10% (minimum 150mm) below the original channel bottom elevation unless otherwise shown in order to achieve the minimum cover. It is the Contractors responsibility to ensure that the minimum cover is achieved when backfilling the culverts. The minimum cover for CSP under Highway Loading shall be 1/6 of the span, and shall be no less than 300mm.

Any tile outlets extended as a result of a culvert installation 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.

Access Culverts:

The bottom of the excavation shall be excavated to a minimum of 100mm below the proposed invert. When the pipe has been installed to the proper grade and depth, the excavation shall be backfilled with ¾" clear stone and wrapped in filter fabric from the bottom of the excavation to the spring line of the pipe, this is considered the bedding. 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 access culverts 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. 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 150mm shall be topsoil and seeded as per the restoration specification. If asphalt is proposed, the asphalt shall be HL3 and shall match the existing thickness. In these cases, the compacted granular "A" shall occupy 150mm below the proposed asphalt.

Road Culverts:

The bottom of the excavation shall be excavated to a minimum of 100mm below the proposed invert. When the pipe has been installed to the proper grade and depth, the excavation shall be backfilled with ¾" clear stone and wrapped in filter fabric from the bottom of the excavation to the spring line of the pipe, this is considered the bedding. For concrete box culverts the clear stone shall extend from the bottom of the culvert to 200mm below. 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 pipe shall be backfilled above the clear stone with imported Granular "A".

Asphalt Road: The asphalt shall be HL4 and HL3 at depths to match the existing thickness, with a minimum of 50mm of HL4 and 50mm of HL3. Lifts shall not be greater than 75mm.

Gravel Road: The top 200mm shall be OPS Granular "M", produced from 100% crushed dolomite, and shall be mechanically compacted to 100% modified standard proctor density.

All culverts included in the profile have been specified with rip rap end walls. Should the end wall specified change the culvert length shall be altered to accommodate the change.

If rip rap end walls are used, they 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.

If concrete block end walls are used, 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 top of the culvert shall govern block elevation. The correct block shall be set with the top of the block equal to the top of the culvert. 2400mm wide concrete blocks shall be used as the top block on arch and larger round pipes in order to span between the culvert top and the supporting block. 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 bottom row shall consist of one block placed parallel to the culvert. The blocks shall be imbedded a minimum of 300mm into each bank and shall extend into the drain bottom to match the pipe invert or below. Erosion protection shall be placed on the banks next to the end walls. The erosion protection shall consist of 150mm x 300mm quarry stone over filter

fabric (Mirafi P150 or approved equal). It shall extend 500mm upstream or downstream and from top of bank to top of bank at each end wall.

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.

It is the Contractors responsibility to ensure that adequate cover is obtained prior to crossing the culvert in accordance with the manufacturer's recommendations.

16. Maintenance

The Contractor shall be responsible for maintenance of the drain, including access culverts for a period of one year after their installation. This will include repairing any settlement areas on the travel surface with Asphalt, Granular "M", Granular "A" and/or topsoil and seed.

17. Subsurface Drainage

All existing subsurface drains encountered during construction of the open channel shall be reconnected or extended to the open channel unless otherwise noted on the drawings or as directed by the Drainage Superintendent or Engineer.

A suitable length of equivalent sized PE agricultural tubing shall be used to connect the drain to the open channel. Manufactured fittings shall connect the PE tile to the existing drain. The connections shall be carefully backfilled to ensure there is adequate support under the pipe and large clumps of clay do not displace the tile.

Tile outlets larger than 150mm in diameter, or as determined by the Drainage Superintendent or Engineer at the time of construction, require erosion protection and rodent grates. The erosion protection made up of rip rap and filter fabric shall be installed on the embankment slope from 0.3m above the tile obvert to the channel bottom. The erosion protection shall be 1.0m wide. Rip rap shall be made up of 150mm to 300mm quarry stone or approved equal. The area to receive the rip rap shall first be graded to allow the placement of the rip below finished grade. After grading, a layer of filter fabric (Mirafi P270 or approved equal) is to be placed with any joints overlapped a minimum of 600mm. Rip rap shall then be placed with the smaller pieces placed in the gaps and voids to give it a uniform appearance.

18. Rip Rap

Erosion protection shall be installed at the direction of the Drainage Superintendent or Engineer. The Contractor shall ensure that the rip rap is separated from any soil prior to final placement. Rip rap shall be made up of 150mm to 300mm quarry stone or approved equal. Rip rap larger than 300mm will be rejected. The area to receive the rip rap shall first be graded to allow the placement of the rip rap to a depth of 400mm below finished grade. After grading, a layer of filter fabric (Mirafi P150 or approved equal) is to be placed with any joints overlapped a minimum of 600mm. Rip rap shall then be placed with the smaller pieces placed in the gaps and voids to give it a uniform appearance. The rip rap along the toe shall be placed in order to ensure proper support for the side slope and continue to allow proper drainage through the channel. The rip rap shall be keyed into the bottom of the channel a minimum of 400mm.

19. Seeding/Restoration

All areas disturbed by construction shall be restored to their pre-construction state. Accesses, working areas, lawns, boulevards and all others previously grassed shall be restored with 50mm of screened topsoil and hydroseed. A 0.50m buffer strip from Station 0+011 to 0+170 shall be established from the north top of bank with hydroseed. The disturbed side slopes upstream of Station 0+110 and above the concrete matting between Stations 0+011 and 0+110 shall be restored with Bonded Fibre Matrix Hydroseed. Farmers fields shall be left in a state that is suitable to cultivation. Grass seed shall be placed between the concrete blocks where the concrete matting is placed.

20. 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 placed 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.

Light duty silt fencing shall be installed down-gradient of the work for the duration of construction.

The light duty silt fencing shall be supplied and installed in accordance with OPSS 805 and OPSD 219.110. The light duty silt fencing shall be removed once the disturbed area has been re-vegetated.

Best Management Practices – Culvert Replacements in Municipal Drains

This document describes the conditions on which one may proceed with a culvert replacement in a municipal drain without DFO approval/notification. All municipal, provincial, or federal legislation that applies to the work being proposed must be respected. If the conditions/requirements below cannot be met, please complete the drain notification form and submit it to the Fisheries Protection Program for review at: FisheriesProtection@dfo-mpo.gc.ca.

Potential Impacts to Fish Habitat

- Infilling fish habitat by encroachment of the water crossing footprint or channel realignment to accommodate culvert
- Harmful substrate alteration of fish habitat (e.g. blockage of groundwater upwellings, critical SAR habitat, spawning areas)
- Removal of riparian vegetation and cover along the banks of the municipal drain
- Removal of edge habitat (e.g. undercut bank, shallower areas with lower velocity, aquatic vegetation) creation of barriers to fish movement (e.g. perched crossings, velocity barriers, alteration of the natural stream gradient)
- Alteration of channel flow velocity and/or depth (e.g. oversized culvert resulting in insufficient depth for fish passage at low flow or undersized culvert resulting in a flow velocity barrier at high flow)
- Alteration of channel morphology and sediment transport processes caused by the physical structure of the crossing resulting in upstream and downstream sediment aggradation/erosion
- Re-entry of sediment that was removed/stockpiled into the watercourse
- Erosion downstream from sudden release of water due to the failure of site isolation
- Stranding of fish in isolated ponds following de-watering of the site
- Impingement or entrainment of fish when de-watering pumps are used
- Short term or chronic transport of deleterious substances, including sediment, into fish habitat from construction or road drainage

Requirements

The following requirements must be met:

- There are no aquatic Species at Risk present in the work zone or impact zone. To confirm there are no aquatic Species at Risk present, refer to the document, [A Guide for Interpreting Fish and Mussel Species at Risk Maps in Ontario](#) which can be found at: <http://www.dfo-mpo.gc.ca/Library/356763.pdf>. Links for Ontario Conservation Area specific fish and mussel maps that include critical habitat extents and a list of aquatic Species at Risk found within the conservation authority boundary can be found on Page 5 of [A Guide for Interpreting Fish and Mussel Species at Risk Maps in Ontario](#).
- The culvert is embedded into the streambed and must allow for the free passage of fish.
- The work involves like-for-like replacements of existing road or private access culverts on all drain types without SAR.
- On C and F Drains only, this can also include replacements with extensions and end walls for the purposes of providing the property or road with safe access, but the project permanent footprint will not increase more than 250 m² below the high water mark.
- The project does not involve replacing a bridge or arch with one or more culverts installed in parallel or a larger-diameter culvert with more than one culvert installed in parallel.

- The project does not involve building more than one culvert installed in parallel on a single watercourse crossing site (e.g. twin culvert).
- The project does not involve temporarily narrowing the watercourse to an extent or for a duration that is likely to cause erosion, structural instability or fish passage problems.
- The municipal drain has no flow/low flow or is frozen to the bottom at the time of the replacement.
- In-water work is scheduled to respect timing windows (Tables 1 and 2) to protect fish, including their eggs, juveniles, spawning adults, and/or the organisms upon which they feed.
- The work can be conducted using the Culvert Removal Method described below and Standard Measures to Avoid Causing *Serious Harm to Fish* will be implemented when required.

Note: If your project must be conducted without delay in response to an emergency (e.g. the project is required to address an emergency that poses a risk to public health or safety or to the environment or property), you may apply for an Emergency Authorization (<http://www.dfo-mpo.gc.ca/asp/forceDownload.asp?FilePath=/pnw-ppe/reviews-revues/Emergency-Authorizations-Autorisations-Urgences-eng.pdf>).

Culvert Removal Methodology

- Plan/manage the work site in a manner that prevents sediment from entering the municipal drain by installing sediment and erosion control materials where required. Ensure that a sediment and erosion control plan is developed and modified as necessary for the site.
- Where required, install effective erosion and sediment control measures before starting work to prevent sediment from entering the municipal drain.
- Implement site isolation measures when in-water work is required.
 - Install an impervious barrier upstream of the work area (Figure 1). If possible, install a secondary barrier upstream of the work area for added protection.
 - Attempt to drive out the fish from the work area and then install the impervious barrier downstream of the work area. This may reduce or eliminate the need for a fish salvage.
 - When the drain is flowing, maintain downstream flows (e.g. bypass water around the work site using pumps or flume pipes; Figure 2). Provide temporary energy dissipation measures (e.g. rip-rap) at discharge point of the hose or temporary outlet pipe when required. Routinely inspect bypass pump and hose or pipe to ensure proper operation. Inspect discharge point for erosion and reposition hose/pipe or install additional temporary energy dissipation material as needed.
 - Dewater the isolated work area. The hose for a pump may discharge along the top of the bank into existing vegetation; however, the area should be monitored for signs of erosion. Reposition the hose or install additional temporary energy dissipation material as needed.
 - A fish screen with openings no larger than 2.54 mm (0.10 inches) should be equipped on any pump used during the operation. Note: Additional information regarding fish screens can be found in the DFO Freshwater Intake End-of-Pipe Fish Screen Guideline document (<http://www.dfo-mpo.gc.ca/Library/223669.pdf>).
 - Collect any fish present in the isolated work area and relocate them downstream.
 - Fish salvage operations must be conducted under a license issued by the Ontario Ministry of Natural Resources and Forestry (MNRF). The MNRF should be contacted well in advance of any work to obtain the required fish collection license.
- Install the culvert so that it is embedded into the streambed; ensure the culvert remains passable (e.g. does not become perched) by fish and wildlife.

- Decommission the site isolation in a manner that minimizes the introduction of sediment. The downstream isolation barrier shall gradually be removed first, to equalize water levels inside and outside of the isolated area and to allow suspended sediments to settle.
- Stabilize and remove waste from the site.
- Where required, maintain effective erosion and sediment control measures until complete re-vegetation of disturbed areas is achieved.



Figure 2. Isolation of Site

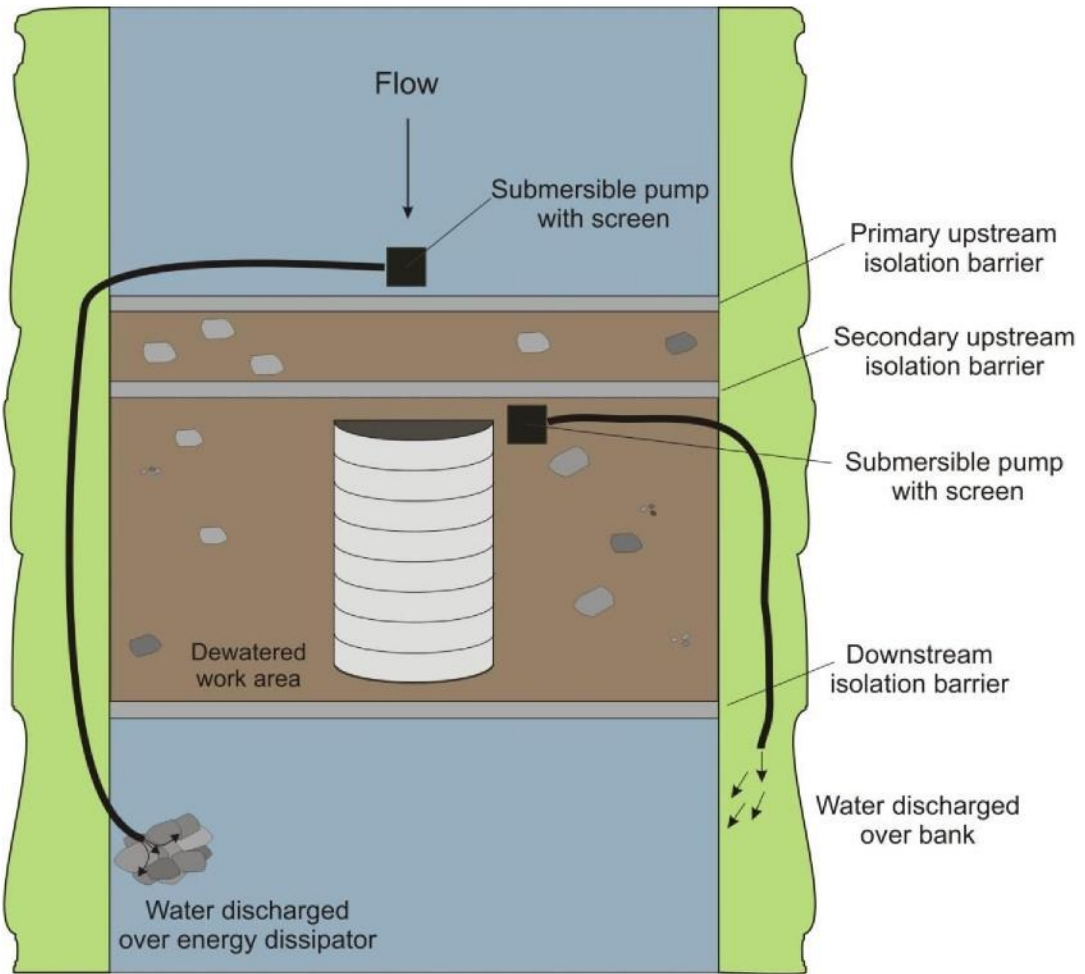


Figure 3. Isolation and Bypass Diversion when Working In-Water

Timing Windows

Figure 1 and Tables 1 and 2 can be used to determine the Restricted Activity period for the drain based on its classification. Note: Timing windows identified on [Conservation Authority](#) permits or [Ministry of Natural Resources](#) (Government of Ontario) work permits may differ and take precedence.



Figure 1. Ontario's Northern and Southern Region boundaries for determining application of restricted activity timing windows.

Table 1. Restricted Activity timing windows for the protection of spawning fish and developing eggs and fry in the Northern Region. Dates represent when work should be avoided.

DRAIN TYPE	RESTRICTED ACTIVITY PERIOD
A	SEPTEMBER 1 TO JULY 15
B	SEPTEMBER 1 TO JULY 15
C	APRIL 1 TO JULY 15
D	SEPTEMBER 1 TO JULY 15
E	APRIL 1 TO JULY 15

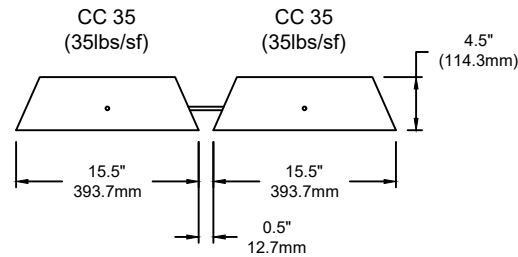
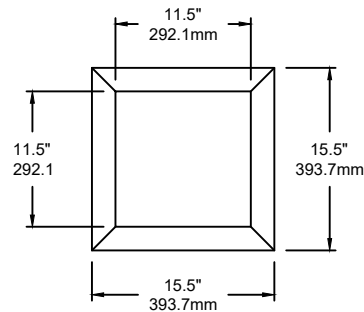
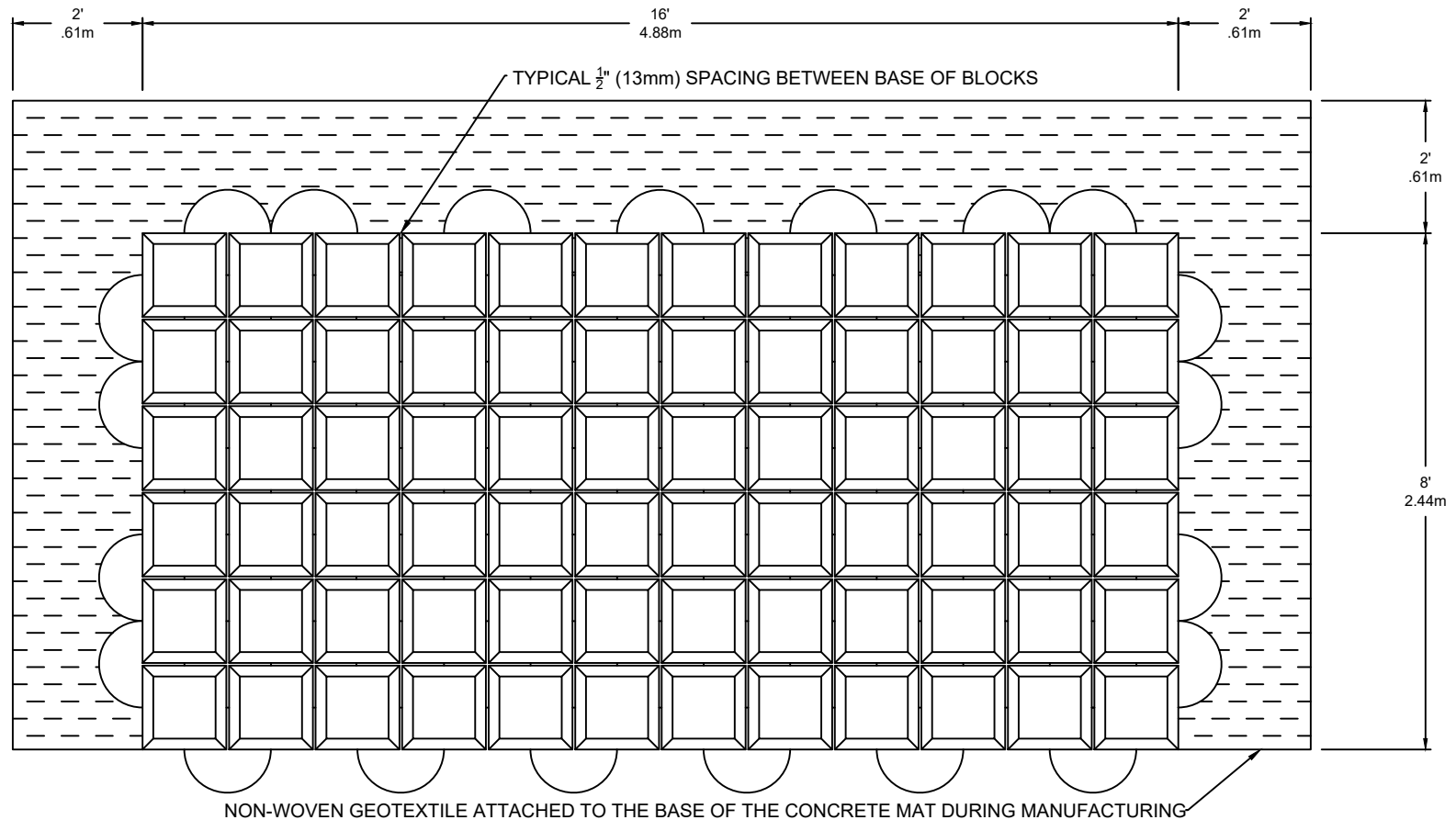
Table 2. Restricted Activity timing windows for the protection of spawning fish and developing eggs and fry in the Southern Region. Dates represent when work should be avoided.

DRAIN TYPE	RESTRICTED ACTIVITY PERIOD
A	SEPTEMBER 15 TO JULY 15
B	MARCH 15 TO JULY 15
C	MARCH 15 TO JULY 15
D	OCTOBER 1 TO JULY 15
E	MARCH 15 TO JULY 15

Standard Measures to Avoid Causing *Serious Harm to Fish*

When implementing a culvert removal project in a municipal drain, the *Fisheries Act* still requires an individual/company to ensure they avoid causing *serious harm to fish* during any activities in or near water. The following advice will help one avoid causing harm and comply with the *Act* (for additional information see <http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/measures-mesures-eng.html>).

1. Schedule work to avoid wet, windy and rainy periods that may increase erosion and sedimentation.
2. Whenever possible, operate machinery on land above the high water mark or on ice and in a manner that minimizes disturbance to the banks and bed of the municipal drain.
 - Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks.
 - Limit machinery fording of the municipal drain to a one-time event (i.e., over and back), and only if no alternative crossing method is available. If repeated crossings of the municipal drain are required, construct a temporary crossing structure.
 - Wash, refuel and service machinery and store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering the water.
 - Keep an emergency spill kit on site in case of fluid leaks or spills from machinery.
3. Install effective sediment and erosion control measures before starting work to prevent sediment from entering the municipal drain. Inspect them regularly during the course of construction and make all necessary repairs if any damage occurs.
4. Erosion and sediment control measures should be maintained until all disturbed ground has been permanently stabilized, suspended sediment has resettled to the bed of the municipal drain and runoff water is clear.
5. Undertake all in-water activities in isolation of open or flowing water while maintaining the natural flow of water downstream and avoid introducing sediment into the municipal drain.
6. Ensure applicable permits for relocating fish are obtained and relocate any fish that become trapped in isolated pools or stranded in newly flooded areas to the main channel of the watercourse.
7. Ensure that the water that is being pumped/diverted from the site is filtered (sediment remove) prior to being released (e.g. pumping/diversion of water to a vegetated area).
8. Implement measures for containing and stabilizing waste material (e.g. dredging spoils, construction waste and materials, commercial logging waste, uprooted or cut aquatic plants, accumulated debris) above the high water mark of nearby waterbodies to prevent re-entry.
9. Stabilize shoreline or banks disturbed by any activity associated with the project to prevent erosion and/or sedimentation, preferably through re-vegetation with native species suitable for the site.
10. If replacement rock reinforcement/armouring is required to stabilize eroding or exposed areas, then ensure that appropriately-sized, clean rock is used; and that rock is installed at a similar slope to maintain a uniform bank/shoreline and natural stream/shoreline alignment.
11. Remove all construction materials from site upon project completion.



INTERNATIONAL EROSION CONTROL SYSTEMS

22295 Hoskins Line
Rodney, OH, 43070
Phone: 1-800-821-7462
Fax: 1-866-496-1990
www.iecs.com

REVISIONS

No.	DATE:
1	
2	
3	



MANUFACTURED BY:

INTERNATIONAL EROSION CONTROL SYSTEMS

43

TYPICAL UNIT DEPTHS
CC 35
2.44m x 4.88m

DRAWN BY:	CHECKED BY:	DATE:	SCALE:	SHEET:
R. J.	E. G.	01/09/17	N.T.S.	1 OF 1

The content of this drawing is the confidential property of "IECS Inc." and should not be copied, modified, retransmitted, or used for any purpose except with "IECS's" written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.



International Erosion Control Systems Inc.

22295 Hoskins Line, Rodney, ON N0L 2C0
 Phone: 1-800-821-7462 Fax: 1-866-496-1990
www.iecs.com



Specifications

A. DESCRIPTION

Cable Concrete® is an articulated concrete block revetment system, developed by International Erosion Control Systems, to control various types of erosion due to water, wind, or vehicular traffic.

This system is made up of 2.44m x 4.88m long (8'x16') mats placed side by side and clamped together to provide one homogeneous erosion protection system. Smaller mats are available as required.

The mats consist of concrete blocks interlocked by integrally woven stainless steel cables, which are poured within each block. Geotextile fabric is attached to the base of each concrete mat. The blocks typically have 292.10mm (11.5") square top faces and 393.70mm (15.5") square bottoms. Variations between the mat systems are the block heights and weights.

SYSTEM	Minimum BLOCK WEIGHT		Minimum BLOCK HEIGHT		Open Area %
	<i>kg/sm</i>	<i>lbs/sf</i>	<i>mm</i>	<i>inches</i>	
CC 35	180.65-195.30	37-40	114.3-127.0	4 ½ -5	20
CC 45	229.47-253.88	47-52	139.7-152.4	5 ½ -6	20
CC 70	351.53-380.83	72-78	215.9-228.6	8 ½ -9	20

B. CONCRETE

The concrete shall meet the requirements of CSA A23.1/A23.2 for materials, testing, and methods of construction. The concrete mix shall be designed to meet CSA A23.1 Exposed Class C-2 requirements. The minimum required concrete strength shall be 25 MPA @ 28 days with a minimum of 5-8 % air entrainment throughout.

C. CABLES

The cables shall be made of type 302/304 stainless steel aircraft cable, 1x19 construction. Cables shall be integral (poured into) to the concrete block and shall traverse through each block in both longitudinal and lateral directions, providing a flexible interlocked system.

STAINLESS STEEL CABLE				
System	Lengthwise mm inches		Widthwise mm inches	
CC35	4	5/32"	4	5/32"
CC45	4	5/32"	4	5/32"
CC70	4.8	3/16"	4.8	3/16"

D. GEOTEXTILE

The standard geotextile material used is a needle punched non-woven fabric which is attached to the underside of the mats. An overlap shall be incorporated on three sides. The overlap provides area for the adjoining mats to be placed upon and prevent undermining of the erosion control system.

It should be noted that when different geotextile weights are used and or when additional overlap area is added to the mat, additional cost adjustments shall be made.

E. CLAMPS

Sufficient malleable or stainless steel cable clamps may be used to connect adjoining Cable Concrete® mats. The standard placement of clamps shall be placed on 1.22m (4') centres connecting adjoining mats together. Clamps are recommended in applications exceeding 3.05m (10') per second.

When placing clamps under existing water, the manufacture will specify a clamp for the condition.

F. ANCHORING

Cable Concrete® mats are designed to take certain velocities in certain slope and bedding situations. This information is founded on engineered flume testing. The data shows maximum limits of the mat system, based on unanchored mats.

Anchoring Cable Concrete® mats offer additional safety to the erosion protection system. If a situation arises where velocities may exceed maximum limits of a system, or if slopes of 1.5:1 or greater are encountered, then anchoring becomes an item to be specified by the governing project engineer.

G. INSTALLATION

Installation equipment shall have a lifting capacity, capable of completely lifting the concrete mat and the lifting bar during unloading, stockpiling and installing etc.

Prepared areas shall be graded to a smooth plane finish. Any roots, debris and stones must be removed and regarded. Specified geotextile to be placed according to manufacturing

recommendations. There shall not be any dragging, tearing or damaging of the geotextile. The mats shall be laid on the geotextile in such a manner to produce a smooth plane surface.

Intimate contact with the subsurface is critical to the systems performance in the field.

The gap between each mat shall not be greater than 2", preferably 1" or it must be closed using a cement mixture.

It is recommended that after the installation of the mat system, that it be covered with desired backfill. If vegetation is required, the mat system shall be backfilled and seeded.

This will allow moisture to traverse back and forth from sub grade to vegetation.

Vegetation will lend support and an even grade for maintenance vehicles (mowers) to traverse over it. Any surface application should not be placed prior to the inspection of the systems clamping and anchoring.

H. PAYMENT

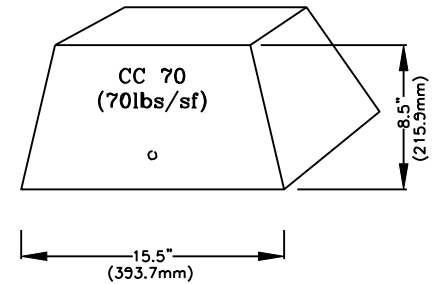
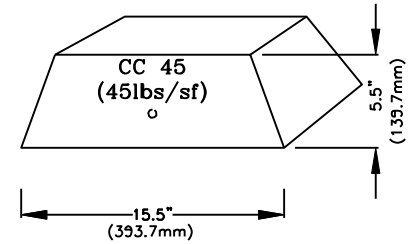
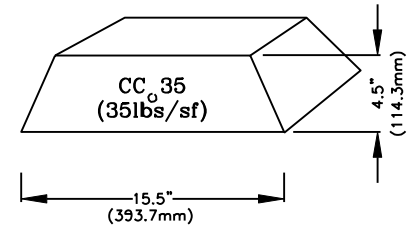
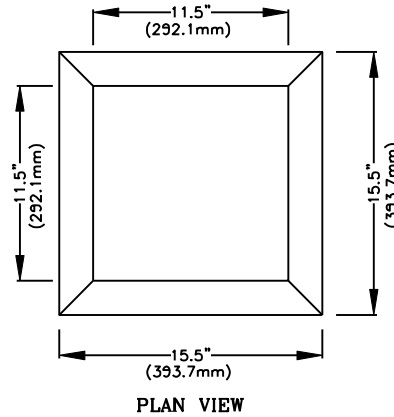
Payment shall be by the square meter and shall include Cable Concrete® mats and manufacturer's recommended geotextile.

Stainless Steel cable clamps, anchors, lifting bar rental and delivery are separate cost items.

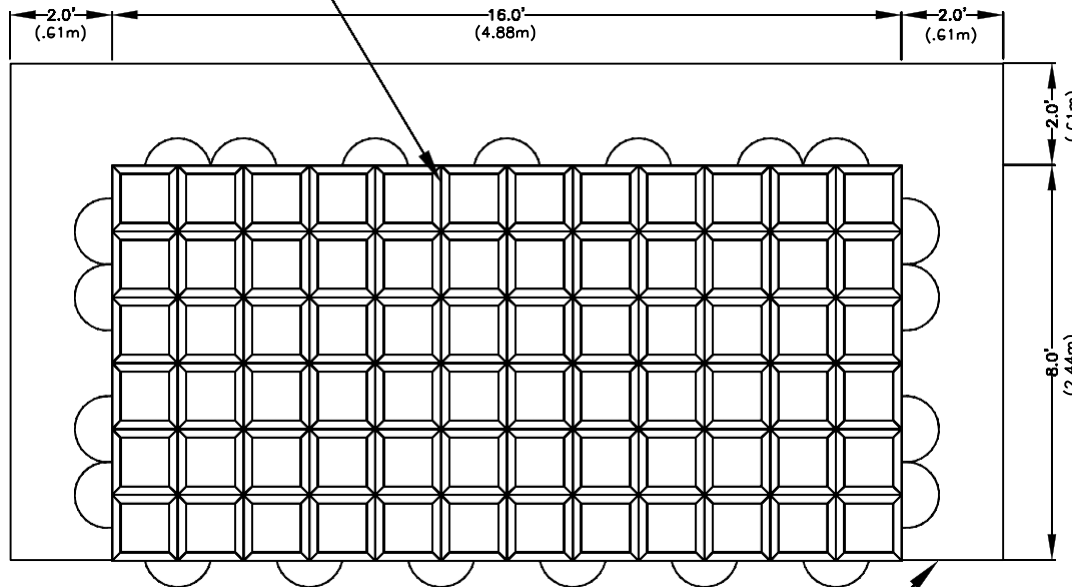
Upgrades or additional items shall be considered additional costs



TYPICAL UNIT DEPTHS



20% OPENING BETWEEN BLOCKS



7oz NON-WOVLEN GEOTEXTILE ATTACHED TO THE BASE OF THE CONCRETE MAT DURING MANUFACTURING



INTERNATIONAL EROSION CONTROL SYSTEMS INC.

22295 Hoskins Line,
Rodney ON, NOL 2C0

Phone: 800-821-7462
Fax: 866-496-1990

www.iecs.com



- Typical Unit Depth

DRAWN BY:

D. J

CHECKED BY:

BY:

L.A

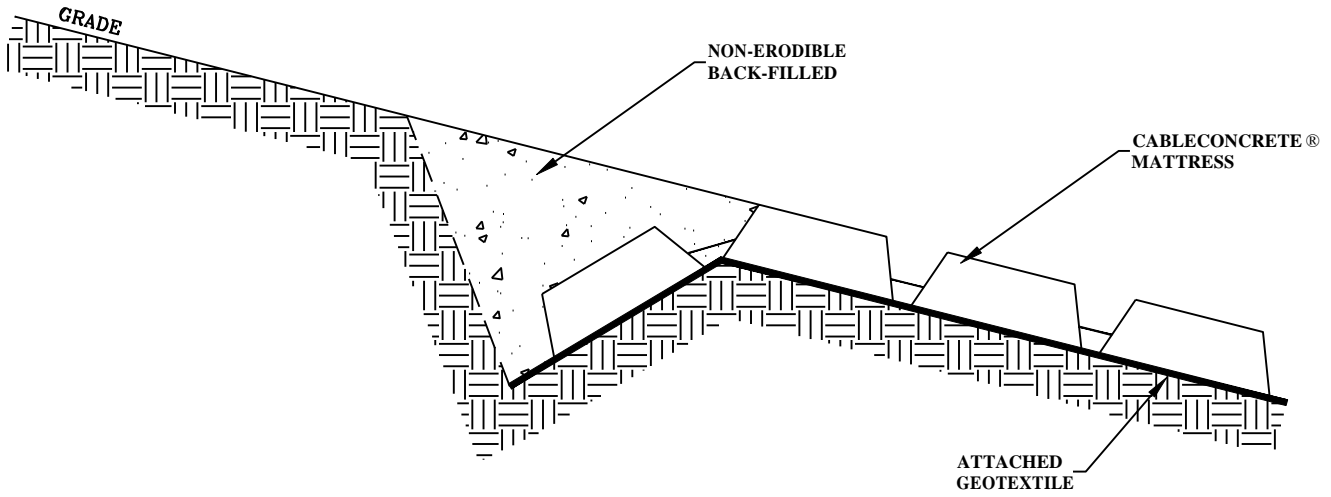
SCALE: N.T.S

DATE: 10/21/13

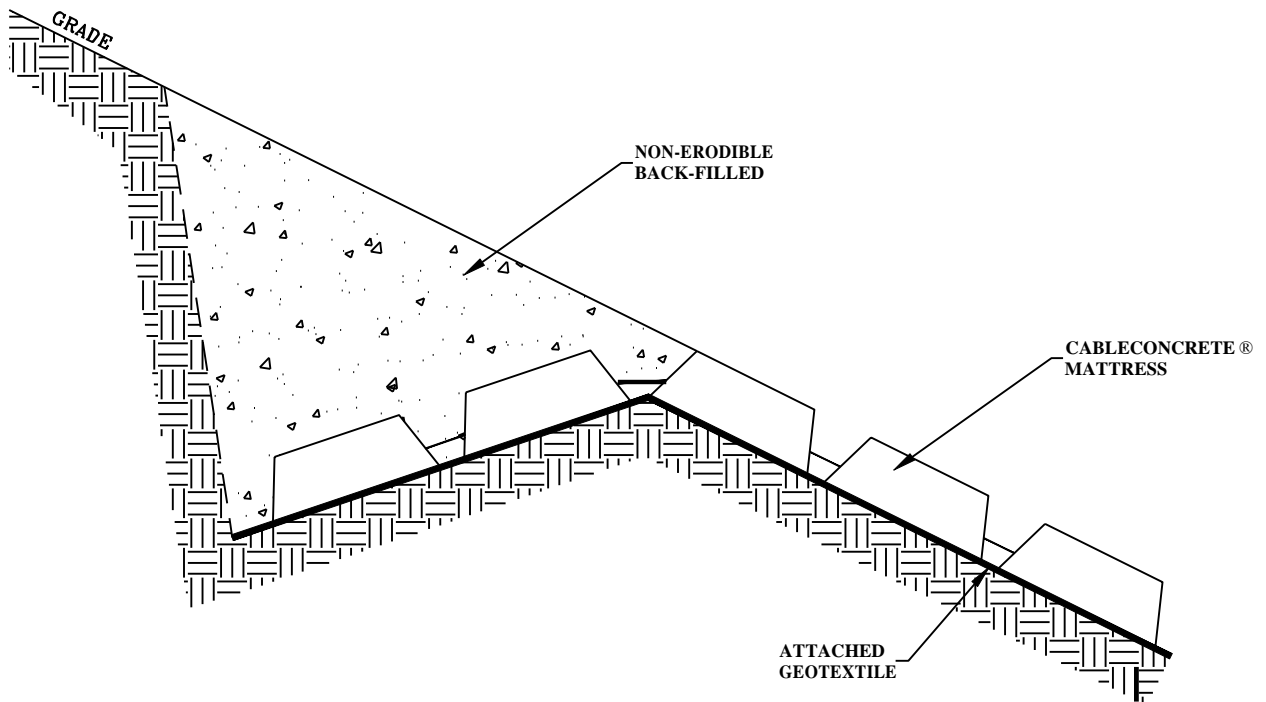
SHEET 1 OF 1

KEY IN DETAIL

TOPOFSLOPE OPTION1



TOPOFSLOPE OPTION2



Drawing N.T.S.



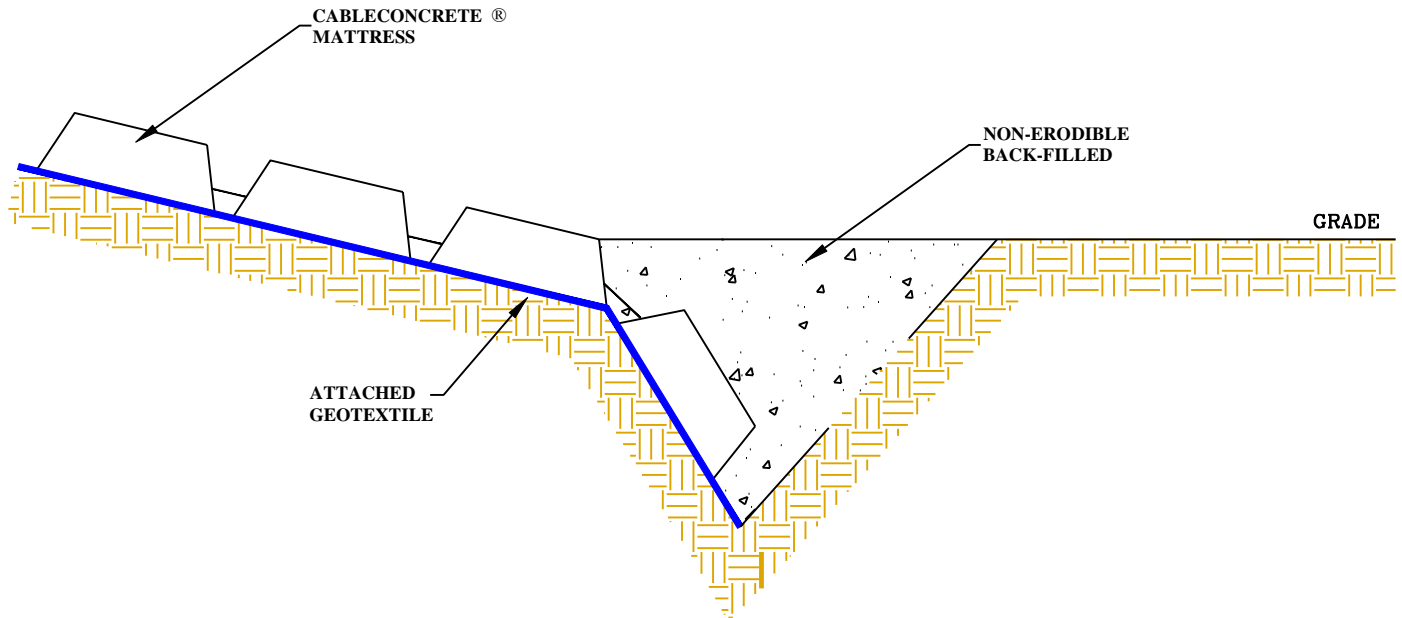
**International Erosion
Control Systems Inc.**

22295 Hoskins Line, Rodney,
ON, N0L 2C0
PH: 800-821-7462
FX: 866-496-1990

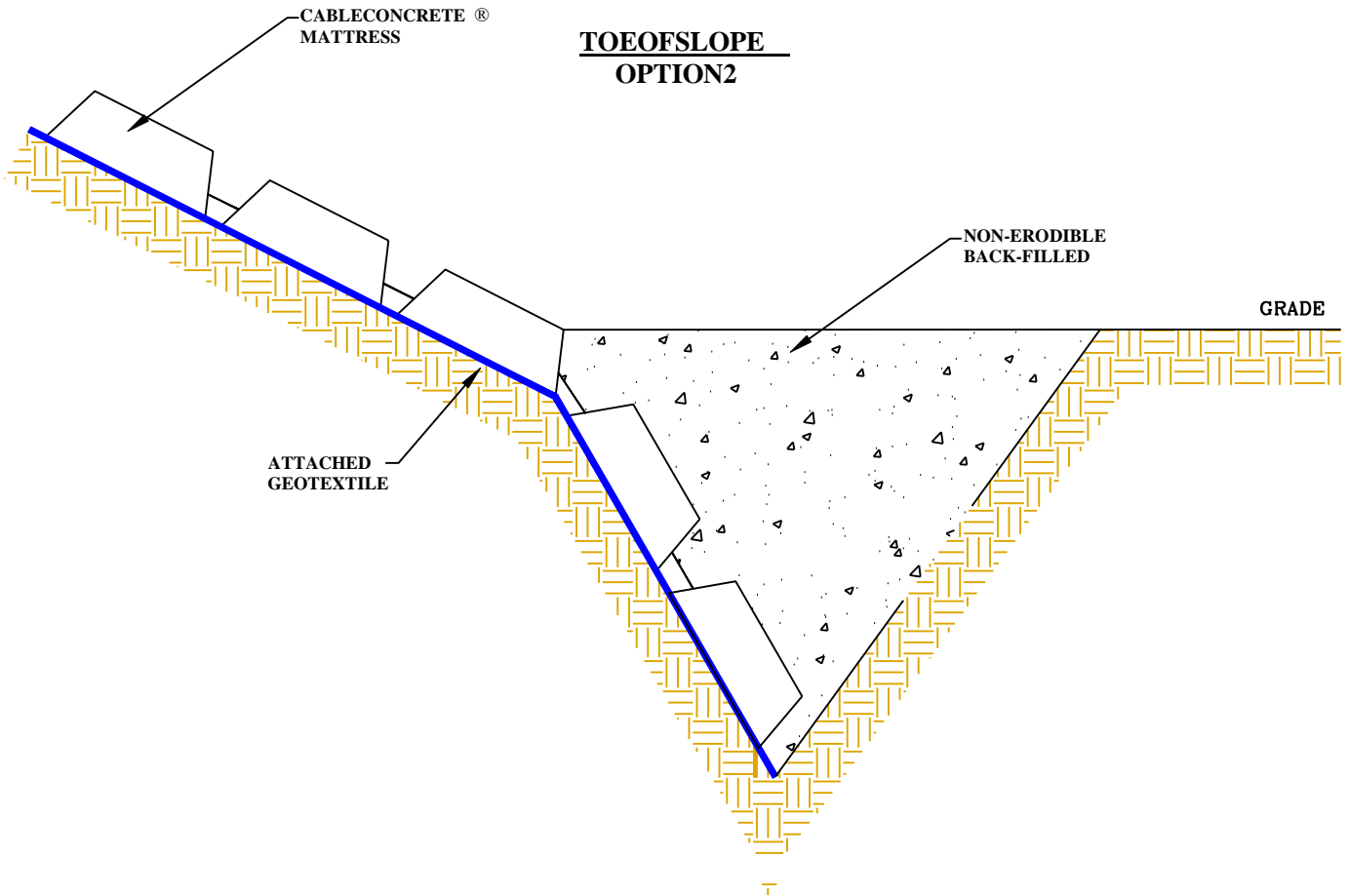
Tracking		Drawn By:	McCoy Drafting and Design, LLC.
Customer:		Checked By:	Charlie Chase
Project:	47	Date:	December 9, 2010

TOE IN DETAIL

TOE OF SLOPE OPTION 1



TOE OF SLOPE OPTION 2



**International Erosion
Control Systems Inc.**

22295 Hoskins Line, Rodney
ON, N0L 2C0
PH:800-821-7462
FX:866-496-1990

Tracking

Customer:

Project:

48

DrawnBy:

CheckedBy:

Date:

McCoyDraftingandDesign,LLC.

CharlieChase

December9,2010



International Erosion Control Systems Inc.

22295 Hoskins Line, Rodney, ON N0L 2C0
Phone: 1-800-821-7462 Fax: 1-866-496-1990
www.iecs.com



Installation Cost Estimate

When estimating the placement of Cable Concrete® in typical applications, here are some guidelines to follow:

On gentle slopes of 3:1 or less, trackhoe with operator and two labourers to place-
11-13 (1.22m x 4.88m) mats, approximately 60 SM/hr or
8-10 (2.44m x 4.88m) mats, approximately 115 SM/hr.

On slopes of 2:1 to 1.5:1, trackhoe with operator and three labourers to place (the 3rd labourer to unhook the mats from the lifting bar at the top of the slope).
10-12 (1.22m x 4.88m) mats, approximately 50 SM/hr or
7-9 (2.33m x 4.88m) mats, approximately 90 SM/hr.

Allow one labourer to clamp and anchor the placed Cable Concrete® mats. Approximately 1 man/10 min. to drive, set and clamp each anchor, 1 man/3min. per clamp to connect adjoining mats together.

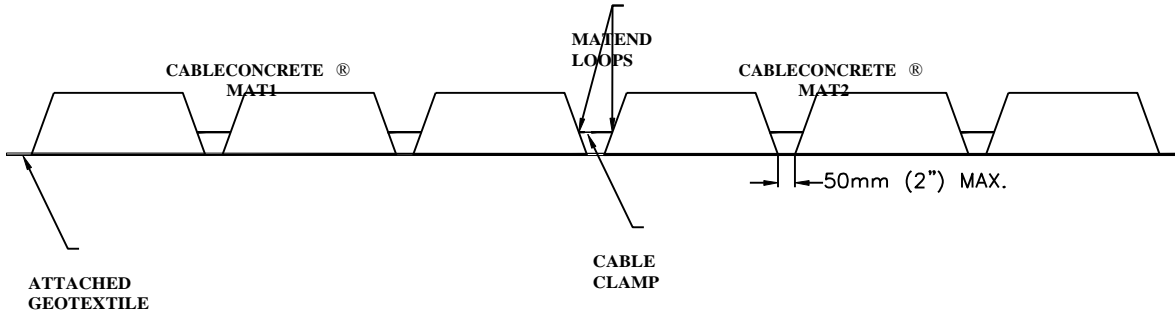
The above estimations are based on placing Cable Concrete® mats on a prepared base.
Use your local machine and labour rates.

Installation equipment shall have a lifting capacity, capable of completely lifting the concrete mats and the lifting bar during unloading, stockpiling, installing etc. Prepared areas shall be graded to a smooth plane finish. Any roots, debris and stones must be removed and re-graded. There shall not be any dragging, tearing or damaging of the geotextile. The mats shall be laid in such a manner to produce a smooth plane surface. Intimate contact with the subsurface is critical to the systems performance in the field. The gaps between each mat shall not be greater than 2", preferably 1", or the gap must be closed using a cement mixture.

It is recommended that after the installation, the mat system be covered with desired backfill. If vegetation is required, the mat system shall be backfilled and seeded. This will allow moisture to traverse back and forth from sub grade to vegetation. Vegetation will lend support and an even grade for maintenance vehicles (mowers) to traverse over it. Any surface application should not be placed prior to the inspection of the systems clamping and anchoring.

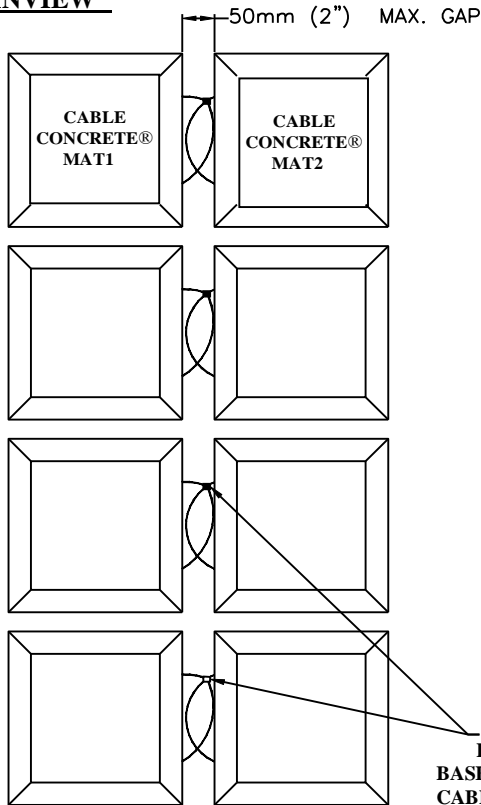
These are recommended guidelines only.

PROFILEVIEW

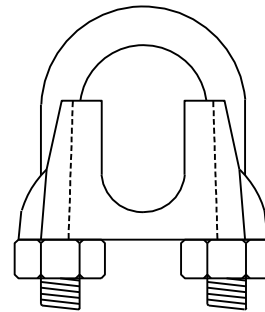


WHEN PLACING THE MATS, THE GAP BETWEEN THE MATS SHOULD NOT BE ANY LARGER THAN A 50mm (2") MAXIMUM. IF THE MATS ARE REPLACED WITH A LARGER SPACE THAN 50mm (2"), IT IS RECOMMENDED TO GROUT THESE AREAS BETWEEN THE MATS.

PLANVIEW



CABLE CLAMP



NOTE:
CABLE CLAMPS ARE MADE OF A U-BOLT,
A COVER SADDLE, AND TWO NUTS.

POSITION CABLE CLAMP ASS NUG TO THE
BASE OF THE CONCRETE BLOCK BY SLIDING
CABLE CLAMP DOWN TO THE ADJACENT
LOOPS, THEN TIGHTEN CLAMP SECURELY.



INTERNATIONAL EROSION CONTROL
SYSTEM INC.

22295 Hoskins Line,
Rodney ON, NOL 2C0

Phone: 800-821-7462
Fax: 866-496-1990

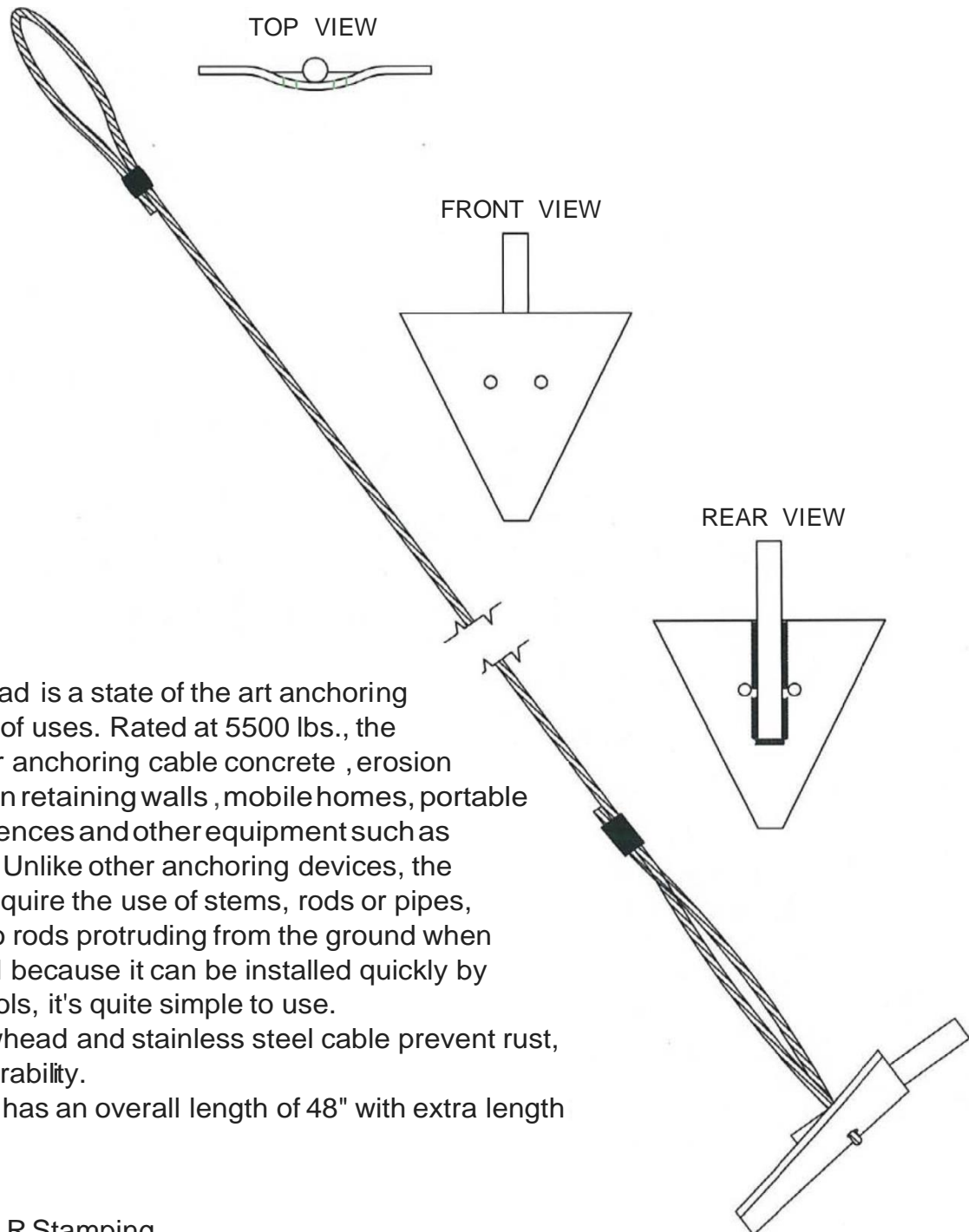
www.iecs.com

50

CABLE CLAMP DETAIL

DRAWN BY: D. JOHNSTON		CHECKED BY: L. ARVAI	
SCALE: N.T.S	DATE: 03/18/13	SHEET 1/1	

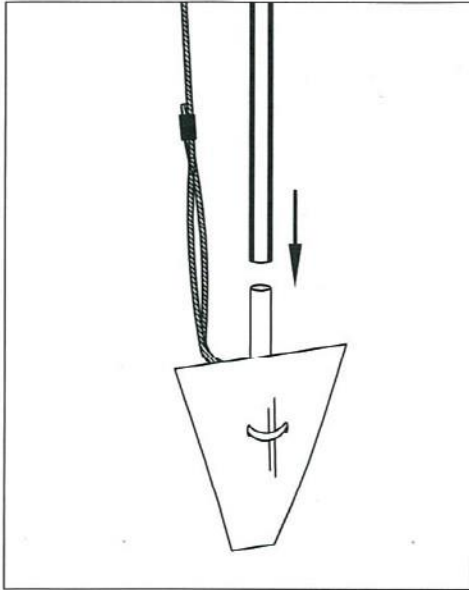
ARROWHEAD EARTH ANCHORS



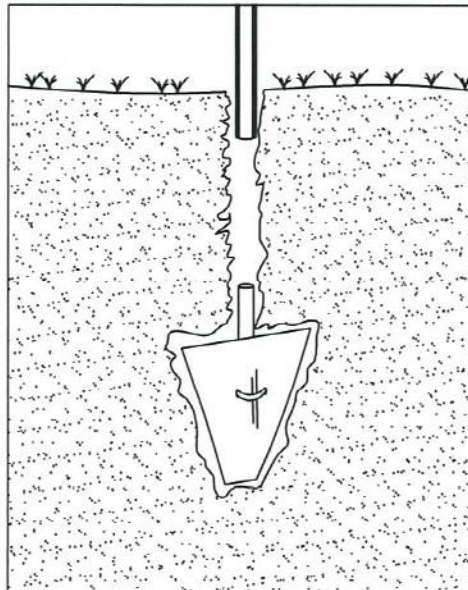
The Chasco Arrowhead is a state of the art anchoring system with a variety of uses. Rated at 5500 lbs., the Arrowhead is ideal for anchoring cable concrete , erosion mats , concrete gabion retaining walls , mobile homes, portable classrooms, sheds ,fences and other equipment such as oil tanks and towers. Unlike other anchoring devices, the Arrowhead doesn't require the use of stems, rods or pipes, therefore there are no rods protruding from the ground when the anchor is set. And because it can be installed quickly by means of common tools, it's quite simple to use. The galvanized Arrowhead and stainless steel cable prevent rust, giving it increased durability. The standard anchor has an overall length of 48" with extra length supplied as required.

Manufactured by B & R Stamping
Oakville , Ontario
905-847-5294

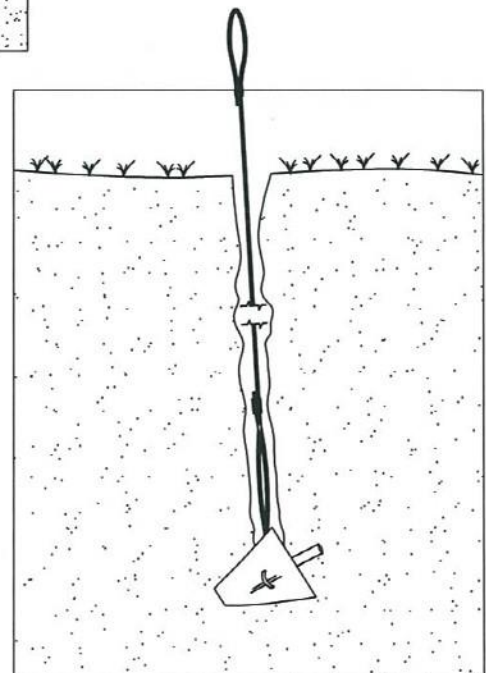
NOT TO SCALE



CABLE IS ATTACHED AND CRIMPED.
 DRIVE ROD IS HALF INCH BLACK
 IRON PIPE - 4 FEET LONG



DRIVE ANCHOR MINIMUM OF 1
 METER INTO UNDISTURBED SOILS
 CAPABLE OF HOLDING SPECIFIED
 ANCHOR STRENGTH



ANCHOR MUST BE PULLED UP INTO
 PLANED / LOCKED POSITION

NOT TO SCALE

CONC 3

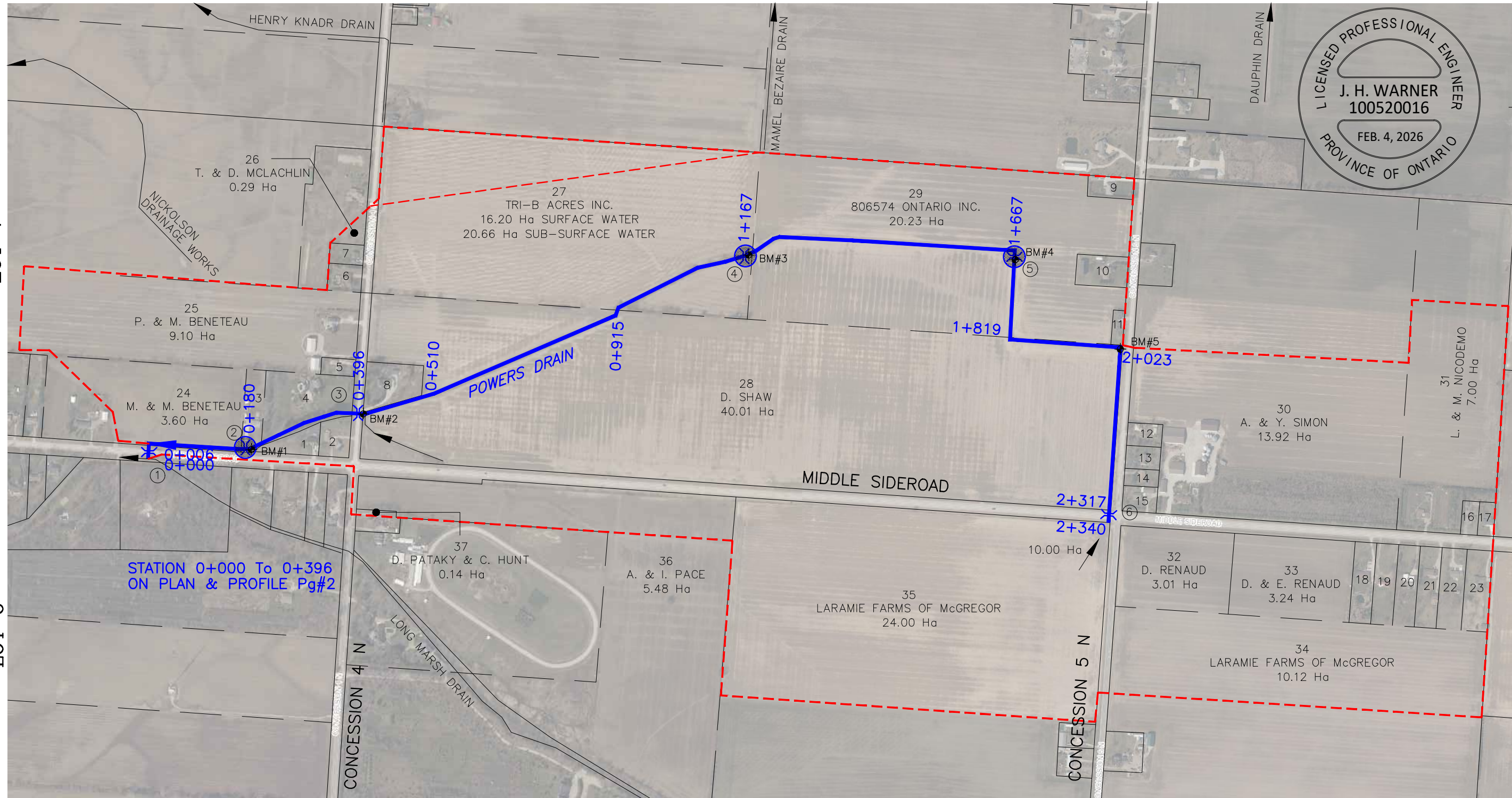
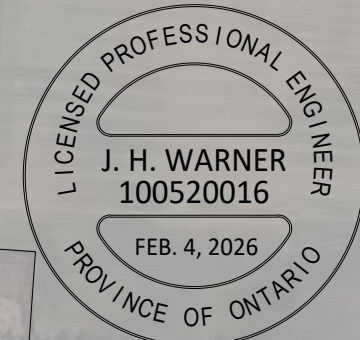
CONC 4

CONC 5

LOT 8

LOT 7

LOT 6



STATION 0+000 To 0+396
ON PLAN & PROFILE Pg#2

LEGEND

- - - DRAINAGE AREA
- POWERS DRAIN
- MUNICIPAL DRAIN
- ① CULVERT NUMBER
- X EXISTING CULVERT
- EXISTING CULVERT TO BE REPLACED
- 1 OWNER INDEX NUMBER

OWNER INDEX NUMBER

1. R. & F. MONTGOMERY	0.38 Ha	10. D. & T. BERTRAND	0.52 Ha	19. R. TATE	0.59 Ha
2. C. & L. BREAUULT	0.38 Ha	11. D. SHEARON	0.14 Ha	20. K. & G. SIMARD	0.59 Ha
3. J. & L. CHAMBERLAIN	0.50 Ha	12. E. MACDONALD	0.25 Ha	21. J. & M. HUVER	0.59 Ha
4. J. & T. TARTARO	1.20 Ha	13. G. & M. GOULET	0.26 Ha	22. C. & R. GUENTHER	0.68 Ha
5. E. & D. RENAUD	0.19 Ha	14. D. TALBOT	0.19 Ha	23. T. & J. RIVERS	0.68 Ha
6. V. & N. BURKOSKI	0.30 Ha	15. R. & M. BEAUDOIN	0.28 Ha		
7. J. DUGGAN & J. JONES	0.22 Ha	16. C. & K. LUCIER	0.19 Ha		
8. A. & J. DESLIPPE	0.78 Ha	17. A. & C. KAVANAGH	0.19 Ha		
9. K. LYONS & W. LYWOOD	0.33 Ha	18. L. & N. PHILLIPS	0.59 Ha		



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

APPROVED	J. WARNER	NO.	REVISIONS	DATE	BY
CHECKED	B. VAN RUITENBURG	1	FINAL REPORT	FEB. 4, 2026	CS
DRAWN	C. SAUNDERS	SCALE: 1:7500			
		0 100 200 300 50m			

TOWN of AMHERSTBURG

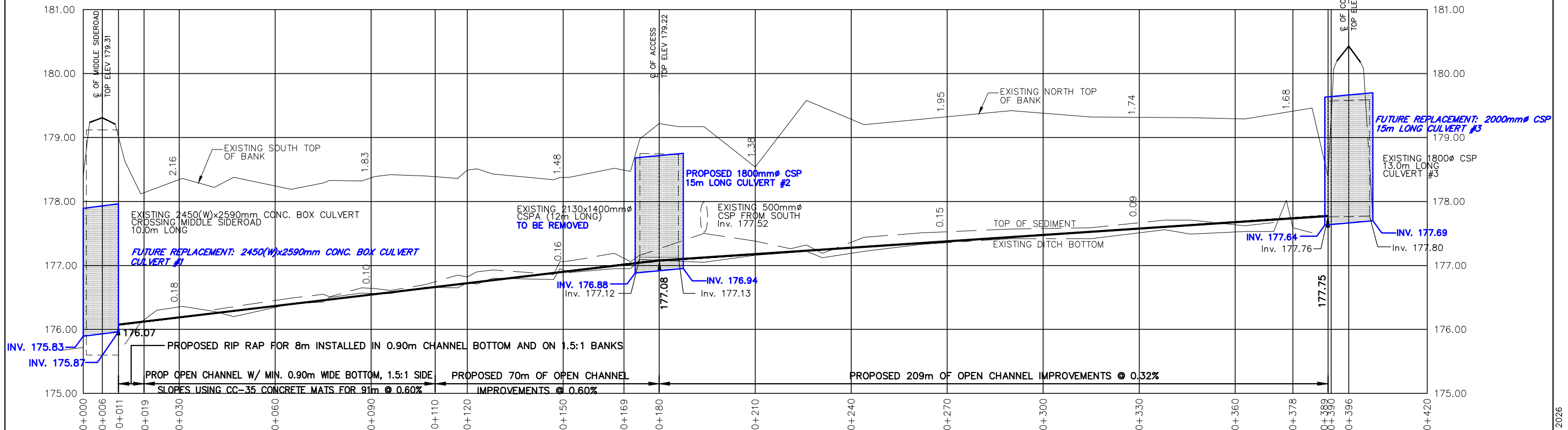
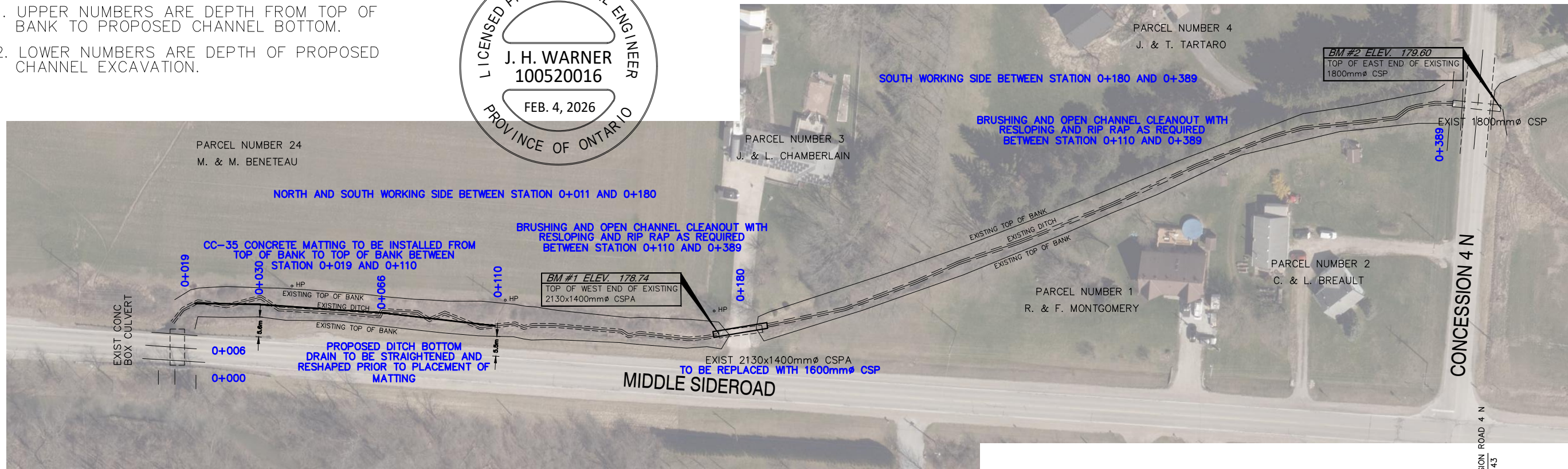
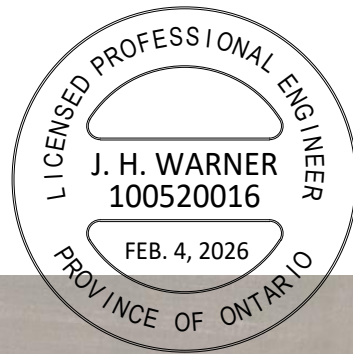
POWERS DRAIN PLAN

1
OF 7

Last Updated: February 4, 2026

GENERAL NOTES

- UPPER NUMBERS ARE DEPTH FROM TOP OF BANK TO PROPOSED CHANNEL BOTTOM.
- LOWER NUMBERS ARE DEPTH OF PROPOSED CHANNEL EXCAVATION.



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

APPROVED	J. WARNER	NO.	REVISIONS	DATE	BY
CHECKED	D. MOORES	1	FINAL REPORT	FEB. 4, 2026	CS
DRAWN	C. SAUNDERS	SCALE 1: 1250			

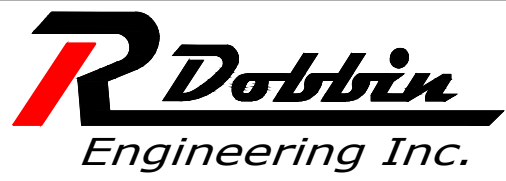
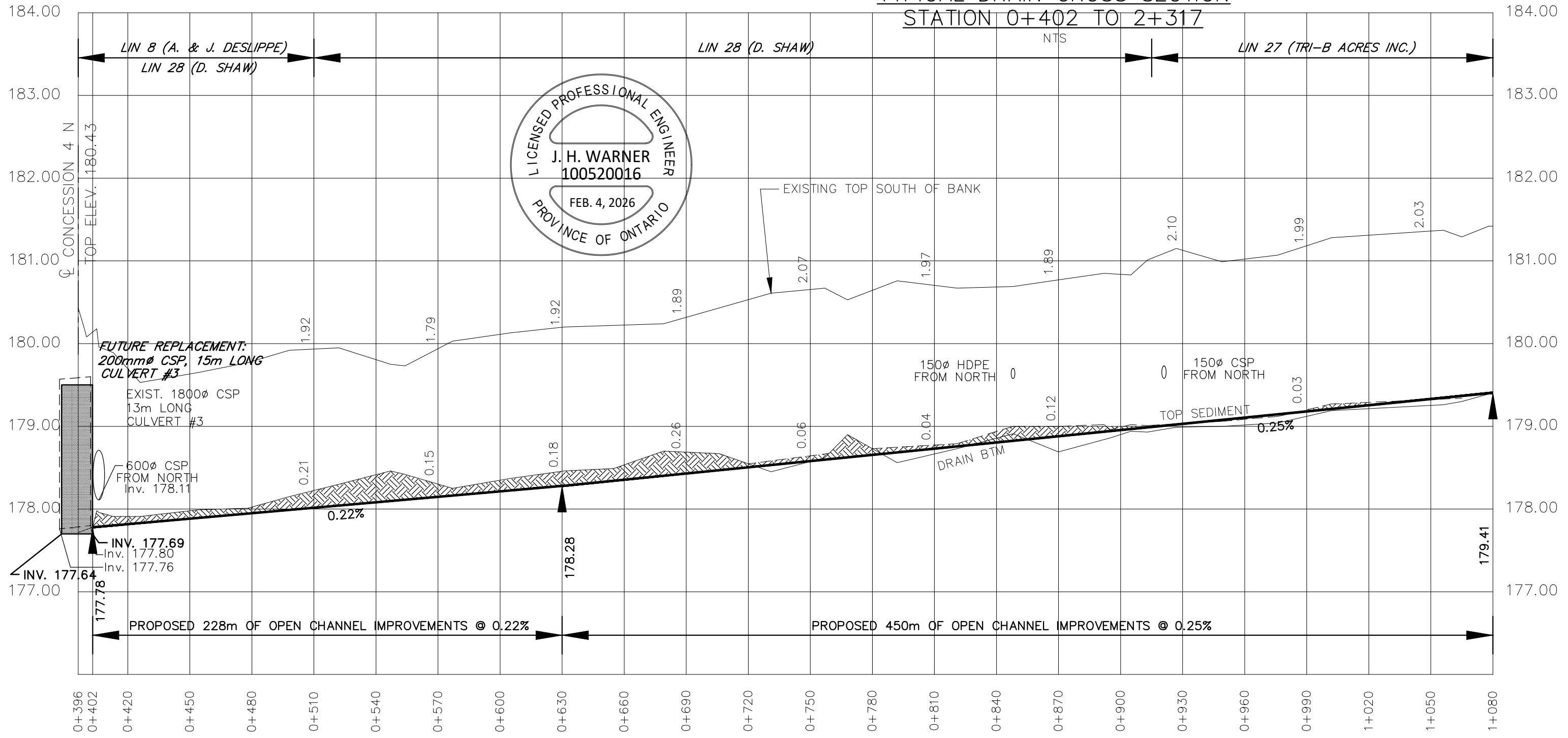
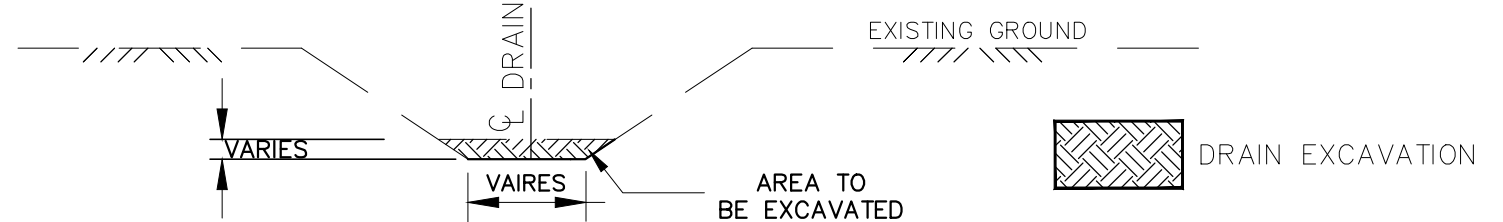
TOWN of AMHERSTBURG

POWERS DRAIN PLAN & PROFILE

Last Updated: February 4, 2026

GENERAL NOTES

- BENCHMARK No.2 ELEV. 179.60
TOP OF EAST END OF EXISTING 1800Ø CSP CROSSING CONCESSION 4 N. ST. 0+396
- UPPER NUMBERS ARE DEPTH FROM TOP OF BANK TO PROPOSED CHANNEL BOTTOM.
- LOWER NUMBERS ARE DEPTH FROM EXISTING CHANNEL BOTTOM TO PROPOSED GRADE



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

DRAWING NAME:
Powers Drain Profile 1

PROJECT No.
2024-1695

APPROVED J. WARNER	NO.	REVISIONS	DATE	BY
CHECKED B. VAN RUITENBURG	1	FINAL REPORT	FEB. 4, 2026	CS
DRAWN C. SAUNDERS	SCALE: 1:2,000			

TOWN of AMHERSTBURG

POWERS DRAIN PROFILE

3
OF 7

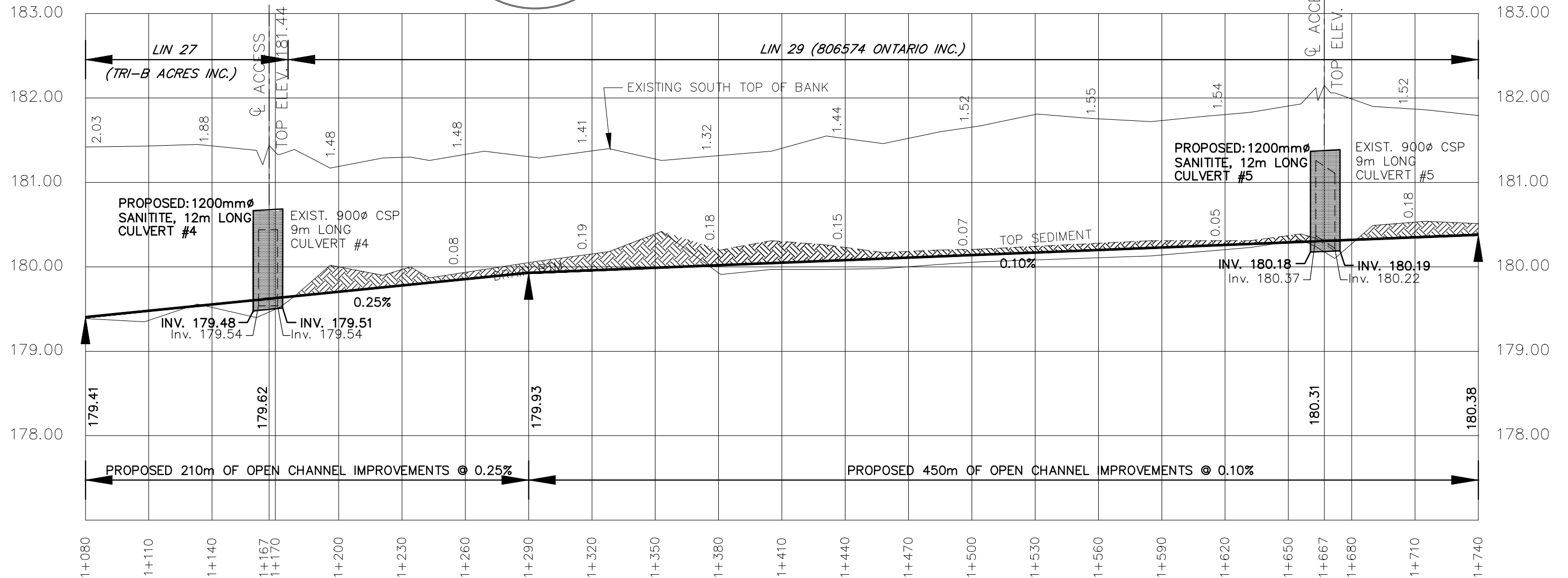
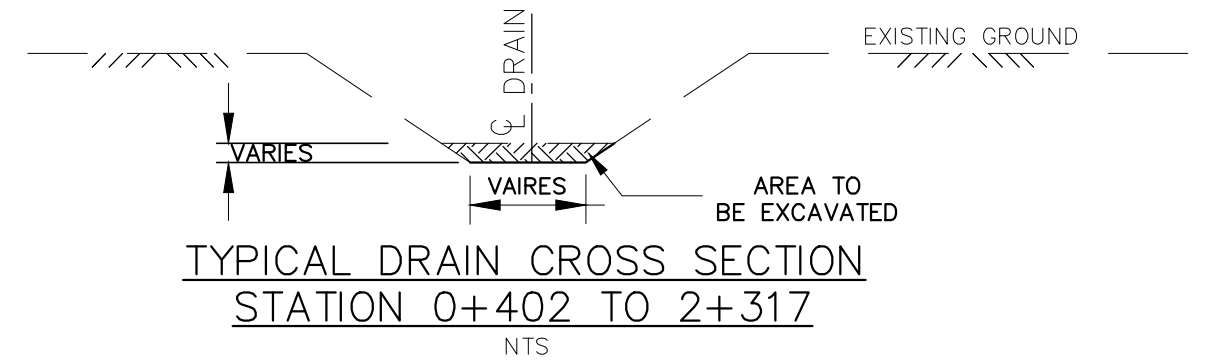
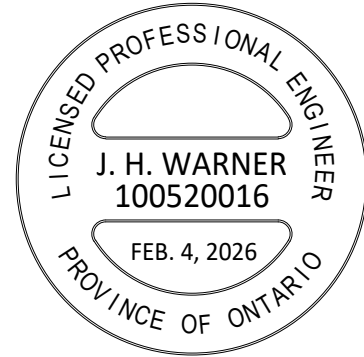
Last Updated: February 4, 2026

GENERAL NOTES

1. BENCHMARK No.3 ELEV. 180.43
TOP OF EAST END OF EXISTING
900Ø CSP AT ACCESS CROSSING FOR
LIN 27. STATION 1+167

2. UPPER NUMBERS ARE DEPTH FROM TOP OF
BANK TO PROPOSED CHANNEL BOTTOM.
3. LOWER NUMBERS ARE DEPTH FROM EXISTING
CHANNEL BOTTOM TO PROPOSED GRADE

BENCHMARK No.4 ELEV. 181.11
TOP OF SOUTH END OF EXISTING
900Ø CSP AT ACCESS CROSSING FOR
LIN 29. STATION 1+667



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

DRAWING NAME:
Powers Drain Profile 2

PROJECT No.
2024-1695

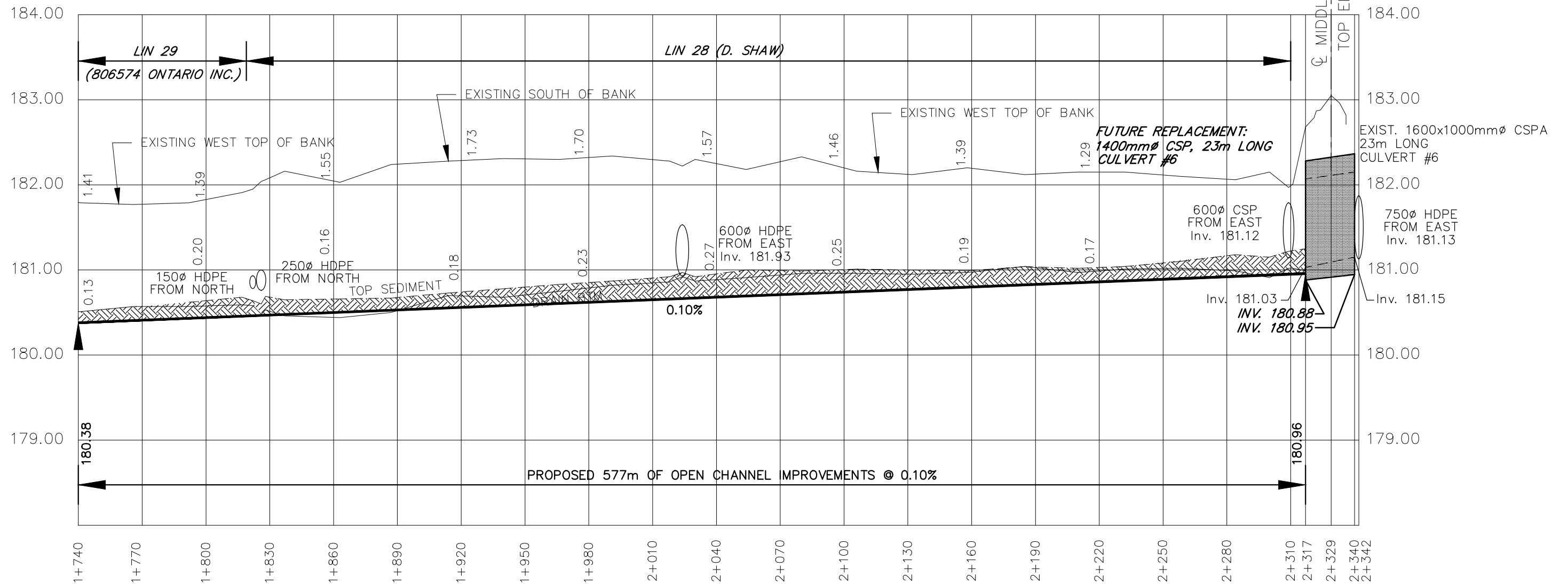
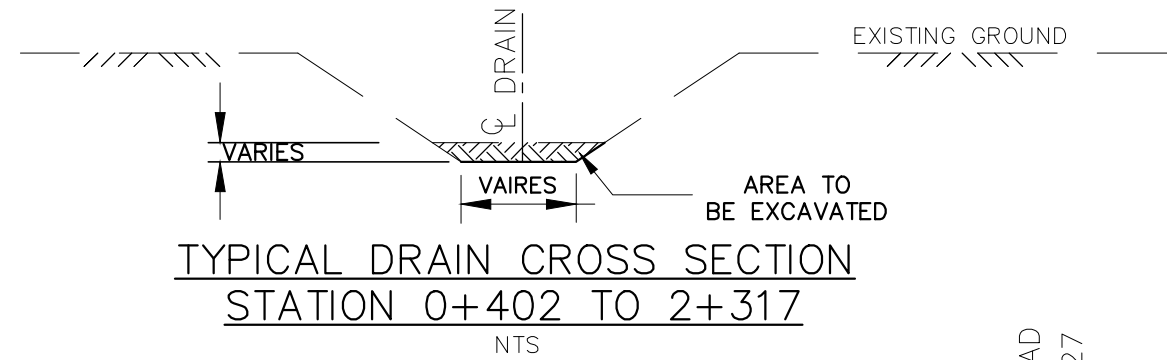
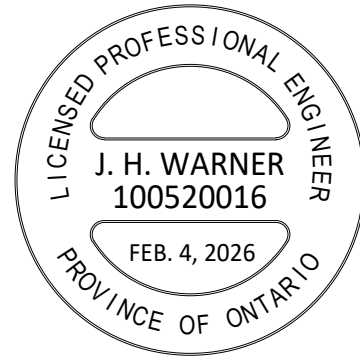
APPROVED J. WARNER	NO.	REVISIONS	DATE	BY
CHECKED B. VAN RUITENBURG	1	FINAL REPORT	FEB. 4, 2026	CS
DRAWN C. SAUNDERS	SCALE: 1:2,000			

TOWN of AMHERSTBURG
POWERS DRAIN
PROFILE

4
OF 7

GENERAL NOTES

- BENCHMARK No.5 ELEV. 181.52
TOP OF WEST END OF EXIST. 600Ø HDPE
CROSSING CONCESSION 5 N. AT STATION 2+024
WHERE DRAIN BENDS TO HEAD SOUTHERLY.
- UPPER NUMBERS ARE DEPTH FROM TOP OF
BANK TO PROPOSED CHANNEL BOTTOM.
- LOWER NUMBERS ARE DEPTH FROM EXISTING
CHANNEL BOTTOM TO PROPOSED GRADE



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

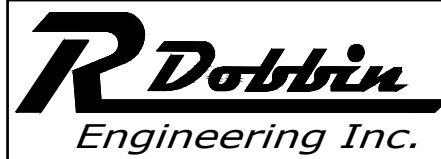
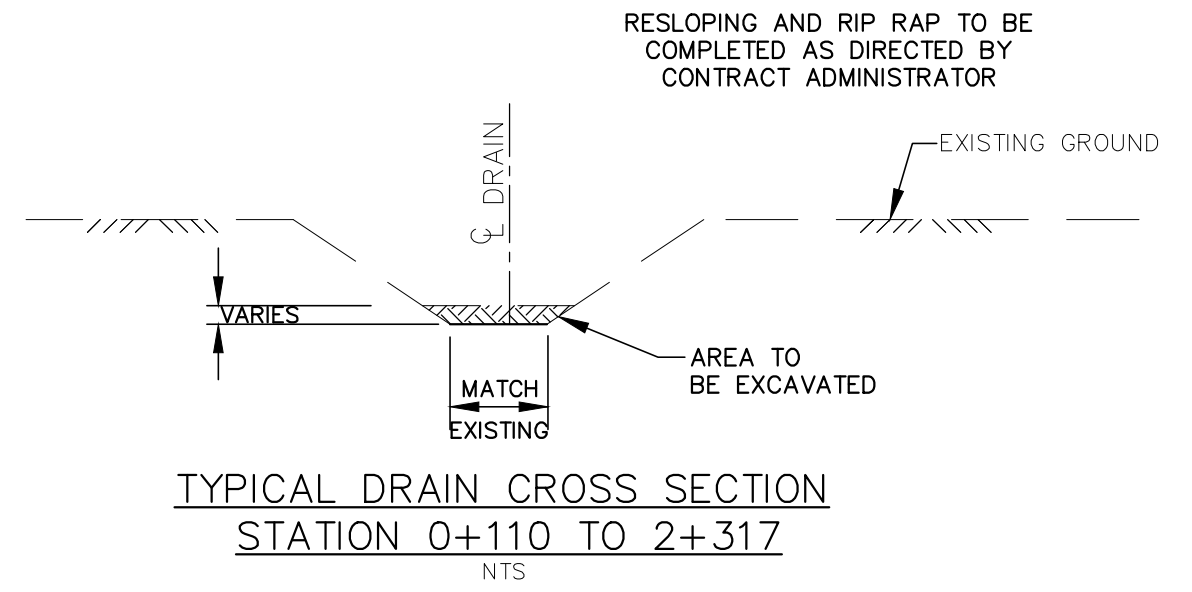
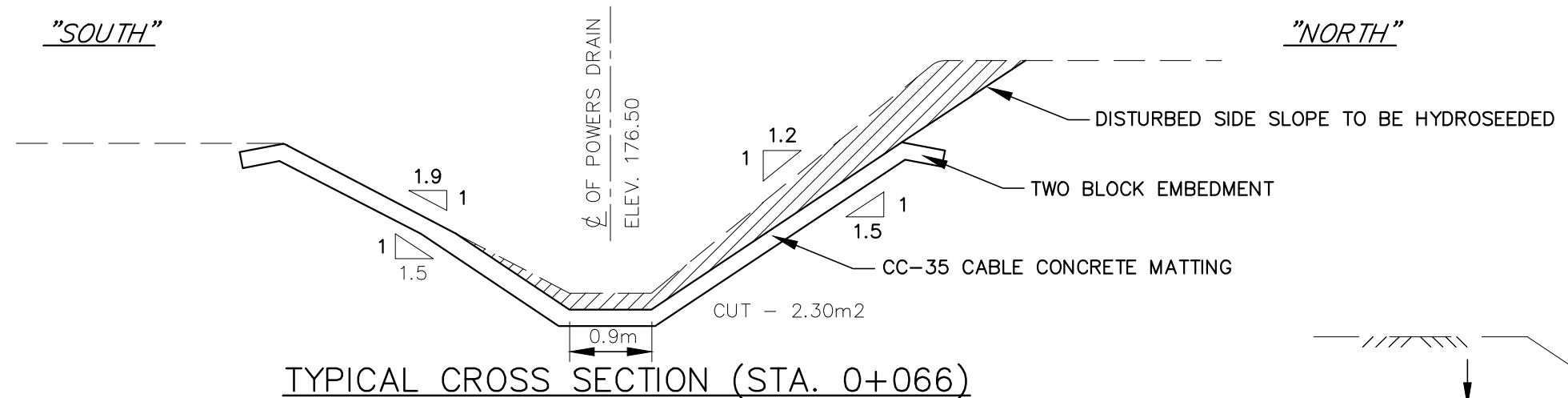
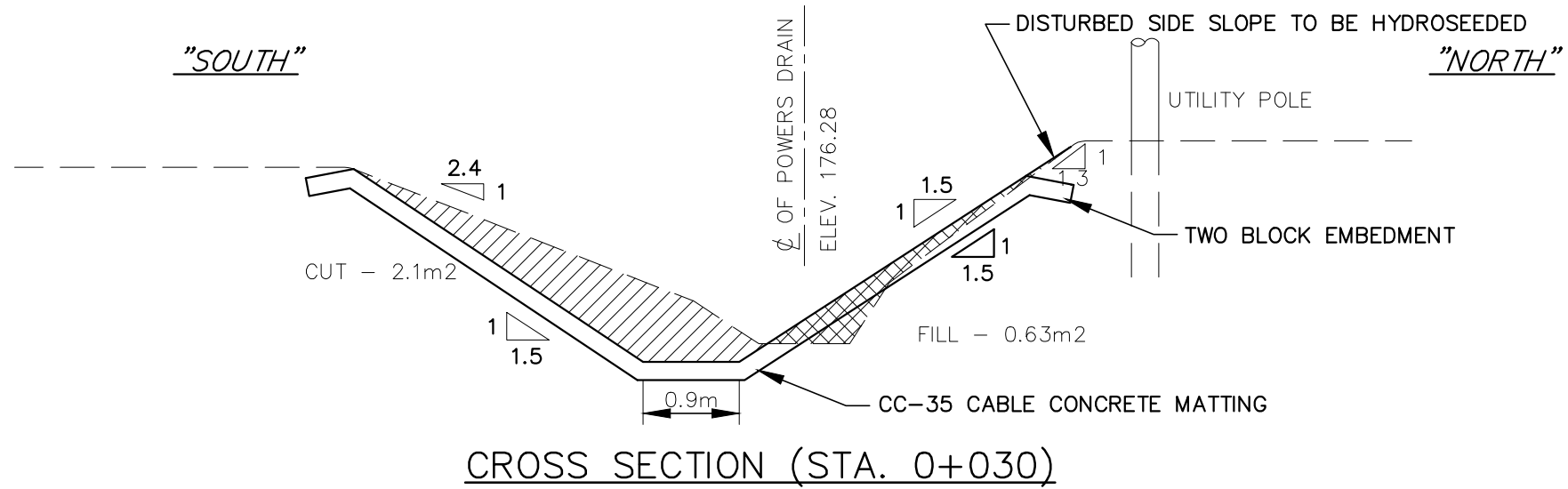
DRAWING NAME:
Powers Drain Profile 3

PROJECT No.
2024-1695

APPROVED J. WARNER	NO.	REVISIONS	DATE	BY
CHECKED B. VAN RUITENBURG	1	FINAL REPORT	FEB. 4, 2026	CS
DRAWN C. SAUNDERS	SCALE: 1:2,000			

TOWN of AMHERSTBURG POWERS DRAIN PROFILE

5
OF 7



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

DRAWING NAME:
 Powers Drain Typical Sections

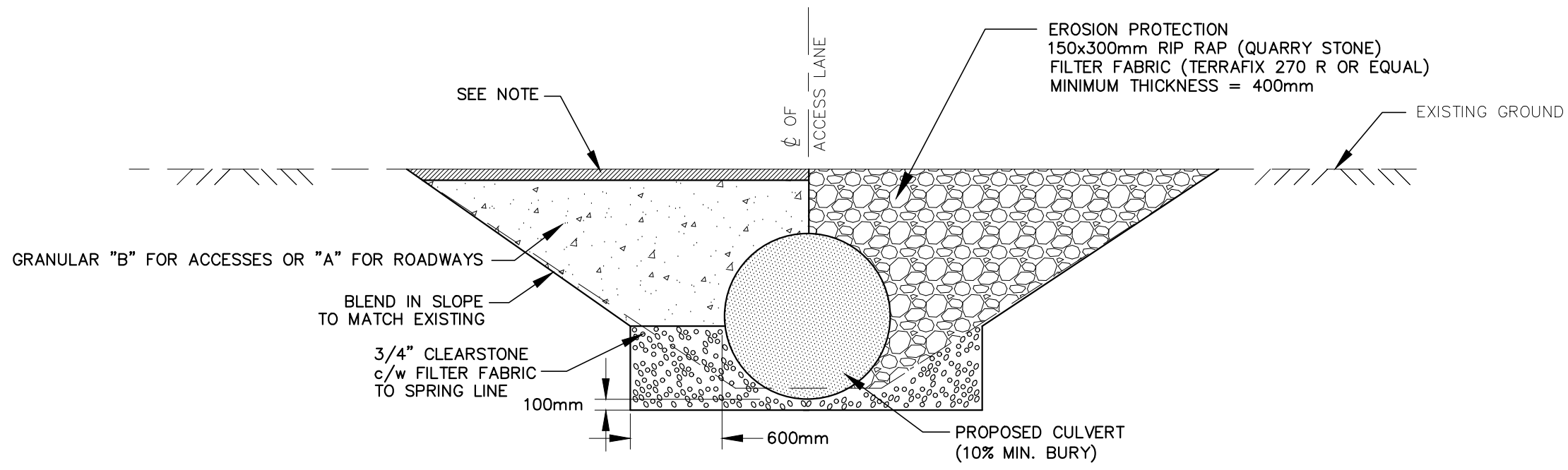
PROJECT No.
 2024-1695

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 4, 2026	CS
B. VAN RUITENBURG				
DRAWN				
C. SAUNDERS				

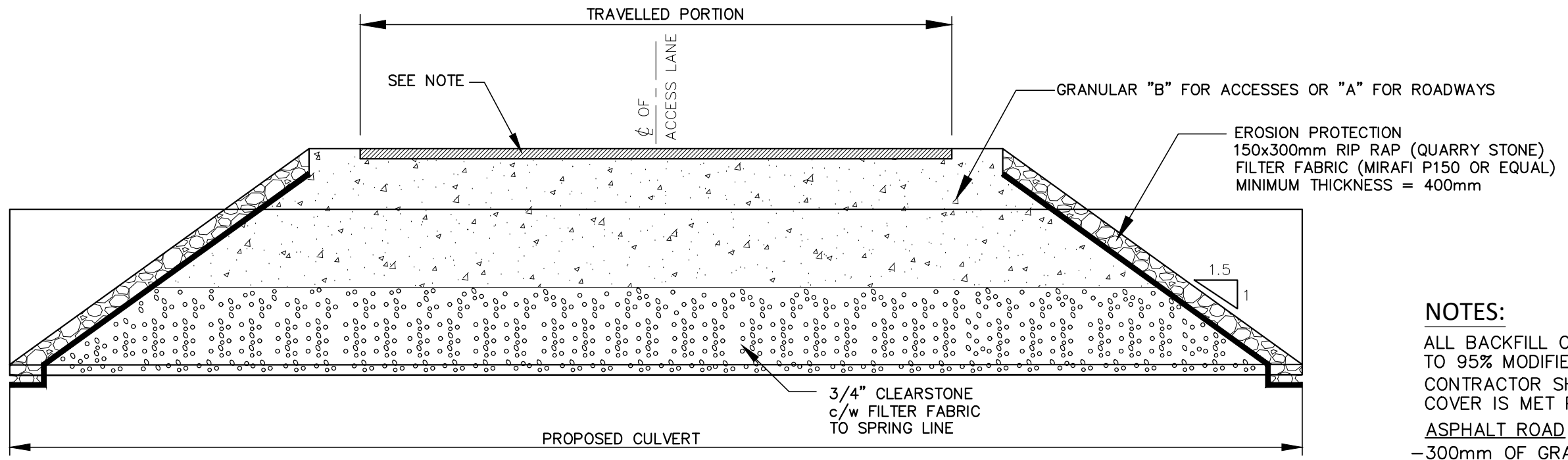
SCALE 1:75

TOWN of AMHERSTBURG
POWERS DRAIN
TYPICAL CROSS SECTIONS

Last Updated: February 4, 2026

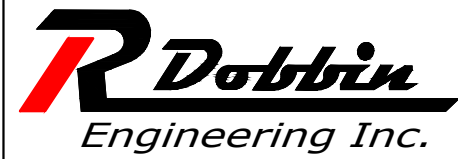


PROPOSED PIPE END SECTION



PROPOSED CROSS-SECTION

- NOTES:**
- ALL BACKFILL COMPACTED TO 95% MODIFIED PROCTOR DENSITY
 - CONTRACTOR SHALL ENSURE MINIMUM COVER IS MET PRIOR TO CROSSING
 - ASPHALT ROAD**
 - 300mm OF GRANULAR "A"
 - HL3 AND HL4 TO MATCH EXISTING THICKNESS (MIN 50mm)
 - ACCESS CULVERT**
 - 150mm OF 100% CRUSHED GRANULAR "A"
 - HL3 ASPHALT TO MATCH EXISTING THICKNESS (IF SPECIFIED)



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

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 4, 2026	CS
B. VAN RUITENBURG				
DRAWN	SCALE 1:75			
C. SAUNDERS	0 2m			59

TOWN of AMHERSTBURG
POWERS DRAIN
TYPICAL CULVERT DETAIL

7
OF 7

DRAWING NAME: Powers Drain Typical Culvert Detail
 PROJECT No. 2024-1695

Last Updated: February 4, 2026

THE CORPORATION OF THE TOWN OF AMHERSTBURG

BY-LAW NO. 2026-022

By-law to provide for improvements to the Powers Drain (2026) based on the report of Josh Warner, P.Eng of R. Dobbin Engineering Inc.

WHEREAS a request for improvements to the Powers Drain (2026) was received under section 78 of the Drainage Act;

WHEREAS Council of the Corporation of the Town of Amherstburg has authorized Josh Warner, P.Eng., of R. Dobbin Engineering Inc., to prepare a report and said engineer's report dated February 4, 2026 entitled Powers Drain (2026) can be referenced as Schedule A, as attached hereto;

WHEREAS \$391,900.00 is the estimated cost provided for the new drainage works;

AND WHEREAS the report was considered by the Amherstburg Drainage Board at the meeting held on March 24, 2026.

NOW THEREFORE the Council of the Corporation of the Town of Amherstburg hereby enacts as follows:

1. AUTHORIZATION

The attached drainage report is adopted and the drainage works is authorized and shall be completed as specified in the report.

2. BORROWING

The Corporation of the Town of Amherstburg may borrow on the credit of the Corporation the amount of \$391,900.00 being the estimated amount necessary for the improvements of the drainage works.

3. DEBENTURE(S)

The Corporation may issue debenture(s) for the amount borrowed less the total amount of:

- (a) Grants received under section 85 of the Drainage Act;
- (b) Monies paid as allowances;
- (c) Commuted payments made in respect of lands and roads assessed with the municipality;
- (d) Money paid under subsection 61(3) of the Drainage Act; and
- (e) Money assessed in and payable by another municipality.

4. PAYMENT

Such debenture(s) shall be made payable within 5 years from the date of the debenture(s) and shall bear interest at a rate not higher than 1% more than the municipal lending rates as posted by The Town of Amherstburg's Bank's Prime Lending Rate on the date of sale of such debenture(s).

- (1) A special equal annual rate sufficient to redeem the principal and interest on the debenture(s) shall be levied upon the lands and roads and shall be collected in the same manner and at the same as other taxes are collected in each year for 5 years after the passing of this by-law.
- (2) All assessments of \$1000.00 or less are payable in the first year in which the assessments are imposed.

Read a first and second time and provisionally adopted this 13th day of April 2026.

MAYOR – MICHAEL PRUE

CLERK – KEVIN FOX

Read a third time and finally passed this ___ day of _____, 2026.

MAYOR – MICHAEL PRUE

CLERK – KEVIN FOX

February 17, 2026

The Mayor and Council
Town of Amherstburg
271 Sandwich Street South
Amherstburg, ON
N9V 2A5

Gentlemen and Mesdames:

Re: Beneteau, Vollans and Tremblay Drains (Previously the Beneteau-Vollans, Beneteau-Vollans Diversion, Tremblay Branch and Tremblay Drains)

In accordance with your instructions, R. Dobbin Engineering has undertaken an examination of the existing Beneteau-Vollans, Beneteau-Vollans Diversion, Tremblay Branch Drain and Tremblay Drains in the Town of Amherstburg.

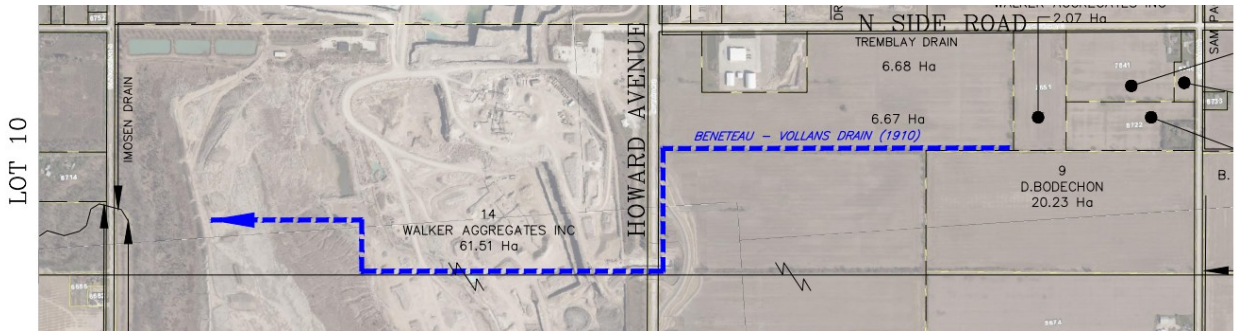
Authorization under the Drainage Act

This Engineers Report that has been prepared under Section 78 of the Drainage Act as per a request from an affected Landowner.

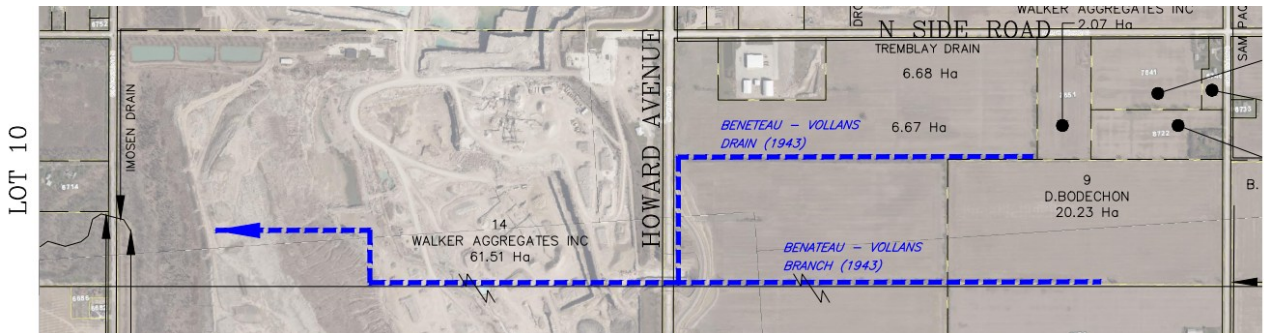
Under Section 78 of the Drainage Act, Council may undertake and complete the maintenance or repair of any drainage works constructed under a bylaw passed under this Act or its predecessor. Section 78 is to be used where it is considered expedient to change the course of the drainage works, or to make 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.

Background

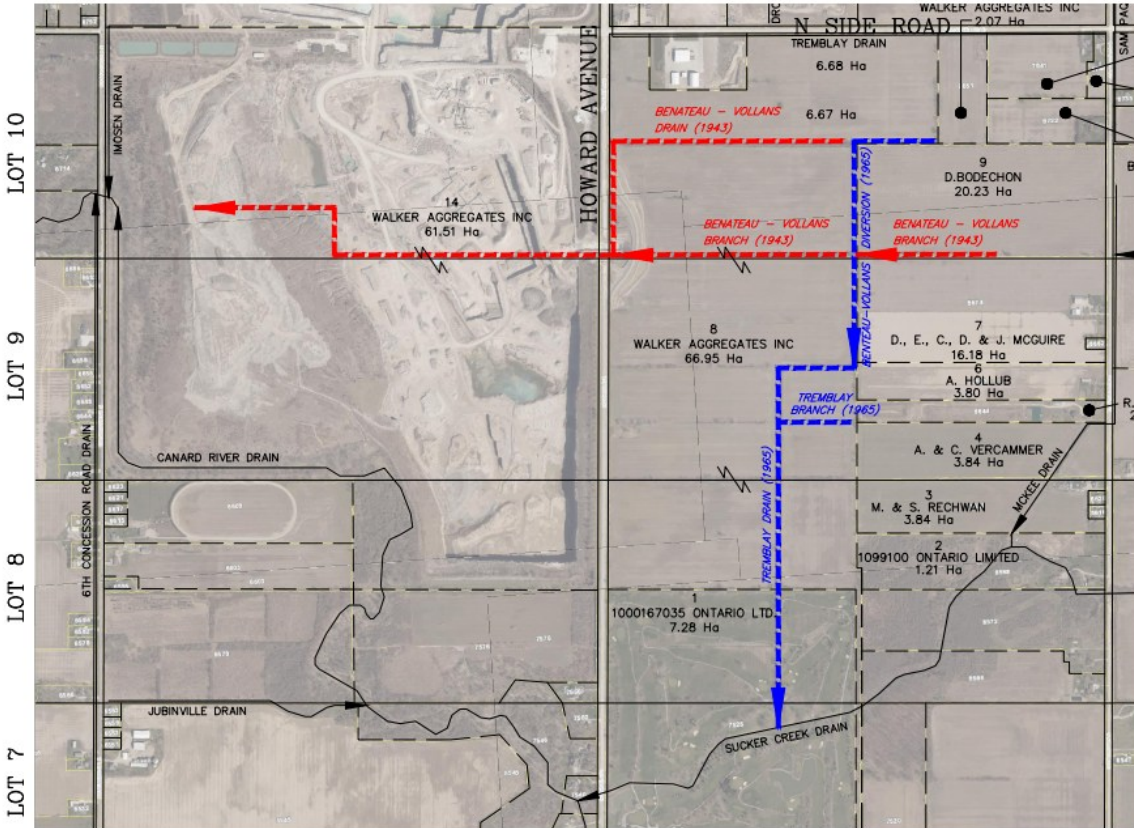
The first report for the Beneteau-Vollans Drain is dated December 2, 1910. Under this report the drain outletted into the Canard River Drain (the Canard River Drain has since been re-routed) in Lot 10, Concession 6 and continued generally easterly to Lot 10, Concession 7 as shown below.



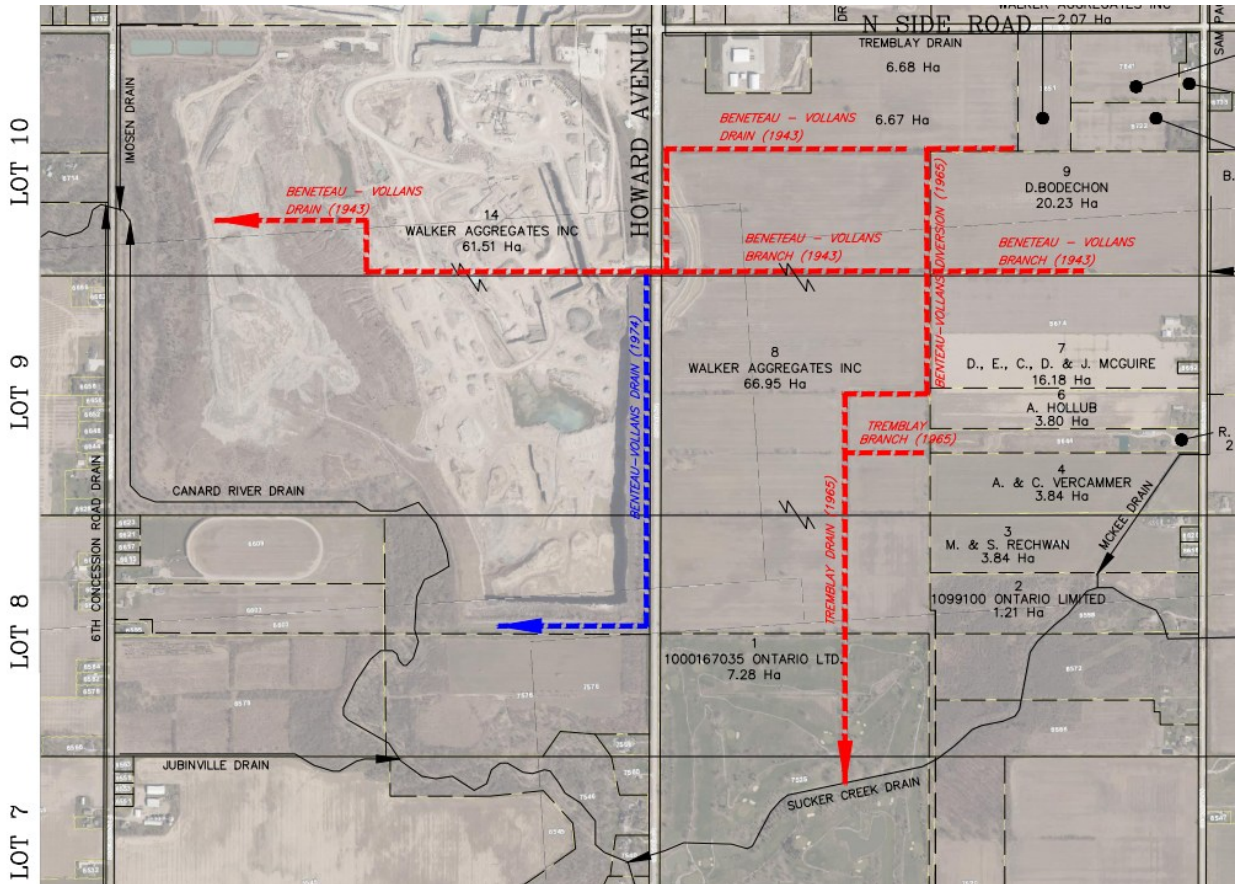
Under an Engineer's Report dated November 13, 1943 the Beneteau-Vollans Drain was improved and the Beneteau-Vollans Branch was constructed.



Under an Engineer's Report dated October 8, 1965 the upper end of the Beneteau-Vollans Drain and the Tremblay Drain were improved. At this time, the Beneteau-Vollans Drain was diverted along the line immediately west of the blind line in the S ½ of Lot 10 and in the N ½ of Lot 9, Concession 7 to an outlet in the Tremblay Drain. The Tremblay Drain and its Branch were repaired and improved. The report also specified culverts on the Tremblay Drain.



Under an Engineer's Report dated August 2, 1974 the Beneteau-Vollans Drain was diverted around the land owned by Allied Chemical Canada, Ltd. The drain was re-routed west of Howard Avenue along the west side of Howard Avenue and thence westerly along the south property line to the Canard River Drain as outlined below.



In 2025, the Beneteau-Vollans Drain (1943) west of Howard Avenue and the portion of the Beneteau-Vollans Drain (1943) that is east of Howard and running east-west were abandoned by the Town of Amherstburg under Section 84 of the Drainage Act.

On-Site Meeting

A site meeting was held on March 26th, 2025.

The following were present at the meeting:

- Josh Warner (R. Dobbin Engineering)
- Sam Paglia (Drainage Superintendent, Town of Amherstburg)
- Mark Fishleigh (Field Service Engineer, County of Essex)
- Jesse Carmichael (Landowner)
- Vince Gagnier (Landowner)
- Al McGuire (Landowner)
- Ray Soucie (Landowner)
- Kate Soucie (Landowner)
- Dave McGuire (Landowner)
- Chris McGuire (Landowner)

The following is a brief summary of the meeting:

- General discussion of the Drainage Act and Landowners rights under the Drainage Act.
- The Landowners were informed that the property with Index Number 9 has made a request to re-route the current Tremblay Drain to the southeast corner of their property in order to facilitate their quarry operation.
- It was discussed that the working side would remain on the west side of the drain which would be consistent with past reports and that the working area may be on top of a berm that is to be constructed by the Landowner. It was stated that any additional cost for future maintenance due to the berm would be assessed to the property with Index Number 9.
- It was discussed that the existing reports on the drains are significantly out of date and therefore require updating to all the drainage works in the area.
- It was mentioned that the working area for the Tremblay Drain on North Sideroad would need to be adjusted to reflect that there will be a berm built adjacent the drain.
- It was requested that rock chutes be provided to drain surface water from the properties to the east of the drain.
- No adverse soil conditions were noted at the site meeting.

Drain Classification

The existing drains are currently classified as class “F” 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.

Class “F” drains are intermittent or ephemeral (dry for more than two consecutive months).

Approvals

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

Discussion

After further discussions with the property with Index Number 9 and a recent purchase of the property with Index Number 10, they requested that the following revisions be considered as part of the report:

- The working side be on the east side of the drain but still be solely on the property with Index Number 9. This will involve a working corridor of 3.5m on the east/south side of the drain.
- The drain be moved onto the property with Index Number 10 as it was recently purchased.

Existing Conditions

Below is a summary of the condition of the existing culverts:

Culvert Number / Station	Location (Parcel Number)	Existing Culvert	Condition	Recommendation
Vollans Drain				
1	1	1100mm dia. CSP	Poor. Bottom has significant holes. Culvert is not centered in the drain.	Replace
2	9	Currently no culvert in this location. Culvert is Proposed.		
Beneteau Drain				
3	Howard Avenue	1050mm dia. Concrete	Good.	Leave and Specify for Future Replacement
4	9	850mm dia. CSP	Under water. Culvert no Longer Required	Remove

Draft Report Meeting (January 28, 2026)

A draft report, dated November 10, 2025, was sent to all the affected Landowners and a meeting was held on January 28, 2026 to go over the report and address any questions and concerns related to the draft report. The following were present at the meeting:

- Josh Warner (R. Dobbin Engineering)
- Sam Paglia (Drainage Superintendent, Town of Amherstburg)
- Nicole Humber (Public Works Clerk, Town of Amherstburg)
- Al McGuire (Landowner)
- Ray Soucie (Landowner)
- Dave McGuire (Landowner)
- Jen McGuire (Landowner)
- Dan McGuire (Landowner)
- Chris McGuire (Landowner)

The following is a brief summary of the meeting:

- General discussion of the Drainage Act.
- It was verified that the future working area will be located on the property with Index Number 9.
- It was discussed that a portion of the properties fronting Concession Road 8 drain to the McKee Drain. R. Dobbin Engineering was to investigate this.
 - Upon review, the report has been revised to reflect that a portion of parcel number 7 and all of parcel number 8 drain to the McKee Drain.
- No other major concerns were brought forward.

Design

The access culverts shall be designed to provide outlet for a 1 in 5-year storm event. The county road culverts shall be designed to provide outlet for a 1 in 50-year storm event.

Recommendations

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

1. All previous reports as part of the Beneteau-Vollans, Beneteau-Vollans Branch, Beneteau-Vollans Diversion, Tremblay and Tremblay Branch Drains in Lots 8 to 10, Concession 6 and 7 (reports dated December 2, 1910, November 13, 1942, October 8, 1965 and August 2, 1974) shall be abandoned and replaced with the drains outlined in this report. The drain names shall be the Vollans Drain, Beneteau Drain and Vollans Branch Drain as outlined on the drawings.

Vollans Drain

2. Culvert #1 shall be replaced and the channel immediately downstream shall be cleaned of rip rap and debris. Culvert #2 shall be installed at the location of the existing monitoring well on the property with Index Number 9.
3. The Vollans Drain shall be re-routed at the southeast corner of the property with Index Number 9 (Station 0+390 to 1+200). The open channel shall be cleaned in order to provide a sufficient outlet (Station 0+300 to 0+390) for the proposed move off, the drain shall be moved off to the west to provide a 3.5m working corridor (Station 1+200 to 1+503) and the drain shall be moved south/east onto the property with Index Number 10 (Station 1+503 to 2+028). Future maintenance specifications shall be developed for the entirety of the drainage works. Swales, rock chutes, and tile extensions, etc. shall be utilized to convey water from the properties to the south/east of the relocated drain and this infrastructure shall form part of the drainage works.

Volans Branch Drain

4. Future maintenance specifications shall be developed for the drainage works.

Beneteau Drain

5. Future maintenance specifications shall be developed for the replacement of Culvert #3. Culvert #4 shall be removed from the drainage works.
6. Future maintenance specifications shall be developed for the open channel portion of the drainage works.

Tremblay Drain along the south side of North Side Road

7. The working area for future maintenance of the Tremblay Drain along the south side of North Side Road shall be changed from the south side of the drain to the north side. The working area shall extend from the centreline of the road to the drain. The excavated material in this section of the drain shall be trucked with any additional cost to truck the excavated material being assessed to the property with Index Number 9.

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 \$346,692.00, including preparation of the report, attending the Meeting to Consider the Report, attending the Court of Revision and estimates for tendering, construction inspection, permitting and contract administration. 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. Items to be assessed under Section 26 for road crossings and locating and working around utilities shall be tendered separately with the actual cost plus a portion of the engineering (25% of the construction cost) being assessed to the owner of the road or public utility.

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 traffic control has been assessed to the owner of Howard Avenue as a special benefit assessment as per Section 26 of the Drainage Act. The special benefit assessment to the road shall be calculated as follows:

Howard Avenue = Tendered Amount for Traffic Control x 1.25 (For Engineering and Taxes)

2. The replacement of Culvert #1 has been assessed with 40% of the cost applied as benefit assessment to property and the remainder of the cost assessed as an outlet assessment to upstream lands and roads based on equivalent hectares. The installation and engineering for Culvert #2 and #3 has been assessed with 100% of the cost applied as benefit assessment. The removal of Culvert #4 has been assessed with 50% of the cost applied as benefit assessment to the property with Index Number 9 and 50% of the cost applied as a benefit assessment to the owner of Howard Avenue.
3. The open channel relocation/move-offs have been assessed with any cost above a standard cleanout applied to the requesting property as a benefit assessment.
4. The engineering for the Vollans Branch Drain has been assessed with 80% of the cost applied as a benefit assessment to the property with Index Number 10 and 20% of the cost applied as a benefit assessment to the property with Index Number 7.
5. The remainder of the drainage works has been assessed with 40% of the cost applied as a benefit assessment and 60% applied as an outlet assessment to the upstream lands and roads based on equivalent hectares.

All final costs included in the cost estimate of this report, except as identified above, 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.

Allowances

Under Section 29 of the Drainage Act, the Engineer in his report shall estimate and allow in money to the Owner 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 for right of way and 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 (approximately \$20,000.00 per acre). Allowances for crop loss are based on \$2,000.00 per hectare for the first year and \$1,000.00 for the second year (\$3,000.00 per hectare total).

Access and Working Area

Beneteau Drain

Access to the work site for construction and future maintenance shall be from Howard Avenue and through the property with Index Number 15. Access shall generally be restricted to a width of 6 metres.

The working area for future maintenance of the drain from Station 0+000 to 0+582 shall be from the south side of the drain and for a width of 15m from the top of bank. The working area from Station 0+582 to 1+806 shall be from the road side with the excavated material being trucked. The working area for the construction and future maintenance at each culvert shall extend 10 metres from the bank on both sides and for 10 metres along the channel on either side of the culvert

Vollans Branch Drain

Access to the work site for construction and future maintenance shall be from Concession Road 8 and through the property with Index Number 10. Access shall generally be restricted to a width of 6 metres.

The working area for future maintenance of the drain shall be from the north side of the drain and for a width of 15m from the top of bank.

Vollans Drain

Construction

Access to the work site for construction shall be from Howard Avenue and Concession Road 8 and through the property with Roll Numbers 9 and 10. Access shall generally be restricted to a width of 6 metres in a location determined by the Engineer.

The working area for construction on the drain from Station 0+223 to 0+390 shall be from the west side of the drain and for a width of 6m from the existing top of bank. The working area for construction of the drain from Station 0+390 to 1+503 shall be from southerly/easterly limit of the property with Index Number 9 and shall extend 30m into the property with Index Number 9. The working area for construction of the drain from Station 1+503 to 2+028 shall extend 10m easterly/southerly from the proposed drain location and shall extend 10m westerly/northerly of the current drain location.

Future Maintenance

Access to the work site for construction and future maintenance shall be from Howard Avenue, North Sideroad, Middle Sideroad and Concession Road 8. Access shall be through the parcel with Index Number 9, 10 or 1 and along the length of the drainage works. The location of access shall be determined by the Drainage Superintendent. Access shall generally be restricted to a width of 6 metres. The parcel with Index Number 9 is expected to build a berm on the west/north side of the drain. Therefore, once the berm is constructed the drain shall be maintained from the south/east side of the drain from Station 0+390 to 1+503. The drain shall be accessed for work between Station 0+390 to 1+503 from Middle Side Road, through the property with Index Number 9 and across Culvert #2, or from Howard Avenue and through the property with Index Number 9. Any work to ensure either access is suitable for the Contractor shall be assessed to the property with Index Number 9. The working area from Station 0+390 to 1+503 shall extend from the east/south top of bank to the property line (a distance of 3.5m) on the property with Index Number 9. The working area from Station 1+503 to 2+028 shall extend 3.5m to the north/west of the drain and 10m to the south/east side of the drain.

All excavated material shall be trucked offsite between Station 0+000 and 1+503. The increased cost to truck excavated material shall be assessed to property in which the work is occurring.

Tremblay Drain (Along the south side of North Side Road)

The working area for future maintenance of the Tremblay Drain along the south side of North Side Road shall be changed from the south side of the drain to the north side. The working area shall extend from the centreline of the road to the drain. The excavated material in this section of the drain shall be trucked with any additional cost to truck the excavated material being assessed to the property with Index Number 9.

Restrictions

No trees shrubs shall be planted nor shall permanent structures be erected within the maintenance working corridor 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

The Vollans, Vollans Branch and Beneteau Drains shall be repaired and maintained as per the applicable Schedule of Maintenance or below provisions, and the specifications and drawings included in this report. Any additional costs as a result of the berm on the property with Index Number 9 shall be assessed to the property. This shall include, but not be limited to, a long reach excavator, trucking of the excavated material, reduced machine size due to the limited working area, work to gain access to the drain or stabilizing the berm. These costs shall be at the discretion of the Drainage Superintendent. All excavated material on the Vollans Drain from Station 0+000 to 1+503 shall be trucked offsite. The increased cost to truck excavated material shall be assessed to property in which the work is occurring. The swales, rock chutes, tiles and all infrastructure between the property line and the channel between Station 0+390 and 1+503 shall be maintained at the expense of the property with Index Number 9.

The Vollans Branch Drain shall be maintained and repaired with 80% assessed to the property with Index Number 10 and 20% assessed to the property with Index Number 7.

All the culverts, as included in the profile with rip rap end walls, shall be maintained and repaired in the following manner:

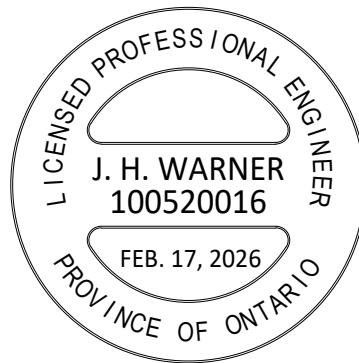
Culvert Number	Benefiting Lands	Road Authority	Upstream Based on Equivalent Hectares as Contained in applicable SofM
1	40%		60%
2	100%		
3		100% to Howard Avenue	

The additional costs as a result of a road or utility shall be assessed to the owner of the road or utility as per Section 26 of the Drainage Act.

In the future, when maintenance occurs on the Vollans Drain, the drainage on the property with Index Number 9 shall be reviewed by the Drainage Superintendent. If the area utilizing the Vollans Drain differs from the assessed area outlined in this report a Section 65 report shall be produced to reflect the revised area.

Yours truly,

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



Beneteau and Vollans Drains
 Town of Amherstburg
 February 17, 2026

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	Parcel Number	Owner	Section 29 (\$)	Section 30 (\$)	Total (\$)
7	Pt. Lot 7 & 8	1	1000167035 Ontario Ltd.	-	990	990
	Pt. Lot 8 & 9	9	Walker Aggregates Inc.	-	5,900	5,900
	SE 1/4 Lot 10	10	Walker Industries Holdings Ltd.	13,130	2,360	15,490
6	SE 1/2 Lot 8	15	627517 Ontario Limited	5,820	-	5,820
TOTAL ALLOWANCES				\$18,950	\$9,250	\$28,200

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	500	500
General Restoration/Seeding	1	LS	1,000	1,000
Hydroseeding between Property Line and Channel from Station 0+390 to 1+503 (Approx. 3900 sq.m)	1	LS	6,000	6,000
Beneteau Drain				
Traffic Control	1	LS	500	500
Silt Fence	1	LS	500	500
Removal of Culvert #4 and Restoration/Seeding of Channel	1	LS	2,000	2,000
Vollans Drain				
Dam Existing Drains	2	each	500	1,000
Silt Fence	1	LS	500	500
Culvert #1 (Parcel Number 1, 1099100 Ontario Limited)				
Removal of existing structure and Unsuitable Material	1.0	LS	1,500	1,500
Supply & install 1600mm dia. CSP c/w Bedding	14.0	m	900	12,600
Supply and install Granular 'B' Type II	120.0	tonne	40	4,800
Supply & install Granular 'A'	25.0	tonne	50	1,250
Supply & install rip rap endwalls	25.0	tonne	110	2,750
Cleanout Channel of Rock and Gravel 10m Downstream of Culvert and Truck Excavated Material	1	LS	1,000	1,000
Open Channel Cleanout (Station 0+300 to 0+390)				
Remove and Reinstall Wire Fence	1	LS	400	400
Brushing and Tree Removal	1	LS	800	800
Open Channel Excavation	90	m	10	900
Trucking of Excavated Material	90	m	12	1,080
Reconnect Existing Tile Outlets	1	each	100	100
Restoration/Seeding	1	LS	1,500	1,500
Open Channel Re-Route (Station 0+390 to 1+200)				
Brushing and Tree Removal	1	LS	600	600
Strip and Stockpile Topsoil for New Channel Alignment	810	m	10	8,100
Excavation of New Open Channel	810	m	30	24,300
Replace and Extend Existing Tiles from Property Line to Drain	5	each	400	2,000

<u>Item Description (Supply and Install New)</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Cost (\$)</u>	<u>Total (\$)</u>
Supply and Install Rip Rap including for Rock Chutes to Property Line	180	tonne	120	21,600
Supply and Install 450mm dia. HDPE (320 kPa) from Property Line to Drain c/w Granular "A" Bedding and Backfill (Station 1+200)	5	m	400	2,000
Side Slope Hydroseeding (Approximately 5,900 sq.m)	1	LS	8,900	8,900
Culvert #2 (Parcel Number 9, Walker Aggregates Inc.)				
Supply & install 1600mm dia. CSP c/w Bedding	15.0	m	900	13,500
Supply and install Granular 'B' Type II	120.0	tonne	40	4,800
Supply & install Granular 'A'	25.0	tonne	50	1,250
Supply & install rip rap endwalls	25.0	tonne	120	3,000
Open Channel Move Off (Station 1+200 to 1+503)				
Brushing and Tree Removal	1	LS	1,500	1,500
Strip and Place/Stockpile Topsoil in Existing Channel and In New Channel Alignment	303	m	16	4,848
Fill in Existing Open Channel	303	m	15	4,545
Excavation of New Open Channel	303	m	30	9,090
Replace and Extend Existing Tiles from Property Line to Drain	5	each	400	2,000
Supply and Install Rip Rap including for Rock Chutes to Property Line	50	tonne	120	6,000
Side Slope Hydroseeding (Approximately 2,100 sq.m)	1	LS	3,200	3,200
Open Channel Move Off (Station 1+503 to 2+028)				
Remove Existing Fence and Leave for Landowner	1	LS	3,000	3,000
Brushing and Tree Removal	1	LS	2,000	2,000
Strip and Stockpile Topsoil in Existing Channel and In New Channel Alignment	525	m	15	7,875
Fill in Existing Open Channel	525	m	15	7,875
Excavation of New Open Channel	525	m	30	15,750
Reconnect Existing Tiles	5	each	400	2,000
Supply and Install Rip Rap including for Rock Chutes	80	tonne	120	9,600
Side Slope Hydroseeding (Approximately 3,300 sq.m)	1	LS	5,000	5,000
Contingency				21,469
Sub Total				236,482
Allowances				28,200
Engineering				58,060
Estimate for Tendering, Inspection and Contract				18,000
ERCA Fee				450
Total Estimate excluding HST				341,192
Non-Recoverable HST (1.76%)				5,500
Total Estimate				\$ 346,692

SCHEDULE OF ASSESSMENT

Conc.	Lot or Part	Affected Hectares	Parcel Number	Owner	Special Benefit (\$)	Benefit (\$)	Outlet (\$)	Total (\$)
Public Lands								
	Howard Avenue	4.50		County of Essex	713	5,704	2,434	8,851
					713	5,704	2,434	8,851
Agricultural Lands								
7	N 1/4 E 1/2 Lot 8	3.84	3	M. & S. Rechwan		95	433	528
	S Pt. E 1/2 Lot 9	3.84	4	A. & C. Vercammer		95	450	545
	Pt. E 1/2 Lot Lot 9	3.80	6	A. Hollub		52	464	516
	N Pt. E 1/2 Lot 9	15.10	7	D., E., C., D. & J. McGuire		590	1,966	2,556
	SE 1/4 Lot 10	20.83	10	Walker Industries Holdings Ltd.		1,799	2,997	4,796
	Pt. NE 1/4 Lot 10	4.05	11	B. & B. Kenshol		-	626	626
6	SE 1/2 Lot 8	1.60	15	627517 Ontario Limited		204	365	569
					-	2,835	7,301	10,136

Conc.	Lot or Part	Affected Hectares	Parcel Number	Owner	Special Benefit (\$)	Benefit (\$)	Outlet (\$)	Total (\$)	
Non Agricultural Lands									
7	Pt. Lot 7 & 8	7.28	1	1000167035 Ontario Ltd.		14,914	564	15,478	
	S 1/2 N 1/2 Lot 8	1.21	2	1099100 Ontario Limited		95	115	210	
	Pt. E 1/2 Lot 9	2.27	5	R. Soucie		43	272	315	
	Pt. E 1/2 Lot 9	0.00	8	S. & A. McGuire		-	-	-	
	Pt. Lot 8 & 9	99.00	9	Walker Aggregates Inc.		284,819	24,809	309,628	
	Pt. NE 1/4 Lot 10	0.23	12	D. Toth		-	43	43	
	Pt. NE 1/4 Lot 10	1.31	13	D. Toth		-	235	235	
	Pt. NE 1/4 Lot 10	2.07	14	Walker Aggregates Inc.		-	483	483	
6	Pt. Lot 8, 9 & 10	1.20	16	Walker Aggregates Inc.		893	420	1,313	
						-	300,764	26,941	327,705
				Total Non Agricultural Lands	327,705				
				Total Agricultural Lands	10,136				
				Total Public Lands	8,851				
				Total Assessment	\$346,692				

Estimated Net Assessment

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

Conc.	Lot or Part	Affected Hecatares	Parcel Number	Owner	Total Assessment (\$)	Estimated Grant (\$)	Allowances (\$)	Estimated Net Assessment (\$)
Public Lands								
	Howard Avenue	4.50		County of Essex	8,851			8,851
Agricultural Lands								
7	N 1/4 E 1/2 Lot 8	3.84	3	M. & S. Rechwan	528	176		352
	S Pt. E 1/2 Lot 9	3.84	4	A. & C. Vercammer	545	182		363
	Pt. E 1/2 Lot Lot 9	3.80	6	A. Hollub	516	172		344
	N Pt. E 1/2 Lot 9	15.10	7	D., E., C., D. & J. McGuire	2,556	852		1,704
	SE 1/4 Lot 10	20.83	10	Walker Industries Holdings Ltd.	4,796	1,599	15,490	(12,293)
	Pt. NE 1/4 Lot 10	4.05	11	B. & B. Kenshol	626	209		417
6	SE 1/2 Lot 8	1.60	15	627517 Ontario Limited	569	190	5,820	(5,441)
Non Agricultural Lands								
7	Pt. Lot 7 & 8	7.28	1	1000167035 Ontario Ltd.	15,478		990	14,488
	S 1/2 N 1/2 Lot 8	1.21	2	1099100 Ontario Limited	210			210
	Pt. E 1/2 Lot 9	2.27	5	R. Soucie	315			315
	Pt. E 1/2 Lot 9	0.00	8	S. & A. McGuire	-			-
	Pt. Lot 8 & 9	99.00	9	Walker Aggregates Inc.	309,628		5,900	303,728
	Pt. NE 1/4 Lot 10	0.23	12	D. Toth	43			43
	Pt. NE 1/4 Lot 10	1.31	13	D. Toth	235			235
	Pt. NE 1/4 Lot 10	2.07	14	Walker Aggregates Inc.	483			483
6	Pt. Lot 8, 9 & 10	1.20	16	Walker Aggregates Inc.	1,313			1,313
					346,692	3,380	28,200	315,112

SCHEDULE OF MAINTENANCE: BENETEAU DRAIN
 To Maintain the Beneteau Drain Open Channel From Station 0+000 to 1+806

Conc.	Lot or Part	Affected Hecatares	Parcel Number	Owner	Benefit (\$)	Outlet (\$)	Total (\$)	Equivalent Hectares
Public Lands								
	Howard Avenue	4.50		County of Essex	285	137	422	4.05
					285	137	422	
Agricultural Lands								
6	SE 1/2 Lot 8	1.60	15	627517 Ontario Limited	24	7	31	0.48
					24	7	31	
Non Agricultural Lands								
7	Pt. Lot 8 & 9	30.00	9	Walker Aggregates Inc.	41	392	433	13.50
6	Pt. Lot 8, 9 & 10	1.20	16	Walker Aggregates Inc.	105	9	114	0.54
					146	401	547	
				Total Non Agricultural Lands	547			
				Total Agricultural Lands	31			
				Total Public Lands	422			
				Total Assessment	\$1,000			

SCHEDULE OF MAINTENANCE: VOLLANS DRAIN
 To Maintain the Vollans Drain Open Channel From Station 0+000 to 2+028.

Conc.	Lot or Part	Affected Hecatares	Parcel Number	Owner	Benefit (\$)	Outlet (\$)	Total (\$)	Equivalent Hectares
Agricultural Lands								
7	N 1/4 E 1/2 Lot 8	3.84	3	M. & S. Rechwan	11	7	18	1.15
	S Pt. E 1/2 Lot 9	3.84	4	A. & C. Vercammer	11	9	20	1.15
	Pt. E 1/2 Lot Lot 9	3.80	6	A. Hollub	6	11	17	1.14
	N Pt. E 1/2 Lot 9	15.10	7	D., E., C., D. & J. McGuire	22	58	80	4.53
	SE 1/4 Lot 10	20.83	10	Walker Industries Holdings Ltd.	23	113	136	6.25
	Pt. NE 1/4 Lot 10	4.05	11	B. & B. Kenshol	-	27	27	1.22
					73	225	298	

Conc.	Lot or Part	Affected Hecatares	Parcel Number	Owner	Benefit (\$)	Outlet (\$)	Total (\$)	Equivalent Hectares	
Non Agricultural Lands									
7	Pt. Lot 7 & 8	7.28	1	1000167035 Ontario Ltd.	102	4	106	3.28	
	S 1/2 N 1/2 Lot 8	1.21	2	1099100 Ontario Limited	11	2	13	0.30	
	Pt. E 1/2 Lot 9	2.27	5	R. Soucie	5	6	11	0.68	
	Pt. E 1/2 Lot 9	0.00	8	S. & A. McGuire	-	-	-	0.00	
	Pt. Lot 8 & 9	69.00	9	Walker Aggregates Inc.	210	329	539	31.05	
	Pt. NE 1/4 Lot 10	0.23	12	D. Toth	-	2	2	0.08	
	Pt. NE 1/4 Lot 10	1.31	13	D. Toth	-	10	10	0.46	
	Pt. NE 1/4 Lot 10	2.07	14	Walker Aggregates Inc.	-	21	21	0.93	
					328	374	702		
Total Non Agricultural Lands					702				
Total Agricultural Lands					298				
Total Assessment					\$1,000				

Beneteau, Vollans and Tremblay Drains
Town of Amherstburg
February 17, 2026

SPECIFICATION OF WORK

1. Location

The location of the proposed and future work outlined in this specification is in Lots 8 to 10, Concession 6 and 7 in The Town of Amherstburg.

2. Scope of Work

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

- Proposed Works
 - Vollans Drain
 - Culvert #1 Replacement and Cleanout Immediately Downstream
 - Culvert #2 Installation
 - Channel Re-Routing/Move-off from Station 0+390 to 2+028
 - Channel Cleanout from Station 0+300 to 0+390
 - Beneteau Drain
 - Culvert #4 Removal

- Future Works
 - Open Channel Works
 - Culvert Replacements

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 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.

Any equivalents shall be approved in writing by the Engineer or Drainage Superintendent prior to ordering.

Construction for Culvert #1 shall be completed after November 1st.

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.

The Contractor shall be responsible for traffic control as per the Ontario Traffic Manual Book 7 – Temporary Conditions (latest revision) when working on public road allowances. A copy of a traffic control plan shall be submitted to the Engineer, Drainage Superintendent and kept on site at all times. The Contractor shall maintain suitable barricades, warning lights, and temporary traffic notices, at his expense, in their proper position to protect the public both day and night. Flagmen are the responsibility of the Contractor when working on the road allowance and when entering or exiting a worksite onto a roadway.

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 noncompliance 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.

They shall also ensure that only competent workmen are employed onsite and that appropriate training and certification is supplied to all employees.

6. MNRF Drain Registration

The Contractor is advised that the Town of Amherstburg has conducted an "Endangered Species Act Review" and has registered its drainage activities with the Ministry of Natural Resources and Forestry.

The Town of Amherstburg, in pursuant to the Endangered Species Act Municipal Agreement, has identified the potential presence of certain species within the project area. It is the responsibility of the Contractor to make certain that necessary provisions are undertaken to ensure the protection of all species at risk and their habitats throughout the course of construction. It is also the responsibility of the Contractor to make itself familiar with the following documents:

1. Town of Amherstburg – Complete Mitigation Documents
2. Town of Amherstburg - Additional Mitigation Measures for Snakes Species
3. Town of Amherstburg - Additional Mitigation Measures for Turtle Species
4. Snakes of Ontario Identifier Guide
5. Turtles of Ontario Identifier Guide

These documents will be provided to the successful bidder.

The Contractor will be responsible for providing the necessary equipment and materials required by the mitigation plans and shall contact the Town of Amherstburg Drainage Superintendent immediately if any endangered species are encountered during construction.

7. 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 and taxes (25% of the cost) shall be borne by that utility.

8. 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, County of Essex and the Town of Amherstburg shall be notified of the pre-construction meeting at least 48 hours prior.

9. Benchmarks

The benchmarks are based on geodetic elevations. Elevations are available at the locations shown on the 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.

10. 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 and accesses with the owners at least two full working days in advance. The Traffic Plan must be submitted to the County of Essex prior to the commencement of any road closures.

- 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 Drainage 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.

11. Access and Working Area

Beneteau Drain

Access to the work site for construction and future maintenance shall be from Howard Avenue and through the property with Index Number 15. Access shall generally be restricted to a width of 6 metres.

The working area for future maintenance of the drain from Station 0+000 to 0+582 shall be from the south side of the drain and for a width of 15m from the top of bank. The working area from Station 0+582 to 1+806 shall be from the road side with the excavated material being trucked. The working area for the construction and future maintenance at each culvert shall extend 10 metres from the bank on both sides and for 10 metres along the channel on either side of the culvert

Vollans Branch Drain

Access to the work site for construction and future maintenance shall be from Concession Road 8 and through the property with Index Number 10. Access shall generally be restricted to a width of 6 metres.

The working area for future maintenance of the drain shall be from the north side of the drain and for a width of 15m from the top of bank.

Vollans Drain

Construction

Access to the work site for construction shall be from Howard Avenue and Concession Road 8 and through the property with Roll Numbers 9 and 10. Access shall generally be restricted to a width of 6 metres in a location determined by the Engineer.

The working area for construction on the drain from Station 0+223 to 0+390 shall be from the west side of the drain and for a width of 15m from the existing top of bank. The working area for construction of the drain from Station 0+390 to 1+503 shall be from southerly/easterly limit of the property with Index Number 9 and shall extend 30m into the property with Index Number 9. The working area for construction of the drain from Station 1+503 to 2+028 shall extend 10m easterly/southerly from the proposed drain location and shall extend 10m westerly/northerly of the current drain location.

Future Maintenance

Access to the work site for construction and future maintenance shall be from Howard Avenue, North Sideroad, Middle Sideroad and Concession Road 8. Access shall be through the parcel with Index Number 9, 10 or 1 and along the length of the drainage

works. The location of access shall be determined by the Drainage Superintendent. Access shall generally be restricted to a width of 6 metres. The parcel with Index Number 9 is expected to build a berm on the west/north side of the drain. Therefore, once the berm is constructed the drain shall be maintained from the south/east side of the drain from Station 0+390 to 1+503. The drain shall be accessed for work between Station 0+390 to 1+503 from Middle Side Road, through the property with Index Number 9 and across Culvert #2, or from Howard Avenue and through the property with Index Number 9. Any work to ensure either access is suitable for the Contractor shall be assessed to the property with Index Number 9. The working area from Station 0+390 to 1+503 shall extend from the east/south top of bank to the property line (a distance of 3.5m) on the property with Index Number 9. The working area from Station 1+503 to 2+028 shall extend 3.5m to the north/west of the drain and 10m to the south/east side of the drain.

All excavated material shall be trucked offsite between Station 0+000 and 1+503. The increased cost to truck excavated material shall be assessed to property in which the work is occurring.

Tremblay Drain (Along the south side of North Side Road)

The working area for future maintenance of the Tremblay Drain along the south side of North Side Road shall be changed from the south side of the drain to the north side. The working area shall extend from the centreline of the road to the drain. The excavated material in this section of the drain shall be trucked with any additional cost to truck the excavated material being assessed to the property with Index Number 9.

12. Removals

The culverts, asphalt, end walls and any native backfill material, when required, shall be removed in their entirety and disposed offsite at the expense of the Contractor. Any broken concrete or rip rap (concrete bags) from the existing structures shall be disposed offsite at the expense of the Contractor unless determined re-usable by the Drainage Superintendent or Engineer.

Where the culverts are to be removed, the Contractor shall restore the channel in these sections to match the upstream and downstream channel dimensions and shall restore them in accordance with the restoration specification.

The Contractor shall work around the existing fences and signs if they are able to. If the existing fences and signs are required to be removed, they shall be removed and re-installed in the same location with the existing materials. The fence between Station 1+503 and 2+028 shall be removed and left for the Landowner. All work in connection with fences and signs shall be carried out in a careful manner so they are replaced in as good a condition as the existing materials permit.

13. Brushing and Tree Removal

For construction and future maintenance all brush, trees, woody vegetation, stumps etc. shall be removed within the channel cross-section and within the working area in order to facilitate construction as determined by the Drainage Superintendent or Engineer. For construction, the trees and brush within the existing section of drain to be moved from Station 0+390 to 1+200 shall remain in place and shall be removed by the Landowner.

A mechanical grinder attached to an excavator shall be used for the removal of brush and trees. Any brush and trees too large to grind shall be close cut. The Contractor shall stockpile the trees and brush in a single pile on the property in which they were removed or dispose of the trees and brush offsite. The Contractor is responsible for the burning of the trees and brush. The Contractor is responsible for obtaining all necessary permits for any disposal sites. Burning of the trees and brush is subject to local bylaws and guidelines of the Ministry of the Environment Conservation and Parks.

Certain trees may be left in place at the discretion of the Drainage Superintendent or Engineer.

14. Strip Topsoil

The topsoil shall be stripped along the proposed and existing channel routes where identified. The topsoil from Station 1+200 to 1+503 shall be placed between the property line and the new drain top of bank. All other stripper topsoil shall be placed at the edge of the working allowance for use by the Landowner.

15. Excavation of Open Channel

For construction and future maintenance, the open channel shall be excavated and maintained to the depths and grades as per the profile and drawings as contained in this Engineers Report. The channel shall be excavated to the proper depth using a laser or similar approved device with a labourer onsite to ensure correctness of grade and to confirm location of tile ends.

For construction on the Vollans Drain the excavated and topsoil material shall be distributed as outlined below with the topsoil and all other excavated material placed in separate piles:

Station 0+223 to 0+390: Trucked and stockpiled on the property with Index Number 9

Station 0+390 to 1+503: Stockpiled at the edge of the working area on the west side of the drain.

Station 1+503 to 2+028: Utilized to fill in the existing drain. The drain shall be backfilled in a maximum of 300mm lifts and compacted to the satisfaction of the Engineer. Any excess material shall be stockpiled at the edge of the working area.

On the Vollans Drain the Contractor shall be responsible for blocking off the three existing drain connections with excavated material and installing rip rap to prevent erosion.

For future maintenance, excavated material shall be trucked or levelled. The excavated material shall be trucked between Station 0+000 and 1+503 on the Vollans Drain. The additional cost to truck the material shall be assessed to the owner requesting the material to be trucked. If levelled, it shall be levelled on the side it is being excavated from. Excavated material shall be cast at least 1.5 metres clear of the bank. Excavated material shall not be placed in low runs or swales out letting surface water to the channel. The excavated material shall be levelled to a maximum depth of 150mm outside of the bush and shall be left in a condition suitable for cultivation. This shall include the removal of any rocks larger than 10cm in diameter and any debris/wood that could damage or plug farm equipment. Leveling shall occur when the material is dry enough to do so as determined by the Drainage Superintendent or Engineer. All high spots above grade shall be removed. The sediment shall be removed leaving a rounded bottom with the intent not to undercut the side slopes. All material unfit for placing on farmlands, as determined by the Drainage Superintendent, shall be disposed of offsite by the Contractor.

The proposed moved-off open channel shall not convey the flows from the Vollans Drain until the banks have become established with vegetation at the discretion of the Engineer.

16. Installation of Culverts

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. Corrugated Steel Pipe Arches and culverts under roadways shall have a minimum wall thickness of 3.5mm. 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. Concrete pipe material shall be as per CSA-A257.2, 65-D.

The high-density polyethylene (HDPE) smooth wall pipe (320 kPa) shall be CSA Approved with bell and spigot joints.

The culverts designated to be replaced in the future under this report shall be examined after any cleanout of the open channel as to its condition. If it is found to be in disrepair

(i.e. there are holes corroded in the bottom or sides) it shall be replaced as per these specifications.

The culverts shall be installed generally in the same location or as approved by the Drainage Superintendent or Engineer. The culverts shall be installed with the invert 10% (minimum 150mm) below the original channel bottom elevation unless otherwise shown in order to achieve the minimum cover. It is the Contractors responsibility to ensure that the minimum cover is achieved when backfilling the culverts. The minimum cover for CSP under Highway Loading shall be 1/6 of the span, and shall be no less than 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.

Access Culverts:

The bottom of the excavation shall be excavated to a minimum of 100mm below the proposed invert. When the pipe has been installed to the proper grade and depth, the excavation shall be backfilled with ¾" clear stone and wrapped in filter fabric from the bottom of the excavation to the spring line of the pipe, this shall be considered the bedding. 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 access culverts shall be backfilled from the spring line or bottom to within 150mm of finished grade with granular "B" Type II. The top 150mm shall be backfilled with OPS granular "A" material to finished grade. If asphalt is proposed, the asphalt shall be HL4 and shall match the existing thickness. In these cases, the granular "A" shall occupy 150mm below the proposed asphalt. Excavated material may be utilized to build up the adjacent access laneways to blend with the required cover height. Granular "A" shall be utilized, at the discretion of the Engineer or Drainage Superintendent, in the vicinity of the proposed culverts in order to provide a suitable finished surface.

Road Culverts:

Where there is asphalt, the asphalt shall be sawcut and milled for a thickness of 45mm and 0.30m past the joint. The milled surface shall be tack coated as per OPSS.

The bottom of the excavation shall be excavated to a minimum of 100mm below the proposed invert. When the pipe has been installed to the proper grade and depth, the excavation shall be backfilled with ¾" clear stone and wrapped in filter fabric from the bottom of the excavation to the spring line of the pipe, this shall be considered the bedding. 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 pipe shall be backfilled above the clear stone with OPS Granular "A".

Asphalt Road: The asphalt shall be HL4 and HL3 at depths to match the existing thickness with a minimum thickness of 50mm for each.

Gravel Road: The top 200mm shall be OPS Granular "M", produced from 100% crushed dolomite, and shall be mechanically compacted to 100% modified standard proctor density.

The culverts shall have rip rap end walls. They 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.

17. Maintenance

The Contractor shall be responsible for maintenance of the drain, including access culverts for a period of one year after their installation. This will include repairing any settlement areas on the travel surface with Asphalt, Granular "A" and/or topsoil and seed.

18. Rip Rap

Erosion protection shall be installed at the discretion of the Engineer or Drainage Superintendent. The rip rap shall be made up of 150mm to 300mm quarry stone or approved equal. The area to receive the rip rap shall first be graded to allow the placement of the rip rap to a depth of 400mm below finished grade. After grading, a layer of filter fabric (Mirafi P150 or approved equal) is to be placed with any joints overlapped a minimum of 600mm. Rip rap shall then be placed with the smaller pieces placed in the gaps and voids to give it a uniform appearance.

Rock chutes made of rip rap shall be installed approximately every 100m between Station 0+390 and 2+028 on the east/south side of the Vollans Drain to allow surface water to enter the drain from the properties to the east/south. This rip rap shall extend to the property line and the Contractor shall ensure that equipment is able to cross the rip rap for maintenance purposes.

19. Seeding/Restoration

All areas disturbed by construction shall be restored to their pre-construction state.

All grass areas disturbed by construction, shall be restored with 50mm of screened topsoil and drill seeded. The area between the channel and property line from Station 0+390 to 1+503 and the side slopes of the open channel shall be hydroseeded. The timing of the seeding shall be approved by the Drainage Superintendent or Engineer.

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.

20. Subsurface Drainage

All existing subsurface drains encountered during construction shall be reconnected and/or extended to the open channel unless otherwise noted on the drawings or as directed by the Drainage Superintendent.

A suitable length of HDPE with 320 kPA stiffness shall be used to connect the existing tile drains from the property line to the open channel. All tile drains shall have rip rap at their outlet and manufactured rodent grates.

The connections shall be carefully backfilled to ensure there is adequate support under the pipe and large clumps of clay do not displace the tile.

21. 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.

A light duty silt fencing shall be installed down-gradient of the work for the duration of construction.

The light duty silt fencing shall be supplied and installed in accordance with OPSS 577 and OPSD 219.110. The light duty silt fencing shall be removed once construction is complete.

CON 5

CON 6

CON 7

CON 8

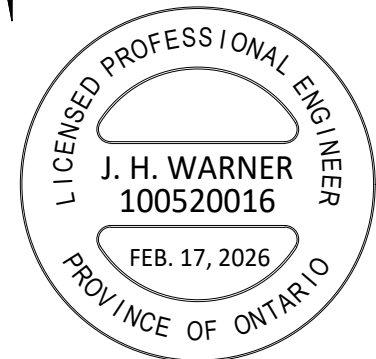
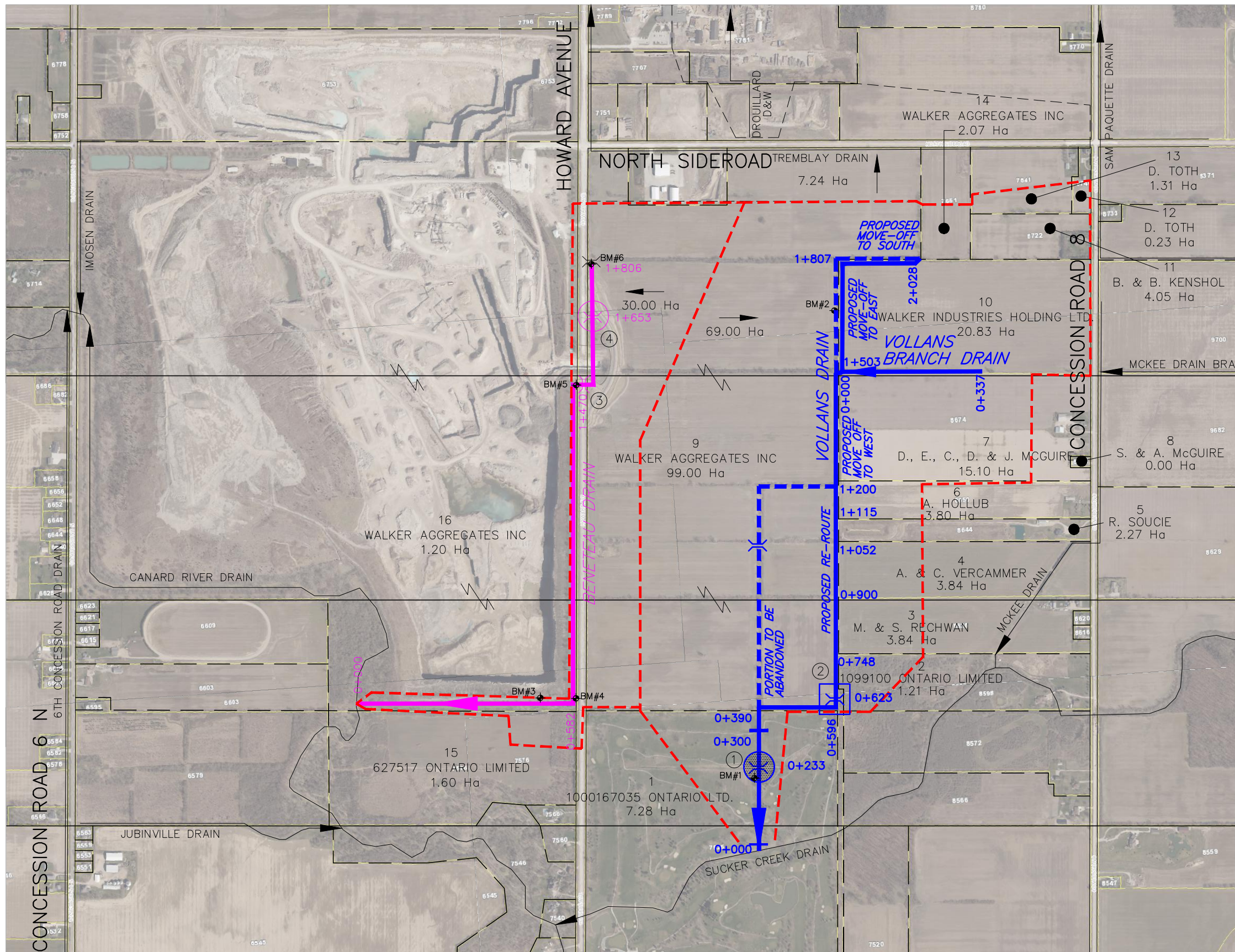
LOT 11

LOT 10

LOT 9

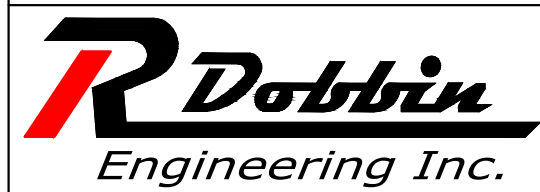
LOT 8

LOT 7



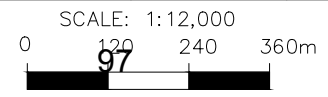
LEGEND

- PEDESTRIAN BRIDGE TO REMAIN PRIVATE
- ⌘ EXISTING CULVERT
- ⌘ EXISTING CULVERT
- ① CULVERT NUMBER
- ⌘ EXISTING CULVERT TO BE REPLACED
- ⌘ EXISTING CULVERT TO BE REMOVED
- ⌘ EXISTING CULVERT TO BE REMOVED
- ⌘ PROPOSED NEW CULVERT
- DRAINAGE AREA
- PROPOSED VOLLANS DRAIN
- PROPOSED DRAIN ABANDONMENT
- PROPOSED BENETEAU DRAIN
- MUNICIPAL DRAIN



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

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 17, 2026	CS
B. VAN RUITENBURG				
DRAWN				
C. SAUNDERS				



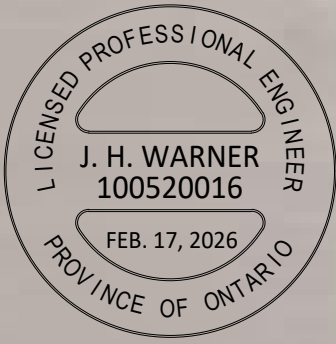
TOWN of AMHERSTBURG
BENETEAU & VOLLANS DRAINS
PLAN

Last Updated: February 17, 2026

DRAWING NAME:
Beneteau & Vollans Drain Plan

PROJECT No.
2024-1709

CON 7



EXISTING DRAIN TO BE DAMMED

RIP RAP EROSION PROTECTION

MATCH LINE 1+217
(LOT LINE BETWEEN LIN 6 & 7)

1+200
PROP 5m OF 450Ø HDPE PIPE TO CONVEY SWALE TO DRAIN
3.5m TYP. LIN 6

A. HOLLUB

1+115

LIN 5

R. SOUCIE

RIP RAP EROSION PROTECTION

TREMBLAY BRANCH
(TO BE ABANDONED)

1+052

EXISTING DRAIN TO BE DAMMED

3.5m TYP. (EAST BANK OF DRAIN TO BE 3.5m WEST OF THE PROPERTY (FENCE) LINE)
LIN 4

A. & C. VERCAMMER

APPROX. 7.5m DRAIN WIDTH TYP.

BERM TO BE ADDED BY LANDOWNER AFTER CONSTRUCTION

LIN 9

WALKER AGGREGATES INC

EXISTING TREMBLAY-BENETEAU - VOLLANS DRAIN (OPEN CHANNEL)

EXCAVATED MATERIAL AND TOPSOIL TO BE WINDROWED ADJACENT TO RE-ROUTED DRAIN IN SEPARATE PILES

0+900

LIN 3

M. & S. RECHWAN

ROCK CHUTES TO BE ADDED APPROXIMATELY EVERY 100m ON EAST SLOPE AT LOCATIONS DETERMINED BY ENGINEER

0+748

LIN 2

1099100 ONTARIO LIMITED

PROPOSED VOLLANS DRAIN RE-ROUTE
(TO BE STRIPPED AND BRUSHED PRIOR TO EXCAVATION)

EXISTING MONITORING WELL

1600Ø CSP (15m LONG) W/ RIP RAP. MEANDER DRAIN AROUND MONITORING WELL AS NEEDED WITH WELL AT NORTH END OF CULVERT

0+623

EXISTING DRAIN TO BE DAMMED

TREMBLAY-VOLLANS-BENETEAU DRAIN
(TO BE ABANDONED IN THIS LOCATION)
(LANDOWNER TO FILL IN CHANNEL)

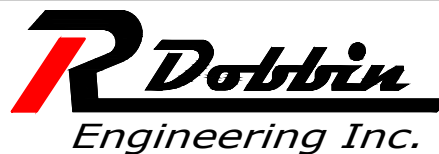
RIP RAP EROSION PROTECTION INSTALLED AT DRAIN BEND LOCATIONS

0+390

0+596

3.5m TYP. (SOUTH BANK OF DRAIN TO BE 3.5m NORTH OF THE PROPERTY (FENCE) LINE)

NOTE: DIMENSIONS OF THE BERM ARE AN APPROXIMATE FOR INFORMATION PURPOSES ONLY AND IS NOT A REQUIREMENT OF THE DRAINAGE PROJECT

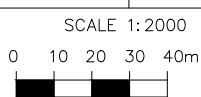


4218 Oil Heritage Road
Petrolia Ontario, N0N 1R0
Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME:
Vollans Drain Detail Plan No.1

PROJECT No.
2024-1606

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 17, 2026	CS
B. VAN RUITENBURG				
DRAWN				
C. SAUNDERS				



TOWN of AMHERSTBURG
VOLLANS DRAIN
DETAIL PLAN No.1

2
of 12

Last Updated: February 17, 2026

NOTE: DIMENSIONS OF THE BERM ARE AN APPROXIMATE FOR INFORMATION PURPOSES ONLY AND IS NOT A REQUIREMENT OF THE DRAINAGE PROJECT

BERM TO BE ADDED BY LANDOWNER AFTER CONSTRUCTION

EXISTING DRAIN TO BE DAMMED

BERM TO BE ADDED BY LANDOWNER AFTER CONSTRUCTION



LIN 9
WALKER AGGREGATES INC

EXISTING DRAIN TO BE STRIPPED, FILLED IN WITH EXCAVATED MATERIAL AND NEW CHANNEL TO BE EXCAVATED WITH WEST BANK 3.5m EAST OF THE PROPERTY LINE (STATION 1+503 TO 1+807)

EXISTING TREMBLAY BENETEAU - VOLLANS DRAIN (OPEN CHANNEL) TO BE ABANDONED

RIP RAP EROSION PROTECTION
EXISTING DRAIN TO BE STRIPPED, FILLED IN WITH EXCAVATED EXCAVATED MATERIAL AND NEW CHANNEL TO BE EXCAVATED WITH NORTH BANK 3.5m SOUTH OF THE PROPERTY LINE (STATION 1+807 TO 2+028)

EXCESS EXCAVATED MATERIAL AND TOPSOIL TO BE WINDROWED ADJACENT TO RE-ROUTED DRAIN IN SEPARATE PILES

EXISTING FENCE LINE TO BE REMOVED AND LEFT FOR PROPERTY OWNER (STATION 1+503 TO 2+028)

LIN 10

WALKER INDUSTRIES HOLDINGS LTD.

EXISTING 400Ø CSP TO BE CUT BACK TO ACCOMMODATE RE-ROUTE LOCATION RIP RAP EROSION PROTECTION TO BE ALONG EAST BANK

3.5m TYP. (WEST BANK OF DRAIN TO BE 3.5m EAST OF THE PROPERTY (FENCE) LINE)

RIP RAP EROSION PROTECTION

RESHAPE VOLLANS BRANCH DRAIN TO ALLOW FOR OUTLET INTO THE VOLLANS DRAIN RE-ROUTE

BERM TO BE ADDED BY LANDOWNER AFTER CONSTRUCTION

1+503

0+000

EXISTING VOLLANS BRANCH DRAIN

8674

0+227

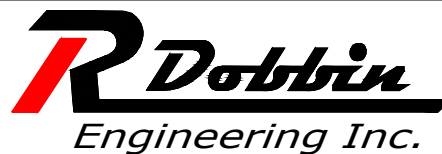
3.5m TYP. (EAST BANK OF DRAIN TO BE 3.5m WEST OF THE PROPERTY (FENCE) LINE)

APPROX. 7.5m DRAIN WIDTH TYP.

LIN 7

D., E., C., D. & J. MCGUIRE

MATCH LINE 1+217
(LOT LINE BETWEEN LIN 6 & 7)



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

DRAWING NAME:
Vollans Drain Detail Plan No.2

PROJECT No.
2024-1606

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 17, 2026	CS
B. VAN RUITENBURG				
DRAWN				
C. SAUNDERS				

SCALE 1:2000

TOWN of AMHERSTBURG

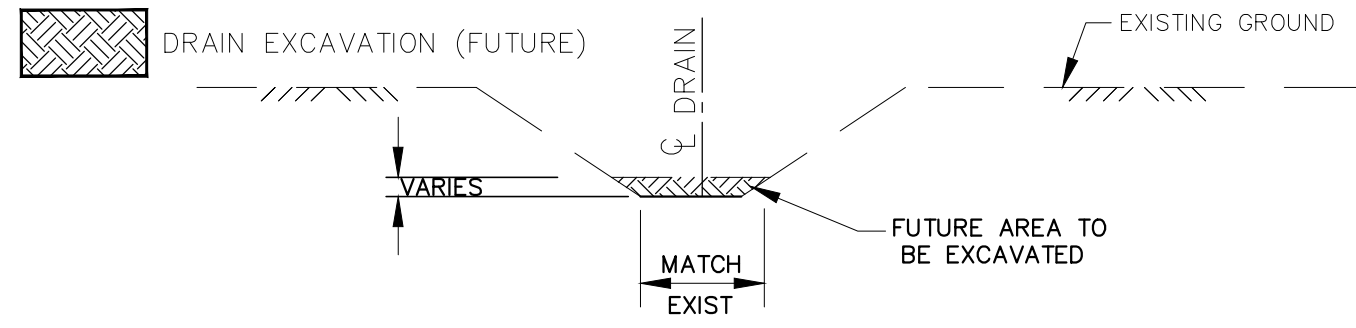
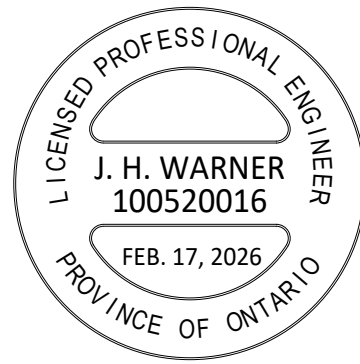
VOLLANS DRAIN DETAIL PLAN No.2

3
of 12

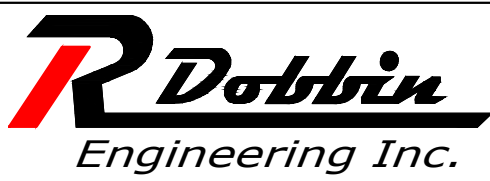
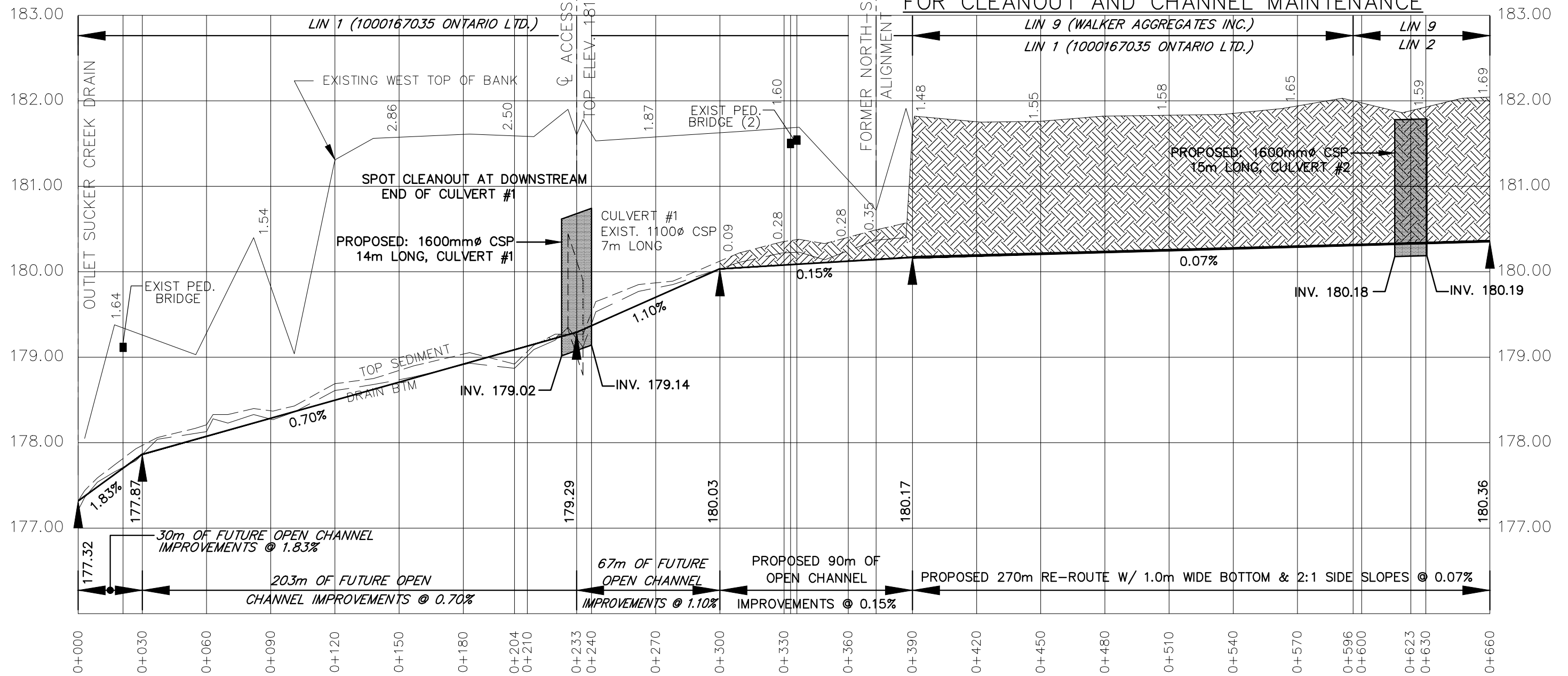
Last Updated: February 17, 2026

GENERAL NOTES

- BENCHMARK No.1 ELEV. 180.44
TOP OF SOUTH END OF EXISTING
1100mm ϕ CSP CROSSING ACCESS AT
STATION 0+233
- UPPER NUMBERS ARE DEPTH FROM TOP OF
BANK TO THE PROPOSED GRADELINE.
- LOWER NUMBERS ARE DEPTH OF EXCAVATION
TO PROPOSED GRADELINE.



TYPICAL DRAIN CROSS SECTION
FOR CLEANOUT AND CHANNEL MAINTENANCE



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

PROJECT No.
2024-1709

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 17, 2026	CS
B. VAN RUITENBURG				
DRAWN				
C. SAUNDERS				

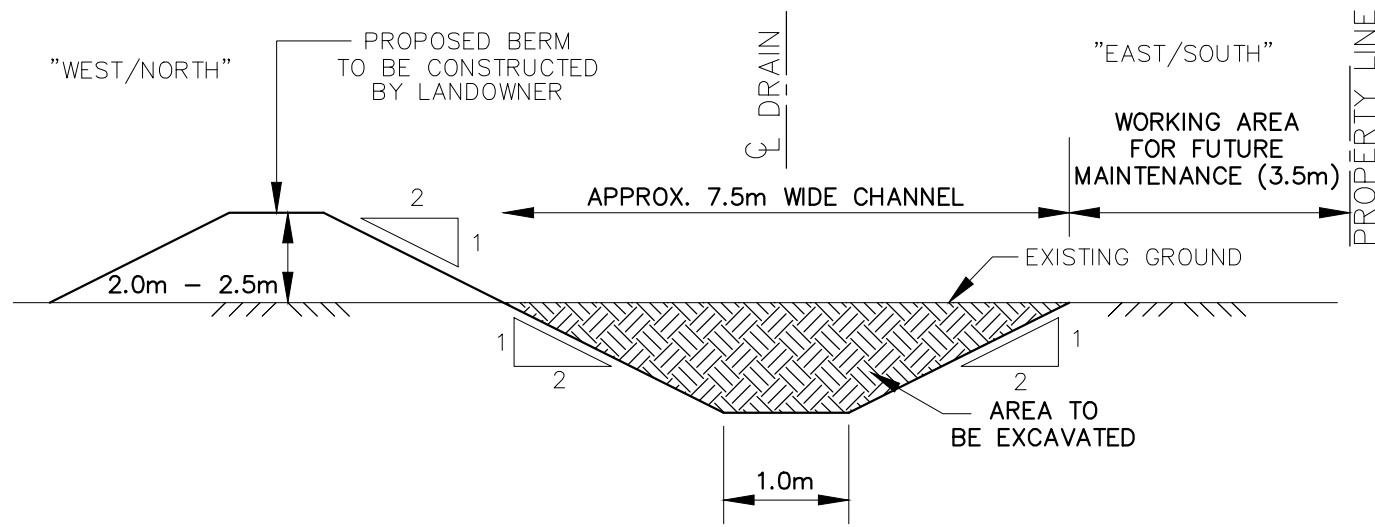
SCALE: 1:2,000

TOWN of AMHERSTBURG

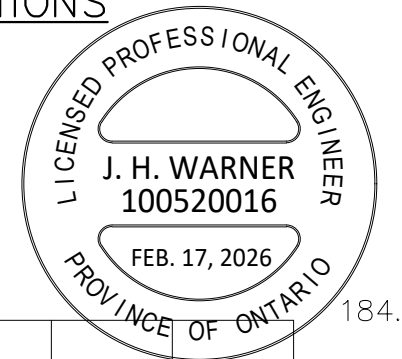
VOLLANS DRAIN PROFILE

GENERAL NOTES

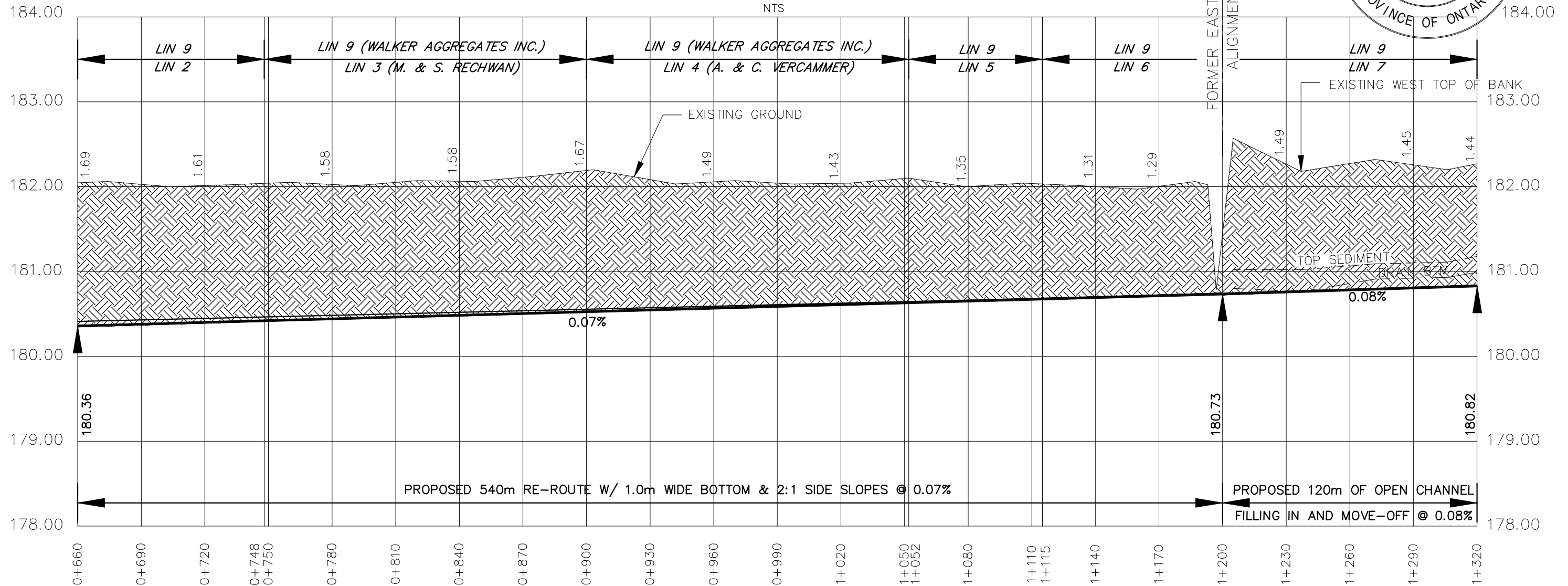
- BENCHMARK No.1 ELEV. 180.44
TOP OF SOUTH END OF EXISTING
1100mmØ CSP CROSSING ACCESS AT
STATION 0+233
- UPPER NUMBERS ARE DEPTH FROM TOP OF
BANK TO THE PROPOSED GRADELINE.
- LOWER NUMBERS ARE DEPTH OF EXCAVATION
TO PROPOSED GRADELINE.



NOTE: SEE SECTION DRAWINGS FOR OTHER CROSS-SECTIONS



TYPICAL DRAIN CROSS SECTION (STATION 0+390 TO 1+200)



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

DRAWING NAME:
Vollans Drain Profile 2

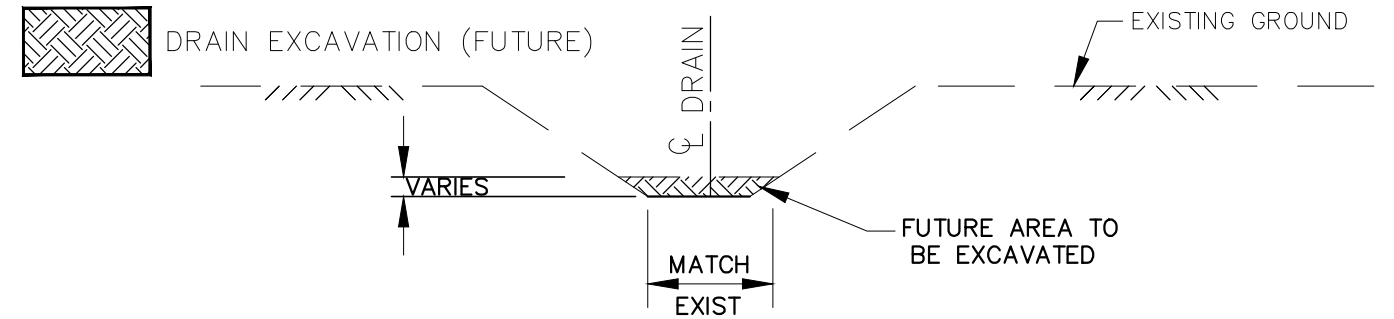
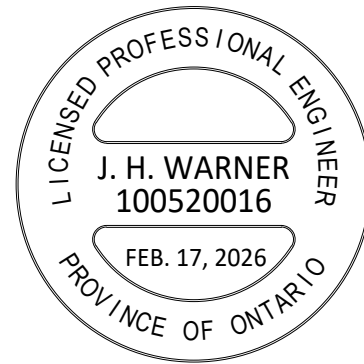
PROJECT No.
2024-1709

APPROVED J. WARNER	NO.	REVISIONS	DATE	BY
CHECKED B. VAN RUITENBURG	1	FINAL REPORT	FEB. 17, 2026	CS
DRAWN C. SAUNDERS	SCALE: 1:2,000			

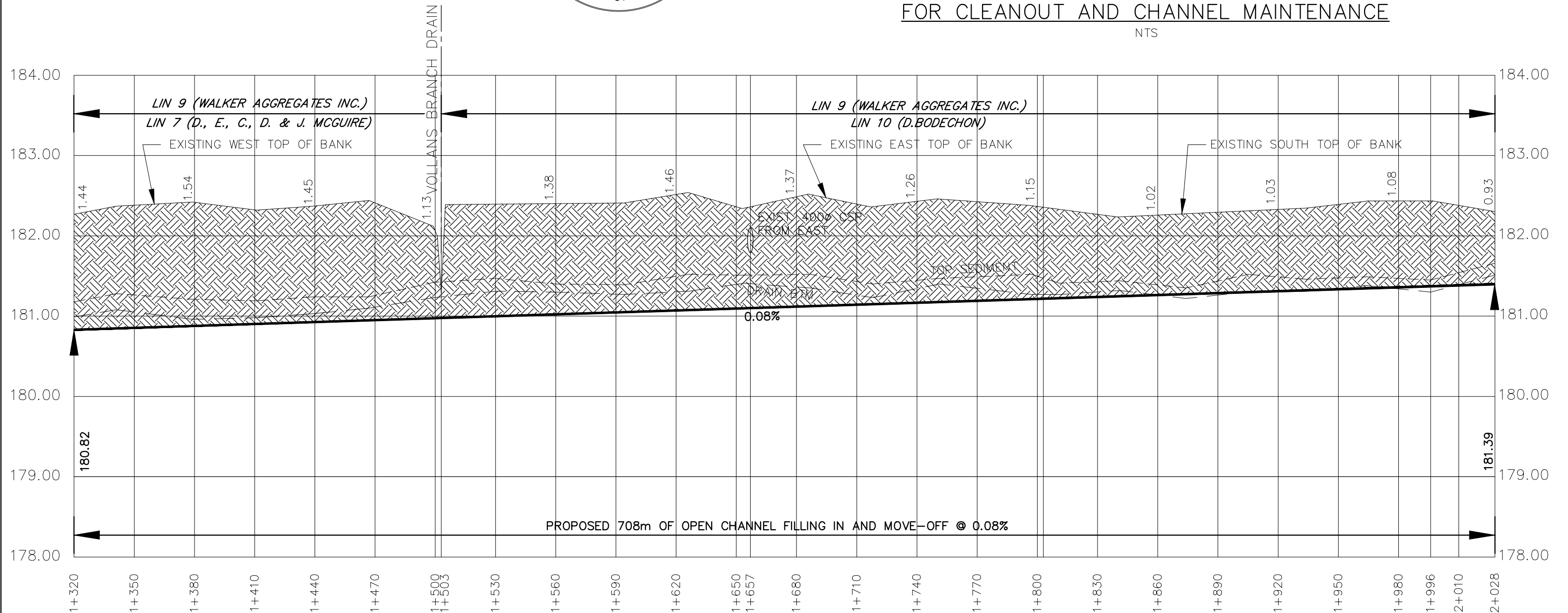
TOWN of AMHERSTBURG VOLLANS DRAIN PROFILE

GENERAL NOTES

- BENCHMARK No.2 ELEV. 182.10m
TOP OF EXISTING 400mmØ CSP
FROM THE EAST AT STATION 1+657
- UPPER NUMBERS ARE DEPTH FROM TOP OF BANK TO THE PROPOSED GRADELINE.
- LOWER NUMBERS ARE DEPTH OF EXCAVATION TO PROPOSED GRADELINE.



TYPICAL DRAIN CROSS SECTION FOR CLEANOUT AND CHANNEL MAINTENANCE
NTS



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

DRAWING NAME:
Vollans Drain Profile 3

PROJECT No.
2024-1709

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 17, 2026	CS
B. VAN RUITENBURG				
DRAWN				
C. SAUNDERS				

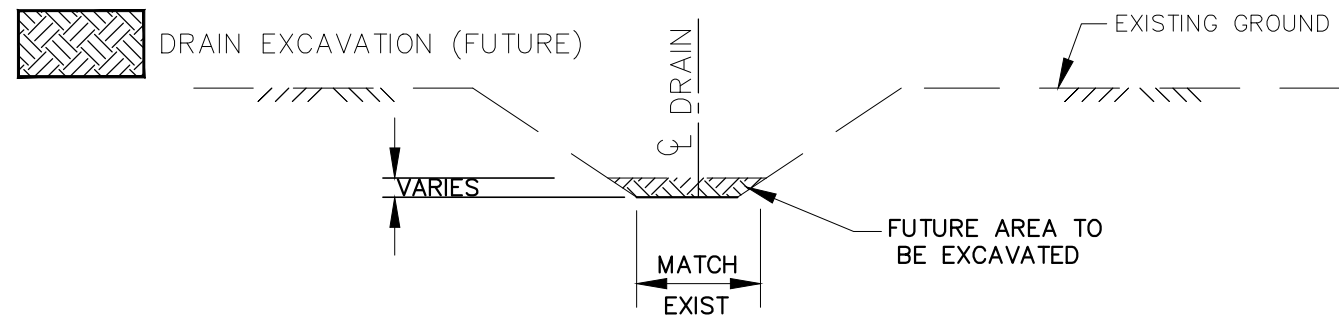
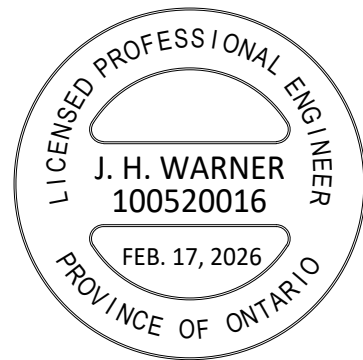
SCALE: 1:2,000
0 20 40 60

TOWN of AMHERSTBURG
VOLLANS DRAIN
PROFILE

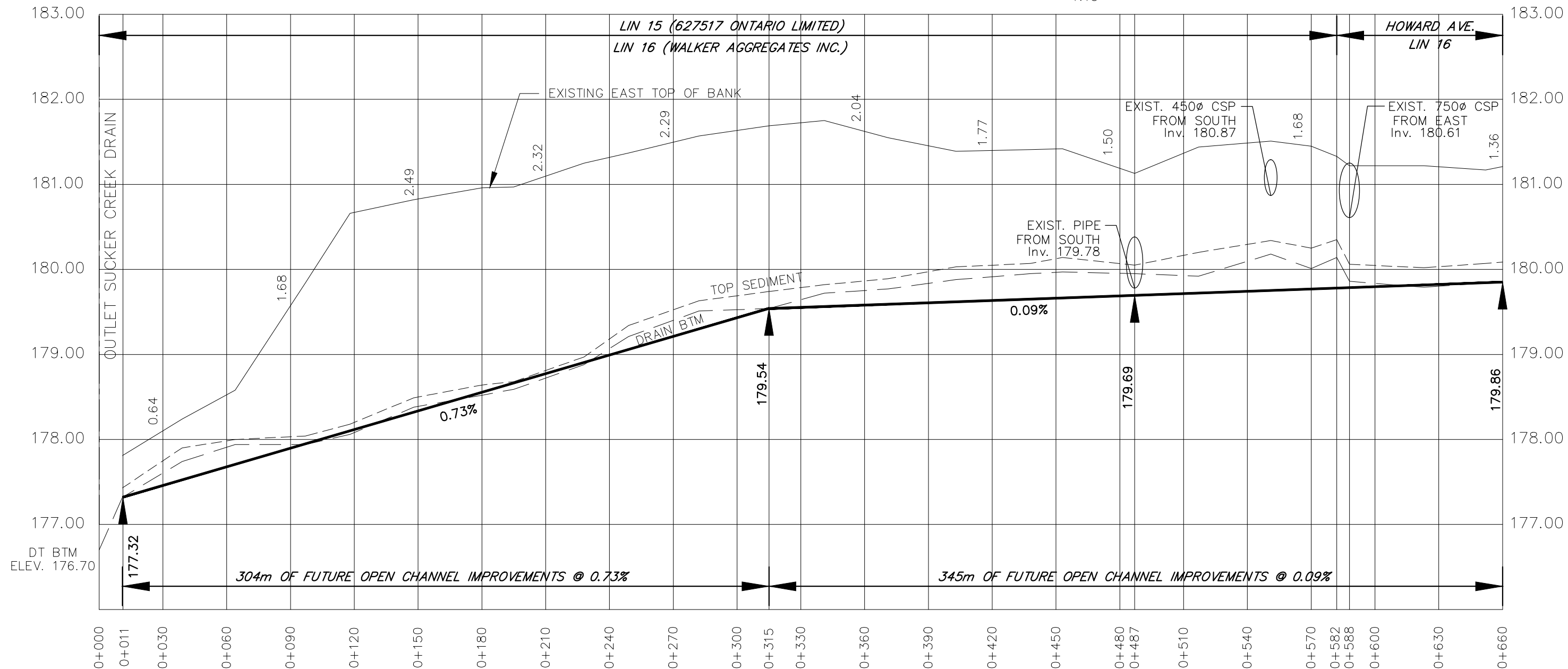
6
of 12

GENERAL NOTES

- BENCHMARK No.3 ELEV. 180.44
TOP OF EXISTING CSP FROM THE SOUTH
AT STATION 0+487
- NUMBERS ARE DEPTH FROM TOP OF
BANK TO THE FUTURE CHANNEL BOTTOM.
- LOWER NUMBERS ARE DEPTH OF EXCAVATION
TO PROPOSED GRADELINE.



TYPICAL DRAIN CROSS SECTION
NTS



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

DRAWING NAME:
Beneteau Drain Profile 1

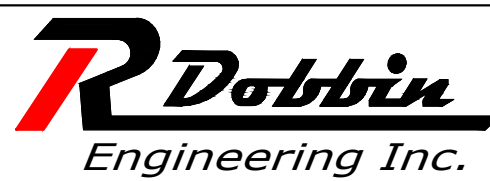
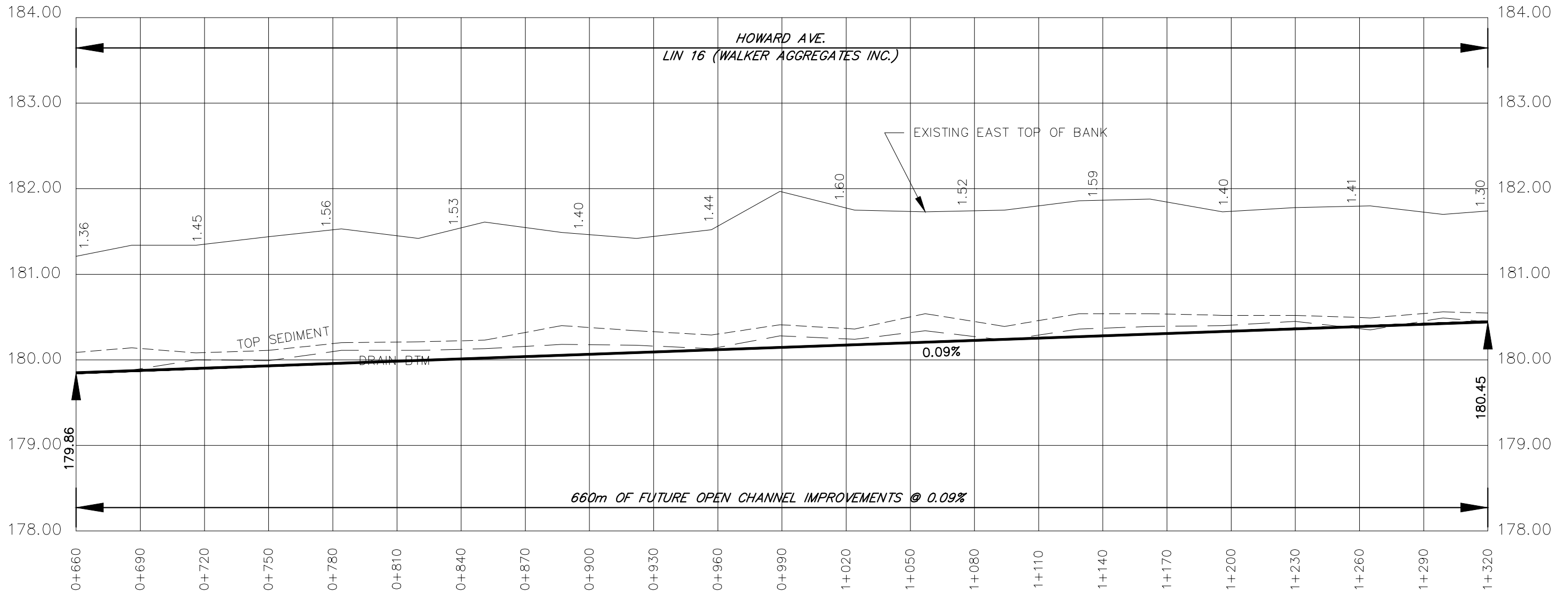
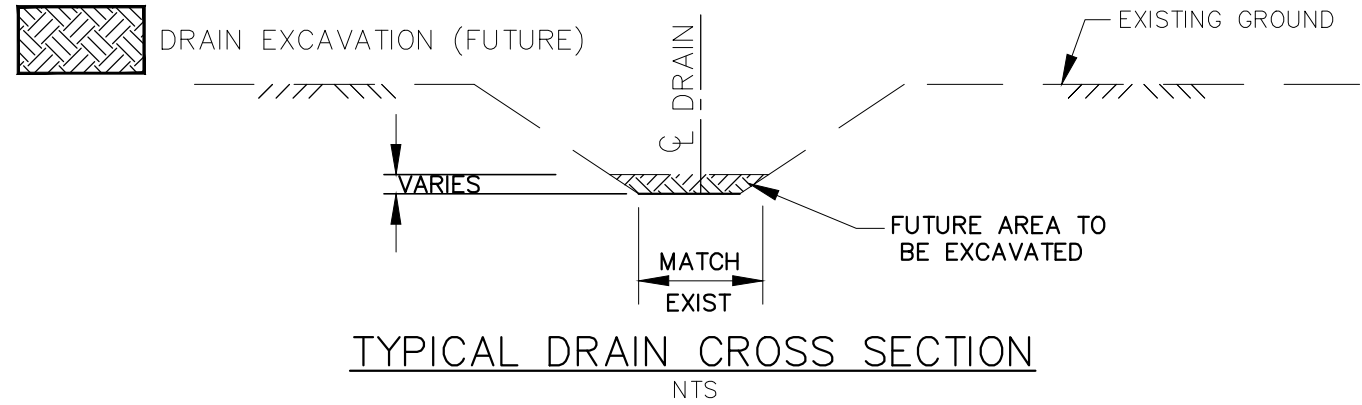
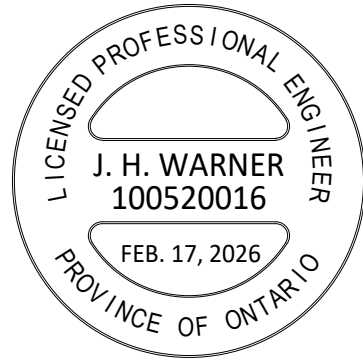
PROJECT No.
2024-1709

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 17, 2026	CS
B. VAN RUITENBURG				
DRAWN	SCALE: 1:2,000			
C. SAUNDERS	0 20 40 60 100			

TOWN of AMHERSTBURG BENETEAU DRAIN PROFILE

GENERAL NOTES

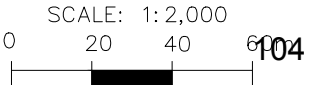
- BENCHMARK No.4 ELEV. 181.25
TOP OF 750Ø CSP FROM THE EAST
AT STATION 0+588
- NUMBERS ARE DEPTH FROM TOP OF
BANK TO THE FUTURE CHANNEL BOTTOM.
- LOWER NUMBERS ARE DEPTH OF EXCAVATION
TO PROPOSED GRADELINE.



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

PROJECT No.
2024-1709

APPROVED	J. WARNER	NO.	REVISIONS	DATE	BY
CHECKED	B. VAN RUITENBURG	1	FINAL REPORT	FEB. 17, 2026	CS
DRAWN	C. SAUNDERS	SCALE: 1:2,000			

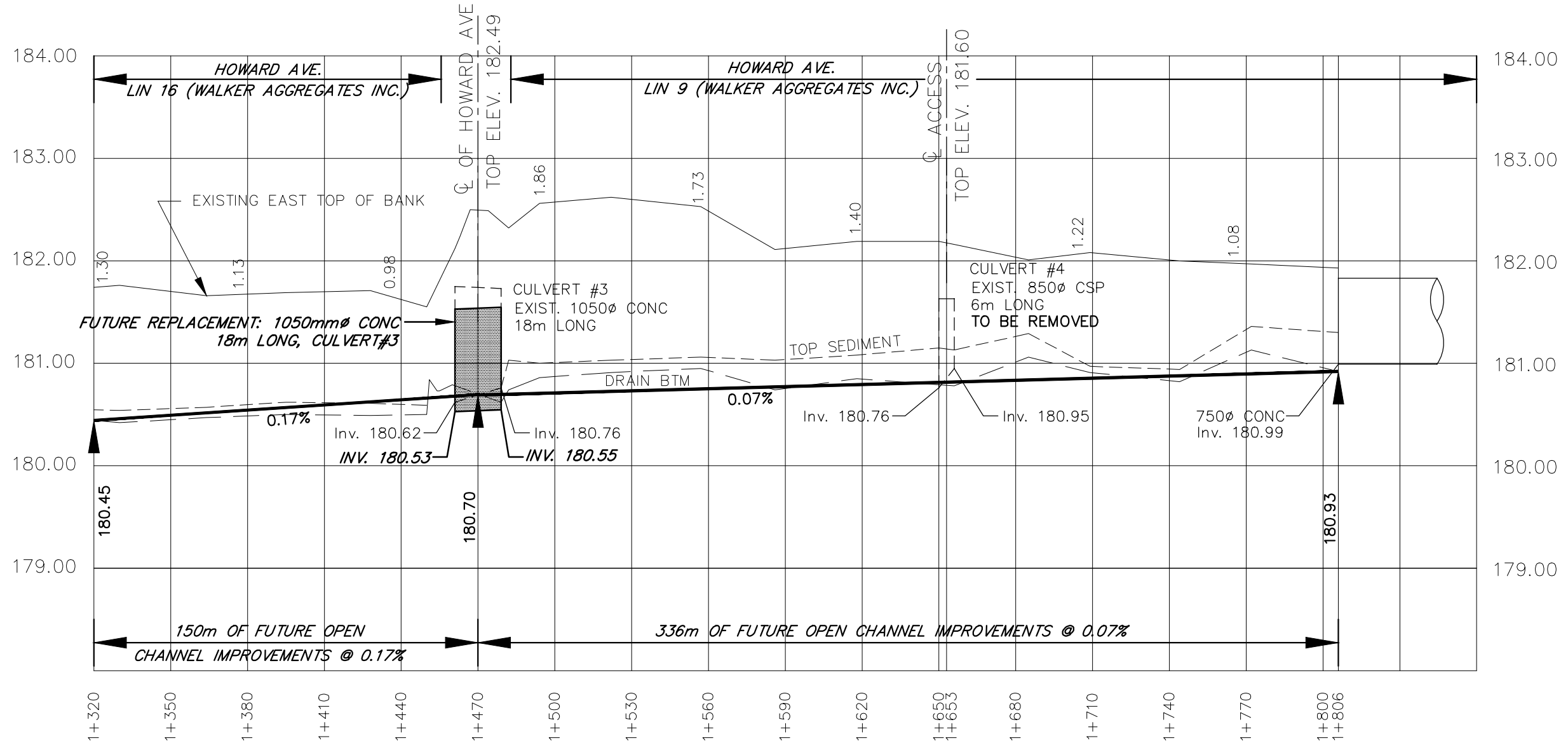
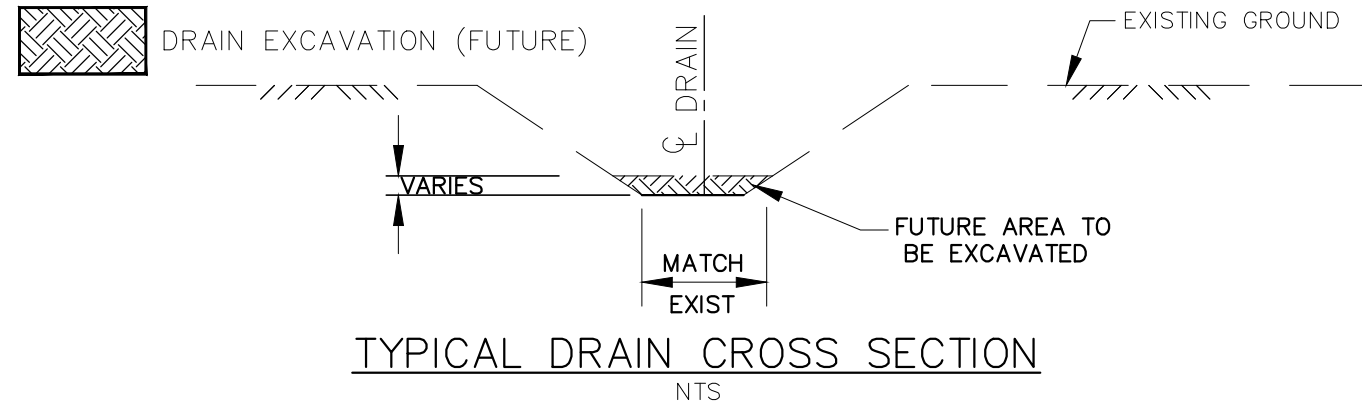
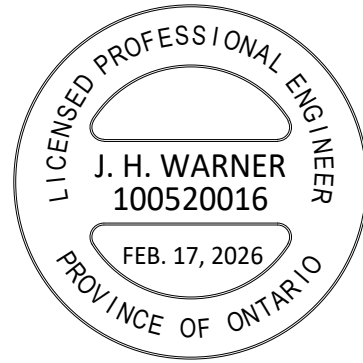


TOWN of AMHERSTBURG
BENETEAU DRAIN
PROFILE

Last Updated: February 17, 2026

GENERAL NOTES

- BENCHMARK No.5 ELEV. 181.75
TOP OF WEST END OF 1000Ø CONCRETE
CROSSING HOWARD AVENUE AT STATION 1+470
- BENCHMARK No.6 ELEV. 181.93
TOP OF SOUTH END OF 750Ø CONCRETE
OUTLET PIPE FROM NORTH AT STATION 1+806.
- NUMBERS ARE DEPTH FROM TOP OF
BANK TO THE FUTURE CHANNEL BOTTOM.
- LOWER NUMBERS ARE DEPTH OF EXCAVATION
TO PROPOSED GRADELINE.



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

DRAWING NAME:
Beneteau Drain Profile 3

PROJECT No.
2024-1709

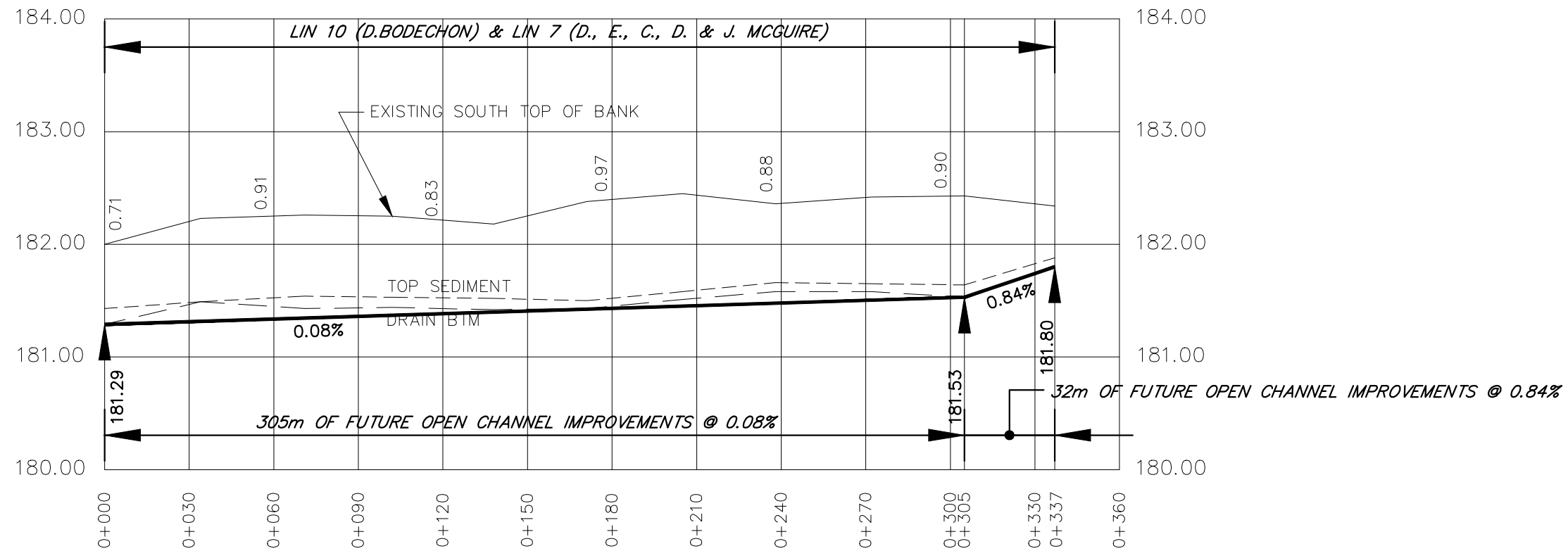
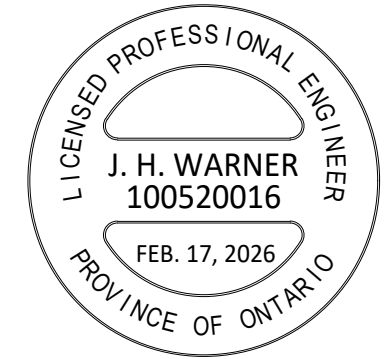
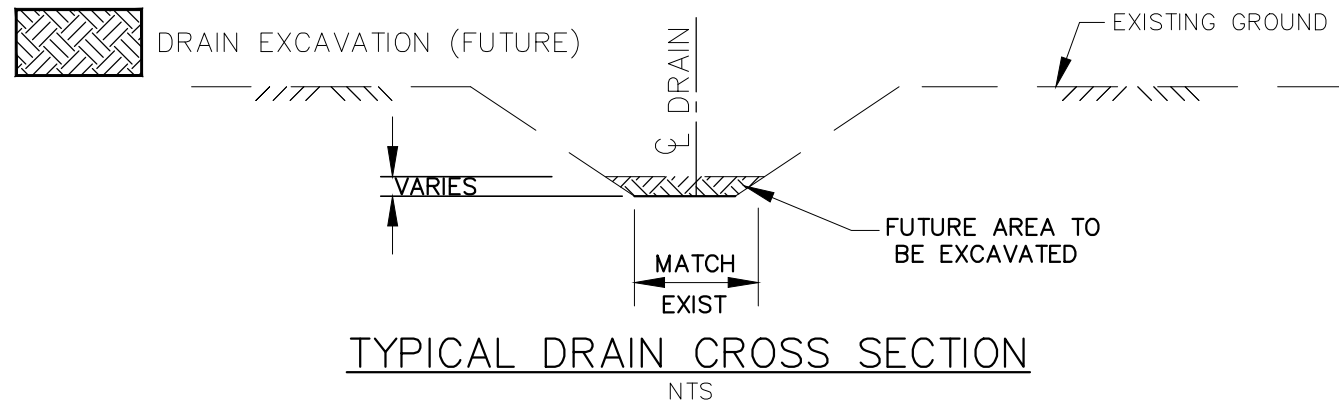
APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 17, 2026	CS
B. VAN RUITENBURG				
DRAWN	SCALE: 1:2,000			
C. SAUNDERS	0 20 40 105			

TOWN of AMHERSTBURG
BENETEAU DRAIN
PROFILE

9
of 12

GENERAL NOTES

- BENCHMARK No.3 ELEV. 182.10m
TOP OF EXISTING 400mm ϕ CSP
FROM THE EAST AT STATION 1+657
ON VOLLANS DRAIN
- NUMBERS ARE DEPTH FROM TOP OF
BANK TO THE FUTURE CHANNEL BOTTOM.



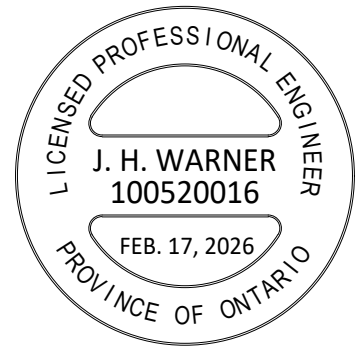
4218 Oil Heritage Road
Petrolia Ontario, N0N 1R0
Phone: (519) 882-0032 Fax: (519) 882-2233

DRAWING NAME:
Vollans Drain Branch Profile

PROJECT No.
2024-1709

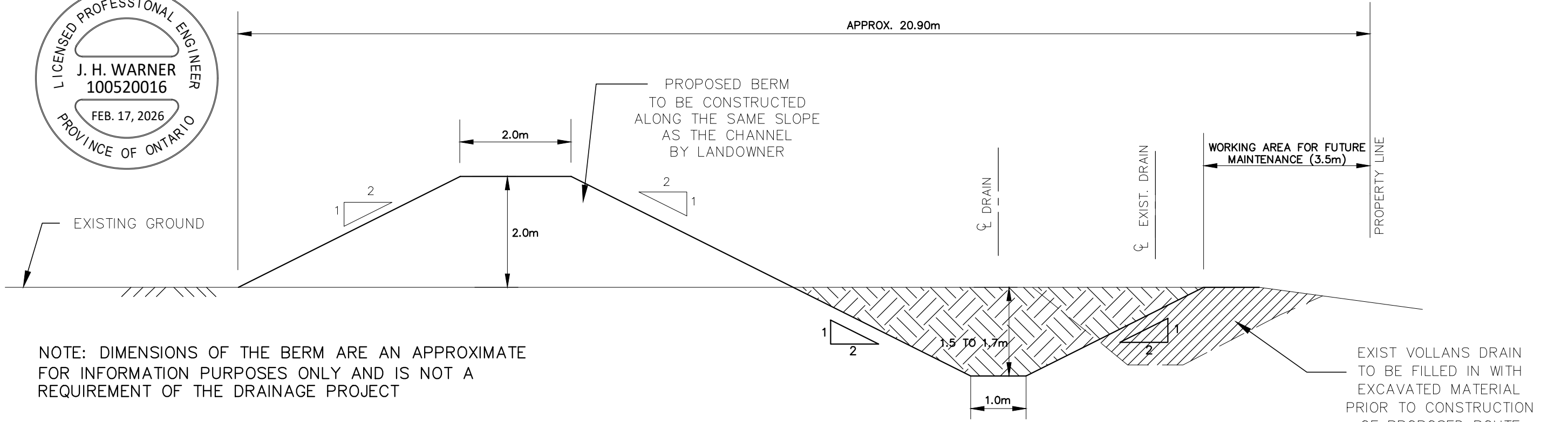
APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED B. VAN RUITENBURG	1	FINAL REPORT	FEB. 17, 2026	CS
DRAWN C. SAUNDERS	SCALE: 1:2,000			

TOWN of AMHERSTBURG VOLLANS DRAIN BRANCH PROFILE



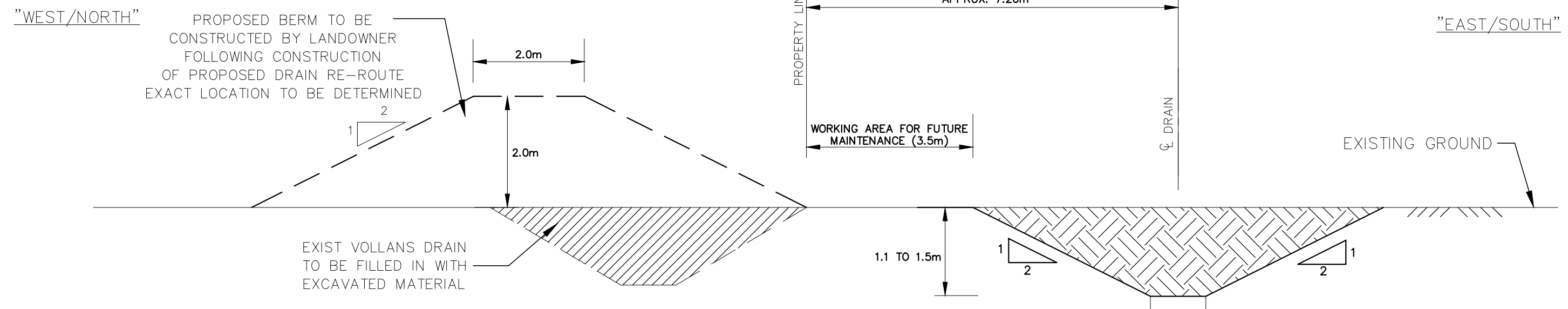
"WEST"

"EAST"

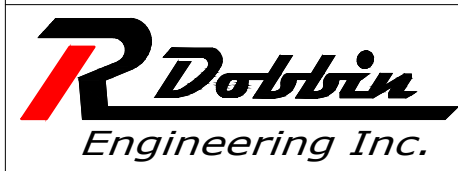


NOTE: DIMENSIONS OF THE BERM ARE AN APPROXIMATE FOR INFORMATION PURPOSES ONLY AND IS NOT A REQUIREMENT OF THE DRAINAGE PROJECT

TYPICAL CROSS SECTION ST. 1+200 TO 1+503



TYPICAL CROSS SECTION ST. 1+503 TO 2+028



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

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 17, 2026	CS
B. VAN RUITENBURG				
DRAWN	SCALE 1:75			
C. SAUNDERS	0 2m 107			

TOWN of AMHERSTBURG

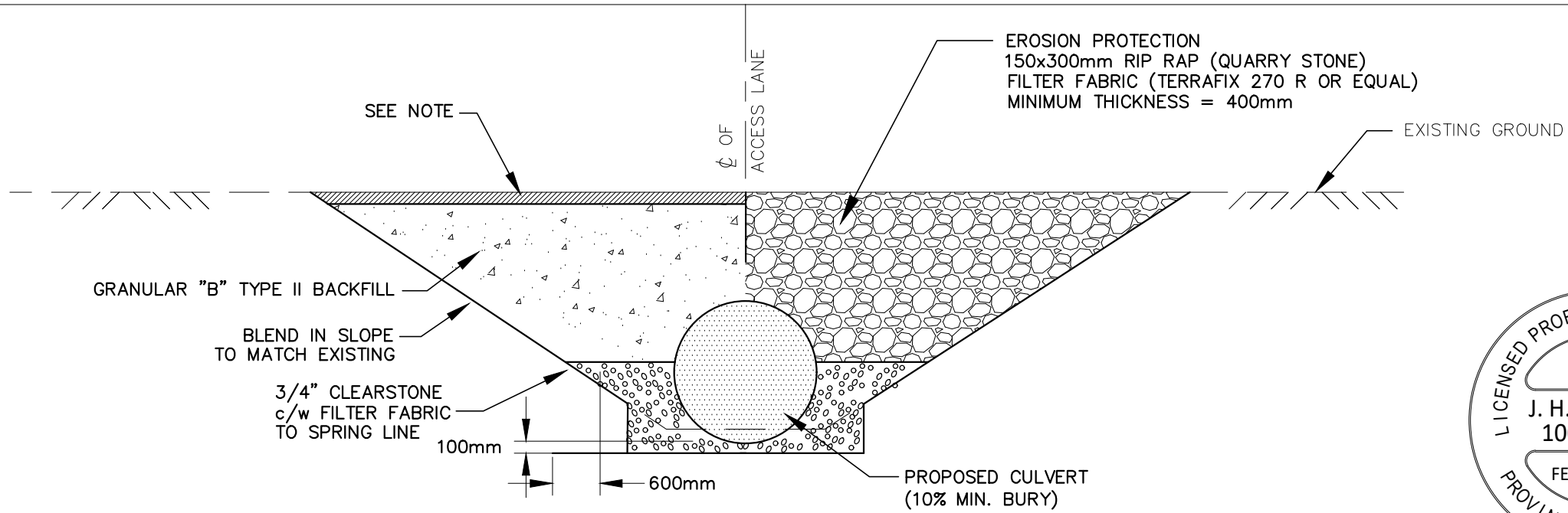
VOLLANS DRAIN
CROSS SECTIONS

11
OF 12

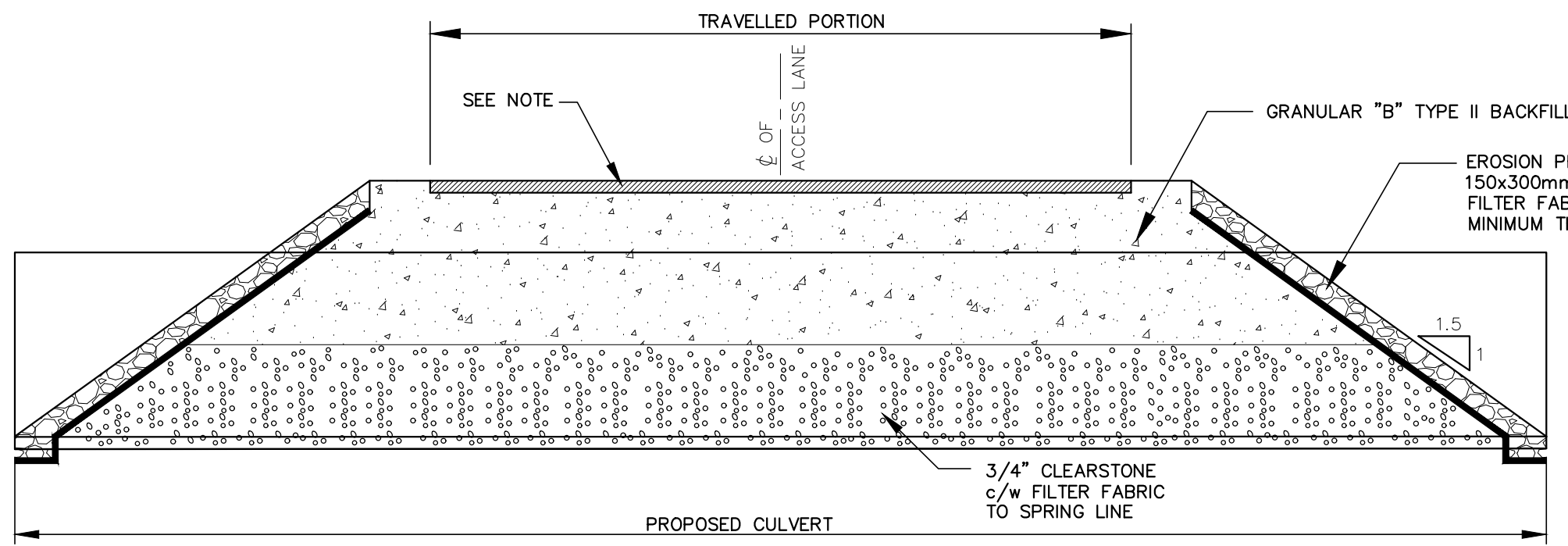
DRAWING NAME:
Vollans Drain Cross Sections

PROJECT No.
2024-1709

Last Updated: February 17, 2026

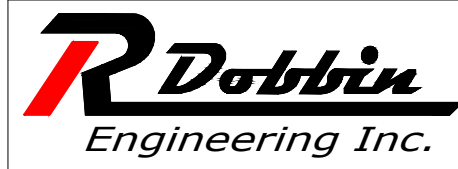


PROPOSED PIPE END SECTION



PROPOSED CROSS-SECTION

- NOTES:**
- ALL BACKFILL COMPACTED TO 95% MODIFIED PROCTOR DENSITY
 - CONTRACTOR SHALL ENSURE MINIMUM COVER IS MET PRIOR TO CROSSING
 - ASPHALT ROAD**
 - HL3 AND HL4 TO MATCH EXISTING THICKNESS
 - 300mm OF GRAN "A" EXTENDING TO SHOULDER
 - GRAVEL ROAD**
 - 200mm OF OPS GRANULAR "M" (CRUSHED DOLOMITE SOURCE) TO MATCH EXISTING ROAD WIDTH
 - ACCESS CULVERT**
 - 150mm OF GRANULAR "A"



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

APPROVED	NO.	REVISIONS	DATE	BY
J. WARNER				
CHECKED	1	FINAL REPORT	FEB. 17, 2026	CS
B. VAN RUITENBURG				
DRAWN	SCALE 1:75			
C. SAUNDERS	0 2m 108			

TOWN of AMHERSTBURG
BENETEAU & VOLLANS DRAINS
TYPICAL CULVERT DETAIL

12
OF 12

DRAWING NAME:
 Beneteau & Vollans Drains Typical Culvert Detail

PROJECT No.
 2024-1709

Last Updated: February 17, 2026

THE CORPORATION OF THE TOWN OF AMHERSTBURG

BY-LAW NO. 2026-023

By-law to provide for improvements to the Beneteau, Vollans and Tremblay Drains based on the report of Josh Warner, P.Eng of R. Dobbin Engineering Inc.

WHEREAS a request for improvements to the Beneteau, Vollans, and Tremblay Drains was received under section 78 of the Drainage Act;

WHEREAS Council of the Corporation of the Town of Amherstburg has authorized Josh Warner, P.Eng., of R. Dobbin Engineering Inc., to prepare a report and said engineer's report dated February 17, 2026 entitled Beneteau, Vollans and Tremblay Drains can be referenced as Schedule A, as attached hereto;

WHEREAS \$346,692.00 is the estimated cost provided for the new drainage works;

AND WHEREAS the report was considered by the Amherstburg Drainage Board at the meeting held on March 24, 2026.

NOW THEREFORE the Council of the Corporation of the Town of Amherstburg hereby enacts as follows:

1. AUTHORIZATION

The attached drainage report is adopted and the drainage works is authorized and shall be completed as specified in the report.

2. BORROWING

The Corporation of the Town of Amherstburg may borrow on the credit of the Corporation the amount of \$346,692.00 being the estimated amount necessary for the improvements of the drainage works.

3. DEBENTURE(S)

The Corporation may issue debenture(s) for the amount borrowed less the total amount of:

- (a) Grants received under section 85 of the Drainage Act;
- (b) Monies paid as allowances;
- (c) Commuted payments made in respect of lands and roads assessed with the municipality;
- (d) Money paid under subsection 61(3) of the Drainage Act; and
- (e) Money assessed in and payable by another municipality.

4. PAYMENT

Such debenture(s) shall be made payable within 5 years from the date of the debenture(s) and shall bear interest at a rate not higher than 1% more than the municipal lending rates as posted by The Town of Amherstburg's Bank's Prime Lending Rate on the date of sale of such debenture(s).

- (1) A special equal annual rate sufficient to redeem the principal and interest on the debenture(s) shall be levied upon the lands and roads and shall be collected in the same manner and at the same as other taxes are collected in each year for 5 years after the passing of this by-law.
- (2) All assessments of \$1000.00 or less are payable in the first year in which the assessments are imposed.

Read a first and second time and provisionally adopted this 13th day of April 2026.

MAYOR – MICHAEL PRUE

CLERK – KEVIN FOX

Read a third time and finally passed this ___ day of _____, 2026.

MAYOR – MICHAEL PRUE

CLERK – KEVIN FOX



THE CORPORATION OF THE TOWN OF AMHERSTBURG

OFFICE OF ENGINEERING AND PUBLIC WORKS

MISSION STATEMENT: Committed to delivering cost-effective and efficient services for the residents of the Town of Amherstburg with a view to improve and enhance their quality of life.

Table with 2 columns: Author's Name, Report Date, Author's Phone, Date to Drainage Board, Author's E-mail, Resolution #.

To: Members of the Drainage Board
Subject: Levying By-Law – Drain Improvements

1. RECOMMENDATION:

It is recommended that:

- 1. The report from the Drainage Superintendent and Engineering Coordinator dated March 16, 2026 regarding the recovery of cost for money spent in 2025 for improvements of a Municipal Drain BE RECEIVED;
2. That By-Law 2026-014 BE READ 3 TIMES to become the Levying By-Law to allow the collection of cost for which Council has provided to Finance for the improvements to Municipal Drain project herein completed by the Town in 2025.

2. BACKGROUND:

The Town has the responsibility to perform maintenance/repairs and improvements to all Municipal Drains upon the requirement to do so, or the request to do so by an affected landowner.

Each calendar year, the Drainage Superintendent completes a summary of improvements and prepares an application to the Ministry of Agriculture, Food and Rural Affairs (OMAFRA) for Provincial Grant according to the Agricultural Drainage Infrastructure Program (ADIP) Policy. Grants are awarded to all Agricultural lands that are up to date with the Farm Tax Credit and OMAFRA pays to the Town, 33% of all eligible drainage assessments.

Section 61 of the Drainage Act, requires that the Town of Amherstburg, who is required to raise the necessary funds in whole or any part for drainage works completed under the Act, shall by By-Law impose upon the lands assessed for the drainage works, the assessment with which it is chargeable, and the amount so imposed is payable in such instalments as the council may prescribe.

The Drainage Superintendent has reconciled the general ledger account for the actual costs incurred by the Town to administer the project and has applied the actual amount to the engineers estimated amount for the project in an assessments schedule which will be authorized by the appointed engineer for the amount chargeable to those lands and becomes part of the grant submission to obtain the grant amount for eligible parcels of land. for the amount chargeable to those lands.

3. DISCUSSION:

Unlike maintenance drain projects where the Town adds a line to the tax roll. Capital drain projects are invoiced to lands using the adopted schedule in the engineers' report appended to the bylaw for that drain. The general ledger account is reconciled for the actual improvement costs to recover and is billed to the affected lands assessed in the bylaw. The Town has up to one year after the completion of the improvement to apply for grant.

4. RISK ANALYSIS:

There is risk in not improving Municipal Drains at the requests of landowners.

5. FINANCIAL MATTERS:

By-Law	By-Law estimate	Actual	Agricultural Lands	Grant amount	Town Roads	Town Water Department
2025-003	277,890.00	218,467.37	56,207.21	18,735.74	43,425.66	10,151.81

Bylaw 2025-003 – 4th Concession Road Drain (2024)

- The actual work including interest, incidentals, permits and construction was \$59,423 under the estimated amount required.

The Town is assessed \$43,426.66 for its Road in Bylaw 2005-003 and does not have any assessment in Bylaw 2025-004. The Towns water department is assessed in both for a total of \$ 14,417 for costs incurred by the existence of its utility under Section 24 of the Act.

In 2025, the Town performed other improvement projects and is working toward reconciling and levying those costs.

6. **CONSULTATIONS:** N/A

7. **CONCLUSION:**

Administration is recommending that

1. That By-Law 2026-014 **BE READ 3 TIMES** to become the Levying By-Law to allow the collection of cost for which Council has provided to Finance for the improvements to Municipal Drain projects herein completed by the Town in 2025.



Sam Paglia, P.Eng.,
**Drainage Superintendent and
Engineering Coordinator**

Attachment(s): None

THE CORPORATION OF THE TOWN OF AMHERSTBURG

BY-LAW NO. 2026-014

**By-law to provide for the Amending of costs spent in 2025
For improvements to a Municipal Drain**

THAT By-Law 2026-014 being a Levying By-Law to provide for the assessment upon the lands and roads liable for their contribution to drainage works that has been acted upon by Council, and for the recovery of costs for the completion of the drainage works for which Council was obligated to raise.

WHEREAS Collection of actual costs related to Improvement of Municipal Drains in 2025, be given first, second and third reading;

WHEREAS \$218,467.37 was the actual costs of improvements under Bylaw 2025-003 to the 4th Concession Road Drain (2024);

AND WHEREAS The Council of the Corporation of the Town of Amherstburg, pursuant to the Drainage Act hereby enacts the following;

1. That the assessment schedules adopted for the purpose of assessing costs to lands and roads on each Municipal Drain herein is applied for the cost recovery of funds necessary for the completion of those works.

NOW THEREFORE the Council of the Corporation of the Town of Amherstburg hereby enacts as follows:

1. AUTHORIZATION

The assessment upon lands and roads liable for their contribution to the Improvements to Municipal Drains be assessed the actual costs that Council was obligated to raise.

Read a first, second and third time and fully adopted this 13th day of April 2026.

MAYOR – MICHAEL PRUE

CLERK – KEVIN FOX



THE CORPORATION OF THE TOWN OF AMHERSTBURG

OFFICE OF ENGINEERING AND PUBLIC WORKS

MISSION STATEMENT: Committed to delivering cost-effective and efficient services for the residents of the Town of Amherstburg with a view to improve and enhance their quality of life.

Author's Name: Sam Paglia	Report Date: March 19, 2026
Author's Phone: 519 736-3664 ext. 2318	Date to Drainage Board: March 24, 2026
Author's E-mail: spaglia@amherstburg.ca	Resolution #: N/A

To: Members of the Drainage Board

Subject: Drainage Apportionment

1. **RECOMMENDATION:**

It is recommended that:

1. The report from the Drainage Superintendent and Engineering Coordinator dated March 19, 2026 regarding various drainage apportionments **BE RECEIVED**;
2. The drainage apportionments **BE APPROVED** as listed:
 - Consent **B/18/22** drainage apportionment for a Municipal Drain.
3. Administration **BRING FORWARD** the Drainage Board's recommendation to approve the drainage apportionments at a future Regular Council Meeting.

2. **BACKGROUND:**

Under the provisions of the Drainage Act (Act), when lands that are assessed for drainage are subsequently divided by a change of ownership of any part, the respective drainage assessments should be accounted for. The Town must take steps to apportion the assessments to reflect the division of the lands as well as maintain a functional assessment schedule for the benefit of the entire watershed for any of the affected drainage schemes.

This report deals with various drainage apportionments, each of which may be associated with separate, individual conditions of severance.

3. **DISCUSSION:**

Section 65 of the Act discusses the obligation of the Town to apportion existing drainage assessments when lands are subsequently sub-divided. Council's authority to permit lands to subsequently connect or disconnect from a drainage works. In this case, specifically, Section 65(2) provides the Town with the necessary provisions to complete assessment apportionments when landowners of the subdivided lands agree on the shares of the assessment.

Agreement on share of assessment

65. (2) If the owners of the subdivided land mutually agree on the share of the drainage assessment that each should pay, they may enter into a written agreement and file it with the clerk of the local municipality and, if the agreement is approved by the council by resolution, no engineer need be instructed under subsection (1). 2010, c. 16, Sched. 1, s. 2 (26).

Section 65(1) of the Drainage Act provides the Town with the option of instructing an engineer to complete the drainage apportionments:

Subsequent subdivision of land

65. (1) If, after the final revision of an engineer's assessment of land for a drainage works, the land is divided by a change in ownership of any part, the clerk of the local municipality in which the land is situate shall instruct an engineer in writing to apportion the assessment among the parts into which the land was divided, taking into account the part of the land affected by the drainage works. 2010, c. 16, Sched. 1, s. 2 (26).

An engineer was not instructed under Section 65(1) of the Act. In the case of the land divisions and severances being considered under this report, apportionments were completed by the Drainage Superintendent and Engineering Coordinator. Assessment schedules for drains that were affected by each land severance were analysed by area and land use, and apportioned accordingly based on the volume of water expected to flow from those lands.

Once completed, all affected landowners were contacted and provided a letter that described the apportionments. If the landowners were in agreement with the apportionments, an "Agreement between Property Owners for Drain Apportionments due to Land Severance or Sale" was signed by the affected property owners in accordance with Section 65(2) of the Act.

It is important to note that an apportionment does not set new values. The ratio in the current bylaw for the affected lands is apportioned to the affected lands in the severance accordingly. When several apportionments are completed on one particular drain, the assessment to lands not affected by severance becomes more and more unfair as more apportionments are completed. Therefore, S. 65 apportionments are only valid until such time as an engineer is appointed by council on the respective drains, where the engineer is obligated to assess all lands and roads in the watershed. Any lands affected by apportionment will likely be re-assessed a different value determined by the appointed engineer, and in an unbiased nature within the schedule of assessments in that report which becomes appended to the new bylaw for the drain.

In the case of the following severances, agreement letters were signed by all affected property owners and are attached:

- Consent **B/18/22** drainage apportionment for a Municipal Drain.

Apportionment agreements, once accepted by the Drainage Board and approved by council through resolution, will be reflected in the assessments of all current and future maintenance works on any of the affected drains listed in each agreement.

4. RISK ANALYSIS:

Under the provisions of the Drainage Act, when lands that are assessed for drainage are subsequently divided by a change of ownership of any part, it is the Town's obligation to take steps to apportion the assessments to reflect the liability of drainage assessments related to the division of those lands. Failing to do so could lead to unfair assessments of drain maintenance costs that do not accurately reflect the accurate ownership of lands within drainage watersheds. This could lead to conflicts between the Town and landowners over drainage assessments and potentially, the denial of agricultural grants from the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA).

5. FINANCIAL MATTERS:

An administration fee is charged by the Planning Department to an owner of land that wishes to sever a portion of his or her lands.

6. CONSULTATIONS: - N/A

7. CONCLUSION:

Administration is recommending that the drainage apportionments be approved as listed and that said apportionments be approved by council resolution:



Sam Paglia, P.Eng.,

Drainage Superintendent and Engineering Coordinator

Attachment(s):

- Consent **B/18/22** drainage apportionment for a Municipal Drain.



The Corporation of The Town of Amherstburg

September 19, 2024

RE: Section 65 Drainage Apportionment – Consent B/18/22

Dear Landowner:

This letter is to advise you of changes to the drainage assessment for your property for the parcel located at [REDACTED] Pointe West Drive legally described as PLAN M139 LOT 29. This is in relation to the Application for Consent B/18/22, which proposes to sever a 0.0901 hectare parcel of land from the existing residential parcel with Roll [REDACTED].

The retained parcel area shall, for the purpose of this severance, be 1.039 hectares and shall be considered residential land for this agreement only.

The re-apportionment of the drainage assessments for the lands described above proposed under this letter is in accordance with Section 65(2) of the "Drainage Act, R.S.O. 1990, Chapter D.17, as amended in 2010 (Act). It is the responsibility of every landowner in Ontario to not only capture, but convey the stormwater that their lands receive to a sufficient outlet. Typically, this is accomplished through drainage infrastructure. These apportionments are only in relation to the Municipal Drains governed by the Act, and are only to be used until such time as Council appoints an Engineer to update the current bylaw for the affected lands.

Administration for the Town of Amherstburg has reviewed all municipal drain reports under bylaw in order to complete the re-apportionments of drainage assessments for the subject lands. Said lands are located within the following watersheds, and are assessed into the following municipal drains constructed by bylaw under the Act:

1. **Ouellette Drain West** – Report by R.C. Spencer Associates Inc. by-law 2019-094

If you are in agreement with the new breakdown of your property listed in the attached chart(s), please have all registered owners of your property sign the attached form and return to the Public Works Department at 512 Sandwich St South. Under Section 65(2) of the Drainage Act, if the agreement is approved by Council by resolution, no engineer will need to be instructed to complete a re-apportionment.

Should you have any questions or require further clarification, please feel free to contact myself at (519) 736-3664 ext 2318.

Sincerely,

Sam Paglia

Sam Paglia, P.Eng.
Drainage Superintendent and Engineering Coordinator

Administration has created the following new breakdown for the affected properties:

1. Ouellette Drain West

Original assessment in the current By-Law						
Plan.	Lot	Affected Area (HA)	Roll No.	Owner	Outlet Assessment	TOTAL
M139	29	.194	██████████	Raymond Frain Cerkauskas and Weili Xu	\$ 282.00	\$ 282.00

Re-AppORTIONED assessment as per B/19/24						
Conc.	Lot	Affected Area (HA)	Roll No.	Owner	Outlet Assessment	TOTAL
M139	29	0.104	██████████	Mathew Daniel Simone	\$ 153.00	\$ 153.00
M139	29	0.090	██████████	N/A	\$ 129.00	\$ 129.00
						\$282.00

CORPORATION OF THE TOWN OF AMHERSTBURG


**Agreement between Property Owners for Drain Apportionment
due to Land Severance or Sale**

OUELLETTE DRAIN WEST

Agreement with *Mathew Daniel Simone* for cost apportionment due to severance or sale of land in the Ouellette Drain West drainage watershed or system.

Re-Apportioned assessment as per B/19/24						
Conc.	Lot	Affected Area (HA)	Roll No.	Owner	Outlet Assessment	TOTAL
M139	29	0.104	██████████	Mathew Daniel Simone	\$ 153.00	\$ 153.00
M139	29	0.090	██████████	Mathew Simone	\$ 129.00	\$ 129.00
						\$282.00

I, (we) agree to the drainage apportionment as listed below that the Town of Amherstburg has calculated for our property, and hereby petition the Council of the Town of Amherstburg to fix these new apportionments by resolution.

<u>MATHEW Simone</u> Retained Property Owner (printed)	<u>Dec. 10, 2025</u> Date	 Retained Property Owner (signature)
<u>MATHEW Simone</u> Severed Property Owner (printed)	<u>Dec. 10, 2025</u> Date	 Severed Property Owner 1 (signature)

March 6, 2026

The Mayor and Council
Town of Amherstburg
271 Sandwich Street South
Amherstburg, Ontario
N9V 2A5

Re: Request under Section 65 for #507 McLeod Avenue and #3918 McLeod Avenue.

In accordance with your instructions, we have undertaken an examination of the following for #507 McLeod Road:

- 65(1) Subdivision of Land
- 65(3) Subsequent Connection to McBride Road Branch of Willow Beach Drain
- 65(4) Subsequent Disconnection from Willow Beach Drain (North Branch and Main Branch)

In accordance with your instructions, we have undertaken an examination of the following for #3918 McLeod Avenue:

- 65(1) Subdivision of Land.
- 65(3) Subsequent Connection for change in land use

Authorization under the Drainage Act

This Engineers Report has been prepared under Section 65(1), Section 65(3), and 65(4) of the Drainage Act.

Subsequent subdivision of land

65(1) If, after the final revision of an engineer's assessment of land for a drainage works, the land is divided by a change in ownership of any part, the clerk of the local municipality in which the land is situate shall instruct an engineer in writing to apportion the assessment among parts into which the land was divided, taking into account the part of the land affected by the drainage works. 2010, c. 16, Sched. 1, s. 2 (26).

Subsequent connection to drainage works, etc.

65(3) If an owner of land that is not assessed for a drainage works subsequently connects the land with the drainage works for the purpose of drainage, or if the nature or extent of the use of a drainage works by land assessed for the drainage works is subsequently altered, the clerk

of the local municipality in which the land is situate shall instruct an engineer in writing to inspect the land and assess it for a just proportion of the drainage works, taking into account any compensation paid to the owner of the land in respect of the drainage works. 2010, c. 16, Sched. 1, s. 2 (26).

Subsequent disconnection from drainage works

65(4) If an owner of land that is assessed for a drainage works subsequently disconnects the land from the drainage works, the clerk of the local municipality in which the land is situate shall instruct an engineer in writing to inspect the land and determine the amount by which the assessment of the land should change. 2010, c. 16, Sched. 1, s. 2 (26).

R. Dobbin Engineering was appointed on February 9, 2026.

Existing and Proposed Drainage

The property at #507 McLeod Road (Roll Number 550-04780) is currently assessed with 0.07 Ha into the McBride Road Branch of the Willow Beach Drain and the remainder into the North Branch of the Willow Beach Drain. The parcel is proposed to be developed into 4 separate parcels. It is proposed to outlet all 4 lots, with a total area of 0.42 Ha, into the top end of the McBride Road Branch of the Willow Beach Drain.

The property at #3918 McLeod Avenue (Roll Number 550-09400) is currently assessed with 4.20 Ha into the McBride Road Branch of the Willow Beach Drain, including the location of the proposed 5 lots fronting onto McLeod Avenue.

Review and Investigation

In preparation of our report under Section 65, the following reports were reviewed:

- Willow Beach Drainage System Report dated December 11, 1968 by C.G.R. Armstrong, P.Eng.
 - This report included upgrades to the existing pump station and upgrades to the covered drainage system upstream.
- Willow Beach Shore Wall Report dated November 2, 1973 by C.G.R. Armstrong, P.Eng.
 - This report provided for the construction of a steel break wall in front of the pump station.
- Willow Beach Drainage System Report dated January 13, 1976 by C.G.R. Armstrong, P.Eng.
 - This report included the cleanout of the Main Drain, North-East Branch, North Branch and North-West Branches of the Willow Beach Drainage System.

- Willow Beach Pumping System Report dated November 28, 1983 by W.J. Sterrington, P.Eng.
 - This report included upgrades to the existing pump station.
- Willow Beach Drainage System Report dated January 28, 2000 by E.O. LaFontaine, P.Eng.
 - This report included the installation of a new pump station including a new outlet pipe, relocation of the drain across Lot 65, Registered Plan 1103, the Main Branch and Northwest Branch were improved from Willow Beach Drive to McLeod Road and a covered drain was constructed on McLeod Road to capture the discharge from the proposed Pollution Control Plant.
- Willow Beach Drain and Pump dated November 2, 2005 by E.P. Dries, P.Eng.
 - This report included the incorporation of improvements completed in 2003. These improvements included the installation of a storm sewer from the Main Branch approximately 48m northeast of Willow Beach Road, through an alley and along McBride Road. The McBride Road storm sewer ties into a ditch inlet catch basin on the east side of McBride Road where it intercepts the Northeast Branch of the Willow Beach Drain. Upstream of this the Northeast Branch is a swale to the southerly limit of McLeod Road. As part of this report the Northeast Branch was abandoned west of McBride Road.
- Section 65 Drainage Apportionment – Consent B/26-28/25 for #507 McLeod Avenue dated August 18, 2025.
 - A Section 65 report was prepared by the Town to address a severance application for #507 McLeod Avenue. As the proposed severance was never approved and the application has since changed, this report shall not apply.

Along with review of the above reports, the Functional Servicing Report (FSR) for the properties dated October 31, 2025 was reviewed. We found that the proposal, with the restriction of a portion of the lots to the 2-year pre-development rate as outlined in the FSR, would have little to no effect on the current drainage system for the McBride Branch of the Willow Beach Drain.

Connection / Disconnection

The revised Drainage Area for the McBride Road Branch is shown below. An area of 0.35 Ha will be subsequently added to the McBride Branch of the Willow Beach Drain and 0.35 Ha will be removed from North Branch of the Willow Beach Drain and the

Main Branch of the Willow Beach Drain upstream of the McBride Road Branch for the parcel with Roll Number 550-04780.



The governing report for the assessment of maintenance of the Willow Beach Drain-McBride Road Branch and Pump Station is dated November 2, 2005. The governing report for the assessment of maintenance of the North Branch and Main Branch of Willow Beach Main Drain is dated January 12, 1976. The 1976 report does not currently provide a fair means for assessing out maintenance as there is no separation of sub

watersheds and there has been significant development and changes to the drainage patterns since the 1976 report. Therefore, we suggest that a Section 76 Report be produced to reflect the changes in the area and remove #507 McLeod Road from the maintenance schedule.

Recommendations

We recommend that the Town of Amherstburg accept the revised drainage assessments for maintenance purposes as outlined in Appendix A. The updated assessments were derived by comparing assessments of similar use properties in the vicinity of the subject properties. A Section 76 to address the maintenance of the North Branch and Main Branch shall follow and shall consider the removal of the parcels severed from #507 McLeod.

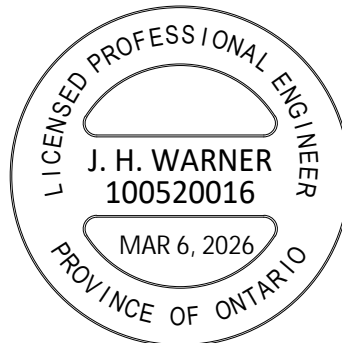
A subsequent connection “buy in” has not been applied to the properties as the 2005 report does not assess out any cost related to the improvements.

The total engineering cost to complete this report is \$2,600.00, excluding HST. This shall be assessed with 70% applied to the parcel with Roll Number 550-04780 and the remainder applied to the parcel with Roll Number 550-09400.

Yours truly,



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



APPENDIX A

**Willow Beach Drain and Pump dated November 2, 2005 (Schedule A-1 for Maintenance of the Willow Beach Drain -
McBride Road Branch) (Section 65(1) and 65(3))**

Roll No.	Conc.	Lot or pt. Lot	Hect.	Owner	Benefit	Outlet	Total
Original Assessment							
550-09400	1	Pt. Lot 19	4.20	Robert & Bernadette Meloche	\$ -	\$ 55.00	\$ 55.00
Updated Assessment							
TBD	1	Pt. Lot 19 (Proposed Lot 1)	0.12	Bernadette Meloche		\$ 10.00	\$ 10.00
TBD		Pt. Lot 19 (Proposed Lot 2)	0.12	Bernadette Meloche		\$ 10.00	\$ 10.00
TBD		Pt. Lot 19 (Proposed Lot 3)	0.12	Bernadette Meloche		\$ 10.00	\$ 10.00
TBD		Pt. Lot 19 (Proposed Lot 4)	0.12	Bernadette Meloche		\$ 10.00	\$ 10.00
TBD		Pt. Lot 19 (Proposed Lot 5)	0.12	Bernadette Meloche		\$ 10.00	\$ 10.00
		Pt. Lot 19 (Retained Lot)	3.60	Bernadette Meloche		\$ 47.00	\$ 47.00
			4.20		\$ -	\$ 97.00	\$ 97.00
Original Assessment							
	1	Lots 132 to 141	0.07	Keith and Maty Ellen Ewer	\$ 42.00	\$ 6.00	\$ 48.00
Updated Assessment							
TBD	1	Pt. Lot 19 (Proposed Lot 6)	0.10	Coulson Design-Build Inc.		\$ 8.60	\$ 8.60
TBD		Pt. Lot 19 (Proposed Lot 7)	0.13	Coulson Design-Build Inc.		\$ 11.10	\$ 11.10
TBD		Pt. Lot 19 (Proposed Lot 8)	0.10	Coulson Design-Build Inc.		\$ 8.60	\$ 8.60
TBD		Pt. Lot 19 (Proposed Lot 9)	0.09	Coulson Design-Build Inc.	\$ 42.00	\$ 7.70	\$ 49.70
			0.42		\$ 42.00	\$ 36.00	\$ 78.00
				Original Total Assessment for Maintenance	\$		\$ 4,000.00
				Updated Total Assessment for Maintenance	\$		\$ 4,072.00

Willow Beach Drain and Pump dated November 2, 2005 (Schedule A-2 for Maintenance of the Willow Beach Drain - Pump and Appurtenances) (Section 65(1) and 65(3))

Roll No.	Conc.	Lot or pt. Lot	Hect.	Owner	Benefit	Outlet	Total
Original Assessment							
██████████	1	Pt. Lot 19	9.47	Robert & Bernadette Meloche	\$ -	\$ 700.00	\$ 700.00
Updated Assessment							
TBD	1	Pt. Lot 19 (Proposed Lot 1)	0.12	Bernadette Meloche		\$ 20.00	\$ 20.00
TBD		Pt. Lot 19 (Proposed Lot 2)	0.12	Bernadette Meloche		\$ 20.00	\$ 20.00
TBD		Pt. Lot 19 (Proposed Lot 3)	0.12	Bernadette Meloche		\$ 20.00	\$ 20.00
TBD		Pt. Lot 19 (Proposed Lot 4)	0.12	Bernadette Meloche		\$ 20.00	\$ 20.00
TBD		Pt. Lot 19 (Proposed Lot 5)	0.12	Bernadette Meloche		\$ 20.00	\$ 20.00
██████████		Pt. Lot 19 (Retained Lot)	8.87	Bernadette Meloche		\$ 656.00	\$ 656.00
					\$ -	\$ 756.00	\$ 756.00
Original Assessment							
██████████	1	Lots 132 to 141	0.42	Keith and Maty Ellen Ewer	\$ -	\$ 69.00	\$ 69.00
Updated Assessment							
TBD	1	Pt. Lot 19 (Proposed Lot 6)	0.10	Coulson Design-Build Inc.		\$ 16.40	\$ 16.40
TBD		Pt. Lot 19 (Proposed Lot 7)	0.13	Coulson Design-Build Inc.		\$ 21.40	\$ 21.40
TBD		Pt. Lot 19 (Proposed Lot 8)	0.10	Coulson Design-Build Inc.		\$ 16.40	\$ 16.40
TBD		Pt. Lot 19 (Proposed Lot 9)	0.09	Coulson Design-Build Inc.		\$ 14.80	\$ 14.80
			0.42		\$ -	\$ 69.00	\$ 69.00
				Original Total Assessment for Maintenance	\$		10,000.00
				Updated Total Assessment for Maintenance	\$		10,056.00



THE CORPORATION OF THE TOWN OF AMHERSTBURG

OFFICE OF ENGINEERING AND PUBLIC WORKS

MISSION STATEMENT: Committed to delivering cost-effective and efficient services for the residents of the Town of Amherstburg with a view to improve and enhance their quality of life.

Table with 2 columns: Author's Name, Report Date, Author's Phone, Date to Drainage Board, Author's E-mail, Resolution #.

To: Members of the Drainage Board

Subject: Section 76 Request for Improvement – North Branch and Main Branch of the Willow Beach Drainage and Pumping Scheme. Engineering Appointment

1. RECOMMENDATION:

It is recommended that:

- 1. The report from the Drainage Superintendent and Engineering Coordinator dated March 24, 2026 regarding the Recommendation of Josh Warner, P.Eng for the variation of assessment (Section 76) to the North Branch and Main Branch of the Willow Beach Drain and Pumping Scheme Engineering Appointment BE RECEIVED;
2. The Drainage Board recommend that Council ACCEPT the request from the Engineers report under Section 65 of the Drainage Act to satisfy the conditions of consent application B/26-28/25 of the application for severance; and,
3. The Drainage Board recommend the appointment of Josh Warner, P.Eng, of R. Dobbin Engineering to examination and report the variation of assessments to the North Branch and Main Branch of the Willow Beach Drain and Pumping Scheme BE APPROVED by Council.

2. BACKGROUND:

The lands at Municipal number 507 McLeod applied for a Section 65(1) Subdivision of land, a Section 65(3) Subsequent connection of land to the McBride Road Branch of the Willow Beach Drain and a Section 65(4) Subsequent Disconnection from the Willow Beach Drain (North Branch and Main Branch).

The Engineers report for the Subsequent Connection/Disconnection recommends that the in order to consider the removal of the parcel severed from 507 McLeod, a Section 76 report is completed in order to vary the assessments on the North Branch and Main Branch.

The Essex Region Conservation Authority (ERCA), the Ontario Species at Risk (SAR), the Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and the Department of Fisheries and Oceans are prescribed persons under the regulation and will receive notification accordingly.

In order to effectively and efficiently provide the community of landowners with the most relevant drainage practitioner, the Town conducts a desk top review of the area requiring drainage. Engineering Consultants are selected not only based on the Town's Roster, but are also selected based on their ability to take on work, and if they have conducted work in the same area and have the relevant watershed information to more efficiently produce the required report effectively for the benefit of the community of landowners involved.

3. DISCUSSION:

R. Dobbin has completed several engineering reports for the Town and is well suited to examine and report on a Section 76 Variation of assessment report.

4. RISK ANALYSIS:

There is more risk for the Town if Council does not accept a request for improvement to a drainage works than there is in accepting one.

Not only does Council have the responsibility to repair and maintain drainage works under the Act, there is obligated to provide the Finance department with the funds necessary for all works related to drainage under the Act. The Engineer appointed by Council has the requirement under Section 4, to determine the validity of the petition.

If Council chooses not to accept the request, the requesting landowner may file an appeal to the Tribunal.

From a pro-active approach to undrained lands, and to allocate the necessary funds more effectively and efficiently, the examining engineer will examine and report on the entire drainage scheme if necessary to satisfy the requests and provide a new drainage report that provides not only the solution to a Common Law matter, but also provides the mechanism for the Town to recover costs fairly for any recommended improvements as well as future maintenance on the new drain and by all the users of that drain.

5. FINANCIAL MATTERS:

The Town be assessed for its lands or roads within the watershed that contribute stormwater. The Town is also tasked with funding the project in its entirety, and until costs can be recovered through the adopted bylaws assessment schedule.

Once the recommended solution under bylaw is constructed, the Town recovers 100% of the cost of the project from all landowners affected, and if the Town is assessed, the assessment for their share of drainage is taken from the Drain reserve fund.

6. CONSULTATIONS:

ERCA, OMAFRA, SAR and DFO have all been notified of the request for improvement, and have the opportunity to call for an environmental assessment on the proposed area. If they wish to, they must pay for that assessment under Section 6(1) regarding environmental appraisals. An ERCA permit will be required under Section 28 of the Conservation Authorities Act for this project.

7. CONCLUSION:

Administration is recommending that the request be accepted under the Act for the benefit of the requesting landowner for the right to access over a Municipal Drain.

Administration is recommending the appointment of Josh Warner, P.Eng. of R. Dobbin Engineering Inc. and that the appointment be brought to the next available council meeting for Council's consideration pursuant to the provisions of the Drainage Act.



Sam Paglia, P.Eng.,
**Drainage Superintendent and
Engineering Coordinator**

Attachment(s):

- Request for Improvement received.