

**BY-LAW NUMBER 09-25**

-of-

**THE CORPORATION OF THE COUNTY OF BRANT**

To provide for drainage works in the County of Brant (Rathbun  
Municipal Drain)

**WHEREAS** the Council of the Corporation of the County of Brant has appointed Streamline Engineering Inc., by resolution to prepare a report to provide a minor improvement and relocation of the existing Rathbun Municipal Drain in accordance with Section 78(5) of the Drainage Act, R.S.O. 1990;

**AND WHEREAS** the Council of The Corporation of The County of Brant has procured a report under Sections 78(5) of the Drainage Act, R.S.O. 1990, as amended, Chapter D.17, Streamline Engineering Inc., dated January 6, 2025, attached hereto as Schedule "A" and forming part of this by-law;

**AND WHEREAS** the estimated total cost to prepare the report for the drainage works is fifty-six thousand, five hundred dollars (\$56,500.00);

**AND WHEREAS** fifty-six thousand, five hundred dollars (\$56,500.00) is the amount to be contributed by the municipality for the County land and road portions of the drainage works;

**AND WHEREAS** the Council is of the opinion that the proposed works are required;

**NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE COUNTY OF BRANT**  
enacts as follows:

1. **THAT** the report prepared by Streamline Engineering Inc. dated January 6, 2025, and attached hereto as Schedule "A" is hereby adopted
2. **AND THAT** the Corporation of the County of Brant may borrow on the credit of the corporation the amount of \$56,500.00 being the amount necessary for the preparation and construction of the report
2. **AND THAT** for paying the amount of \$56,500.00 being the amount assessed upon the lands and roads within the municipality, a special rate sufficient to pay the amount assessed, plus interest thereon, shall be levied upon the whole rateable properties in The Corporation of The County of Brant for one (1) year after the passing of this by-law to be collected in the same manner and at the same time as other taxes are collected
3. **AND THAT** the Corporation of the County of Brant may arrange the issue of debentures for the amount borrowed less the total of:
  - (a) grants received under Section 85 of the Drainage Act
  - (b) commuted payments made in respect of lands and roads assessed within the municipality
  - (c) moneys paid under Section 61(3) of the Drainage Act
  - (d) money assessed in and payable by another municipality, and such debentures shall be made payable within five (5) years from the date of the debenture and shall bear interest at a

rate not higher than the rate charged by Infrastructure Ontario on the date of sale of such debenture.

And such debentures shall be made payable within ten (10) years from the date of the debenture and shall bear interest at the rate prevailing at the time the debenture(s) is/are sold by the County of Brant.

4. **THAT** all assessments of One Thousand Dollars (\$1000.00) or less are payable in the first year in which the assessment is imposed.
5. **THAT** this by-law comes into force on the passing thereof and may be cited as the Simmons-Hopkins Municipal Drain.

**READ** a first and second time and provisionally adopted, this 11<sup>th</sup> day of February, 2025.

**THE CORPORATION OF THE COUNTY OF BRANT**

\_\_\_\_\_  
David Bailey, Mayor

\_\_\_\_\_  
Spencer Pluck, Deputy Clerk

**READ** a third time and finally passed in Council, this \_\_\_ day \_\_\_ of 2024.

**THE CORPORATION OF THE COUNTY OF BRANT**

\_\_\_\_\_  
David Bailey, Mayor

\_\_\_\_\_  
Sunayana Katikapalli, Clerk

Engineer's Report

# RATHBUN MUNICIPAL DRAIN RELOCATION 2025

County of Brant



January 6, 2025

To the Mayor and Members of Council of the County of Brant,

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Streamline Engineering is pleased to present our accompanying report for the Rathbun Municipal Drain Relocation 2025.

This report recommends the construction of approximately 301m of municipal tile drain to relocate the existing drain on Lot 11, Concession 7 of Ward 4 to avoid existing and proposed buildings and infrastructure.

A summary of the assessments for the project are as follows:

Privately Owned Agricultural – Grantable	\$	56,500
<b>Total Estimated Assessments</b>	\$	<b>56,500</b>

We appreciate the opportunity to provide services to the County of Brant and we trust that this report meets the requirements of the County of Brant.

Respectfully submitted by,

Streamline Engineering Inc.



Trevor Kuepfer, P. Eng.  
Project Engineer

A handwritten signature in black ink that reads "Cody Kuepfer".

Cody Kuepfer, C.Tech.  
Civil Technologist

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# 1 Project Background

## 1.1 Existing Conditions

The project is located in the County of Brant, and is on Lot 11, Concession 7 of Ward 4. The existing Rathbun Municipal Drain on this property consists of 350mm (14") dia. and 250mm (10") dia. concrete tile. Currently, a portion of the existing drain is located underneath existing agricultural infrastructure. Furthermore, the property owner is planning on constructing a barn and the proposed location of the barn is also overtop of the existing municipal drain.

## 1.2 Project Authorization

This report has been prepared in response to appointment by the County of Brant, dated December 17, 2024 to provide a minor improvement to the Rathbun Municipal Drain in accordance with Section 78(5) of the Drainage Act, R.S.O. 1990.

## 1.3 Municipal Drain History

Streamline Engineering conducted a review of all the historical documentation available in the County of Brant office regarding the applicable portions of the Rathbun Municipal Drain.

The municipal drain report relevant to this project was an improvement made to the Rathbun municipal drain under a report by McDowell and Jewitt in 1964. This report provided for approx. 2400m of tile improvement as well as a crossing of Highway 53. Work took place on Lots 9 and 10, Concession 6 and Lots 10 and 11, Concession 7.

## 1.4 Site Visit

A site visit was conducted at the onset of this project at 95 7<sup>th</sup> Concession Road, Harley, ON. The following were present at the meeting.

Rieni Van Deelen	Property Owner
Wes Donker	Property Representative
Trevor Kuepfer	Streamline Engineering
Cody Kuepfer	Streamline Engineering

Rieni and Wes discussed the location of the proposed barn as well as the approx. location of the existing municipal drain. They expressed interest in rerouting the drain to avoid all buildings and infrastructure on the property and mentioned the time sensitivity in completing such a relocation to allow for construction activities to begin as soon as reasonably possible. They mentioned that their preference would be for the drain alignment be located close to the east property line to avoid all existing and proposed buildings.

## Minor Drain Improvement Validity

At this site visit, it was confirmed by the Engineer that this project satisfies the required criteria to be considered a minor improvement to a drainage works as outlined in Ontario Regulation 500/21 subsection 7(1).

## 2 Design Process and Engineering Considerations

### 2.1 Design Considerations

#### Tile Drain

The tile system has been designed to maintain the capacity of the existing drainage system.

## 3 Proposed Work

### 3.1 Recommendations

Streamline Engineering recommends rerouting the municipal drain as noted on the accompanying drawings, installing one junction box and approx. 301m of 300mm (12") dia. pipe and all necessary connections.

This design satisfies the requirements outlined in Ontario Regulation 500/21 subsection 7(1) for the project to be considered a minor drain improvement.

## 4 Project Costs

### 4.1 Project Cost Estimate, Assessment, and Grant

The total project cost is estimated to be **\$ 56,500**. This cost includes estimated construction costs, administrative costs, an allotment for contingency costs, net HST, interest charges, etc. Schedule A – Project Cost Estimate details a breakdown of all of the estimated costs anticipated for this project.

All costs associated with this project are to be assessed to the Hog Farm Van Deelen Ltd property.

Under the authorization of Section 85 of the Drainage Act, properties may be eligible for an OMAFRA grant for up to 1/3 of their property assessment. Grant eligibility is determined by the OMAFRA Agricultural Drainage Infrastructure Program (ADIP) and a property is required to be used for agricultural purposes and have a Farm Property Tax Class rate in order to be eligible for the grant under this program. The County of Brant will be required to apply for this grant upon the completion of this project.

The 1/3 OMAFRA grant is anticipated to apply to the Hog Farm Van Deelen Ltd property, resulting in the net cost assessed to the owner of approximately **\$37,700**.

## 5 Future Considerations

### 5.1 Maintenance

The County of Brant shall utilize the Rathbun Municipal Drain 1964 report by McDowell and Jewitt to divide any maintenance costs using the same relative proportions until such time that the maintenance schedule is changed under the relevant process in the Drainage Act.

### 5.2 Drain Abandonment

Section 19 of the Drainage Act provides the Engineer the ability to abandon any drain or part that is no longer useful or is being supplanted by a new drainage works. The existing Rathbun Municipal Drain from 1964 Report on Lot 11, Concession 7 shall be considered abandoned and cease of having Municipal Drain status following the construction of the proposed drain.



Project Schedules

SCHEDULE A - PROJECT COST ESTIMATE

<b>Rathbun Drain Relocation</b>				
<b>Item No.</b>	<b>SP No.*</b>	<b>Description</b>	<b>Approx. Quantity</b>	<b>Est. Cost</b>
A1	1	Pre-Construction Meeting, Mobilization, De-Mobilization.	LS	\$3,000
A2	2	Supply 19mm (¾") clear crushed stone.	130 tonne	\$3,900
A3	3	a) Supply 900mm x 1200mm concrete JB.	LS	\$1,800
		b) Install JB (Sta. 0+000).	LS	\$1,500
A4	4	Connection of ex. 350mm concrete tile to proposed JB with 375mmØ HDPE pipe (320 kPa) as specified.	LS	\$500
A5	5	a) Supply 6m of 300mm dia. solid, bell & spigoted HPDE pipe (320 kPa) with one 45 degree HDPE elbow with plain ends.	LS	\$400
		b) Install HDPE pipe and 45 degree elbow via excavator on 19mm clearstone bedding as specified (Sta. 0+000 to 0+006).	LS	\$400
		c) Supply 300mm dia. concrete tile (2000D) and required geotextile.	295 m	\$8,100
		d) Install concrete tile via excavator (Sta. 0+006 to 0+301).	295 m	\$17,300
<b>SUBTOTAL - Rathbun Drain Relocation</b>				<b>\$36,900</b>
<b>Provisional Costs</b>				
These costs are included to account for construction activities that may or may not be required at the time of construction.				
<b>Item No.</b>	<b>SP No.*</b>	<b>Description</b>	<b>Approx. Quantity</b>	<b>Est. Cost</b>
P1	6	Tile connections into the proposed drain with core drilled hole and coupler.		
		a) 100mm dia. Connection	2 ea.	\$400
P2		Contingency Allowance	LS	\$3,000
<b>SUBTOTAL - Provisional Costs</b>				<b>\$3,400</b>
<b>TOTAL ESTIMATED CONSTRUCTION COST</b>				<b>\$40,300</b>

\*SP No. refers to the Special Provisions - Project Specific Construction Specification associated with the item

<b>SUMMARY OF COSTS</b>	
<b>Construction</b>	
Total estimated cost of construction	\$40,300
<b>Administration</b>	
Public meetings, survey, design and drafting, preparation of cost estimates, drainage report preparation, presentation at the Consideration of the drainage report	\$7,500
Contractor procurement, contract administration and construction review	\$6,000
Miscellaneous project expenses (i.e. printing, permitting fees, mileage, estimated interest charges, net HST, etc.)	\$2,700
<b>TOTAL ESTIMATED PROJECT COST</b>	<b>\$56,500</b>

The above costs are estimates only. The final costs of construction, and administration cannot be determined until the project is completed.

These estimates do **not** include costs to defend the Drainage Report should appeals be filed with the Court of Revision, Drainage Tribunal, and/or Drainage Referee.

Appendix A  
Construction Specifications

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## 1 Special Provisions

Special Provisions are directions specific to this project. A project specific specification is included in the Special Provisions for each line item bid for the project. Should a discrepancy be noted between the Special Provisions and General Conditions/Specifications, the Special Provisions shall take precedence.

### 1.1 Working Space and Access Routes

The Contractor shall be entitled to undertake work and stage construction equipment/materials in the following working areas:

- A 20m working space on the Hog Farm Van Deelen Ltd property for the proposed tile drain.

The Contractor shall be entitled to utilize the following access routes, which shall be a maximum 6m in width:

- Access Route #1 – From driveway on south side of 7<sup>th</sup> Concession Road at 95 7<sup>th</sup> Concession Road, Harley, ON.

The Contractor shall obtain approval from the Contract Administrator and relevant property owner prior to exceeding the noted working spaces, or if they wish to use an alternative access route. The Contractor shall be responsible for any damages to lands, crops, etc. outside of the specified working areas or access routes.

### 1.2 Utilities

No utilities investigation was undertaken prior to construction for this project.

All public and private utilities shall be located by the Contractor prior to the construction of the proposed drain. If required by the specific utility, the Contractor shall be responsible to coordinate for a representative of the utility to be on-site during the relevant construction works.

### 1.3 Anticipated Soil Conditions

No soils investigation was completed for this project, however based on the soils observed from the excavation on site soils are generally expected to be clayey with a small amount of stones.

### 1.4 Agency Project Requirements

There are no agency requirements for this project.

## 1.5 Project Specific Construction Specifications

### **SP1 Pre-Construction Meeting, Mobilization, and De-Mobilization**

The Contractor shall not complete any construction activities prior to an executed Contract being completed, as well as confirmation of their anticipated construction start date with the Contract Administrator.

The Contractor shall be responsible to notify all property owners, the Drainage Superintendent and Contract Administrator and conduct a pre-construction meeting prior to the commencement of any construction activities. A minimum 48 hours' notice shall be provided by the Contractor.

Furthermore, this item covers the Contractor's costs associated with facilitation and attendance at the pre-construction meeting, the transportation and/or accommodation (meals and lodging) of labour, equipment, offices, conveniences, and other items not required to form part of the permanent works and not covered by other items in the Schedule of Unit Prices. This line item shall only apply to the first/ primary mobilization/demobilization required to fulfill the Contract. Additional mobilization costs will not be paid if the Contractor chooses to leave the site on their own accord following the initial mobilization. However, if at the discretion of the Contract Administrator a situation warrants the Contractor to demobilize from site to complete the remainder of the work at a later date, the costs associated with this may be negotiated with the Contract Administrator and paid as an extra item.

Payment at the Lump Sum price set out in the schedule of unit prices for the pre-construction meeting, mobilization and demobilization will be made as follows:

- 25% payable following the pre-construction meeting.
- 50% payable following the first mobilization.
- 25% payable on the Substantial Performance of the Contract.

### **SP2 Supply 19mm (¾ inch) Diameter Clearstone**

For the unit price bid per tonne, the Contractor shall supply 19mm (¾ inch) dia. clear crushed stone. This unit price shall be used as payment for **all** 19mm clear crushed stone installed for this project.

The Contractor shall provide tickets and/or adequate supporting documentation to the Contract Administrator to support the quantity of clearstone proposed to be paid.

### **SP3 Structure Installation**

The proposed junction box shall be manufactured with cored holes, knockouts, and sumps as per the applicable structure details, and shall be installed as oriented on any applicable detail drawings. The Contractor shall include the cost to complete all necessary tile connections c/w parging on the interior and exterior of the proposed structure as part of the associated line item.

Junction boxes shall have a minimum 150mm thick reinforced concrete lid and shall have a minimum 450mm of cover.



All structures shall be placed on either firm native material, or if necessary, 19mm clearstone bedding. All structures shall be levelled by the Contractor to the satisfaction of the Contract Administrator. Excavated subsoil material may be used by the Contractor as backfill surrounding the catchbasins, however the Contractor shall be responsible to address any settlement around the structure during the warranty period.

### **SP4 Connection of Existing Municipal Tile to Junction Box**

The Contractor shall install this connection via excavator on a 19mm clearstone bedding and the stone shall be paid out based on the bid unit price in the Tender and not included in the bid of this line item. The Contractor shall ensure that all connections are properly supported to prevent settlement underneath connections. The Contractor shall be responsible for any damage to the tiles throughout the warranty period.

For the connection of the existing 350mm concrete tile on the upstream side of the proposed junction box, the Contractor shall supply and install a minimum of 3m of 375mm solid HDPE pipe (320 kPa). The joint between the existing concrete tile and the proposed pipe shall be butt jointed and double wrapped with a minimum 300mm width of geotextile. The downstream end of the HDPE pipe to be connected into the junction box at 0+000.

For the connection of the existing 350mm concrete tile on the downstream side of the proposed junction box the Contractor shall salvage existing tile lengths of the concrete tile during the installation of the junction box. The existing concrete tile lengths shall be re-used to complete the connection to the junction box. The tile should be firmly butt jointed to the adjacent concrete tile, the joint wrapped with geotextile, and the tile cut to be flush with the inner wall of the junction box, all to the satisfaction of the Contract Administrator.

All existing municipal tile destroyed in the making of these connections shall be disposed of offsite by the Contractor.

### **SP5 Tile Installation**

All concrete tile shall be 2000D strength. All HDPE pipe shall be solid dual-wall (i.e. smooth inner wall) pipe with a minimum 320 kPa stiffness at 5% deflection.

#### **Topsoil Stripping**

Prior to the installation of the new tile, in all locations the Contractor shall strip a minimum 4m width of topsoil from the area of the proposed tile trench. The topsoil shall be stockpiled separately from the subsoil material.

Where the tile installation exceeds the maximum digging depth of the Contractor's excavator, they shall lower the surface grade in order that the excavator may dig to the correct depth. The Contractor shall complete any additional stripping required to facilitate the work. The Contractor shall consider the additional stripping and excavating required in their bid of the associated line item.

### **Trenching**

All trenching shall be carried out with an excavator and the pipe shall be installed with 19mm clearstone bedding and backfill as per the accompanying details. The minimum trench shall be equal to the outside diameter of the pipe plus 100mm on each side of the pipe. The maximum trench width shall be equal to the outside diameter of the pipe plus 300mm on each side of the pipe.

### **Concrete Tile Installation**

The concrete tiles shall be laid carefully so that successive tiles align both horizontally and vertically as firmly as possible and at a regular grade and alignment in accordance with the drawings. The maximum acceptable gap between any tiles shall be 10mm. Any ground/debris along the edges, faces, or inside of the tile shall be scraped off by the Contractor prior to the tile being laid. If requested by the Contract Administrator, the Contractor shall use a concrete saw to cut the edges of any concrete tile to bevel the tile and minimize the gap between the butt joints at a turn in the proposed drain.

The Contractor shall wrap all concrete tile joints with RM-150 (4 oz.) non-woven geotextile or approved equivalent centered on the tile joints with a minimum 300mm width.

### **Backfilling**

Once sufficient time has been given for the Contract Administrator to verify the elevation of the tile, backfilling of the trench may commence. The tile installation trench shall be backfilled by the Contractor at the end of each working day. Clean native material free of stones greater than 150mm in diameter and organic material shall be used within 300mm of the proposed tile. In cases, where in the opinion of the Contract Administrator the backfill material is too stony to be used as backfill around the tile, the Contractor shall use 19mm clear stone as backfill up to 150mm overtop of the tile. The Contractor shall take care to ensure that the area between the tile and the trench wall is backfilled as to avoid any voids between the tile and the trench wall. The remainder of the trench may be backfilled with the remaining native material.

### **Topsoil Restoration**

Following backfilling with the native material, the topsoil shall be replaced to the satisfaction of the Contract Administrator. The trench shall be mounded to allow for the settlement of the backfill material to ensure that no depression remains after settling has occurred, and conversely that the trench can be easily cultivated with ordinary farm equipment without causing undue hardship to the farm machinery and farm personnel.

Under no circumstances shall frozen topsoil be levelled or placed over top of the drain. If the Contractor elects to install the drain during winter months, the Contractor shall return to the site and level the topsoil when conditions are appropriate. No additional mobilization charges shall be made for returning the site to complete the levelling of topsoil.

### **Tile Installation Specifics**

The proposed drain shall be bid and installed considering information highlighted in the table below:

Station Range	Comments
0+000 to 0+006	<ul style="list-style-type: none"> <li>• Tile shall be installed via excavator on stone bedding as per the Drain Installation on Stone Bedding Detail.</li> <li>• The Contractor shall supply 6m of 300mm dia. HDPE pipe (320 kPa) with bell end and a 300mm dia. solid 45 deg. elbow with plain ends. The 45 deg. elbow shall be inserted into bell end of HDPE pipe at Sta. 0+006. The connection between the proposed 300mm dia. concrete tile and the proposed elbow shall be butt jointed and double wrapped with a minimum 300mm width of geotextile.</li> </ul>
0+006 to 0+301	<ul style="list-style-type: none"> <li>• Tile shall be installed via excavator on stone bedding as per the Drain Installation on Stone Bedding Detail.</li> <li>• At Sta. 0+301 the proposed concrete tile shall be butt jointed to the existing 250mm dia. concrete tile and double wrapped with a minimum 300mm width of geotextile. The existing catchbasin shall remain undisturbed in the making of this connection.</li> </ul>

All of the aforementioned work shall be included as part of the work of the associated tile installation line item. An extra payment will not be made for the stripping, stockpiling and replacing of topsoil.

The Contractor shall be responsible for any damage to the new tile throughout the warranty period.

**SP6 Tile Connections**

For the unit bid price, the Contractor shall provide all labour and material required to connect all any private drains encountered during construction to the proposed drain with appropriately sized agricultural tubing or approved equivalent (assuming a length of 6m or less). Initially the Contractor shall connect to the existing tile with an appropriate coupler or reducer. The connection shall be adequately supported with 19mm clear stone bedding and the stone shall be paid out based on the bid unit price in the Tender and not included in the bid of this line item. Connections directly to a length of tile shall be installed into the drain with a core drilled hole and manufactured HDPE tee/coupler fitting as per the detail in the accompanying drawings. Connections directly to a structure shall be into the appropriate opening/knockout provided, and parged on the interior and exterior of the structure.

The Contractor shall also cap the downstream end of the connected tile with an end cap, geotextile, or other item to the satisfaction of the Contract Administrator.

The Contractor shall be responsible for all tile connections made, or any missed tile connections over the course of the warranty period, and is required to rectify any deficiencies related to the connections.

## 2 General Requirements

### 2.1 Periodic and Final Construction Review

Periodic review of the construction works will be made by the Contract Administrator during the completion of the work. The Contract Administrator may order the Contractor to daylight any aspect of the work completed so that they may verify elevations, or review any other aspect of the work.

Regardless of whether or not the Contractor's work has been checked by the Contract Administrator, the Contractor shall assume full responsibility for the alignment, elevations, and dimensions of each and all parts of the work.

Prior to demobilization and removal of equipment and materials from the site, the Contractor shall arrange an on-site final review of the work with the Contract Administrator. A minimum 48 hours' notice shall be provided by the Contractor.

### 2.2 Existing Conditions

The Contractor shall clean up and restore all disturbed areas to condition equal to or better than existing conditions using materials equal to or better than existing materials.

The Contractor shall maintain flow in all existing sewers, drains, ditches, watercourses, etc. as applicable.

### 2.3 Benchmarks and Temporary Construction Markers

The established benchmarks will govern the elevation of the proposed work and the Contractor shall verify the accuracy of benchmarks prior to completing any construction works. Any discrepancies shall be brought to the attention of the Contract Administrator immediately.

Both prior to and during construction, the Contract Administrator may set out temporary benchmarks, stakes, flags, or markers. The Contractor or property owner shall be held liable for the cost of re-establishing any destroyed benchmarks or temporary construction markers.

### 2.4 Material Specifications

Unless otherwise specified elsewhere in the Contract Documents the following specifications shall apply for the following construction materials.

- All concrete tile shall conform to the requirements of the most recent ASTM C412 specification for with a pipe strength of 2000D.
- All high-density polyethylene (HDPE) pipe shall be solid dual-wall (i.e. smooth inner wall) pipe with a minimum stiffness of 320 kPa at 5% deflection. The pipe joints shall be secured with either snap-on couplers for pipes up to and including 200mm in diameter, or split couplers for pipes larger

than 250mm in diameter, or gasketed bell and spigot joints, whichever is specified in the Contract Documents.

- All non-woven geotextile shall be RM-150 (4 oz), Terrafix 270R or approved equivalent unless specified elsewhere.
- 19mm (¾ inch) crushed clear stone shall be as per requirements in OPSS.MUNI 1004.

## 2.5 Iron Bars

The Contractor shall notify the Contract Administrator should they disturb an iron bar during construction so it can be replaced by an Ontario Land Surveyor. If, to the discretion of the Contract Administrator, the disturbance of the iron bar is due to negligence on the Contractor's behalf, the Contractor shall retain an Ontario Land Surveyor to replace the bar at their own expense.

## 2.6 Pollution

The Contractor shall keep their equipment in good repair. The Contractor shall refuel or repair equipment away from open water.

If polluted material from the construction materials or equipment is caused to flow into the drain, the Contractor shall immediately follow the relevant spill reporting and cleanup protocols specified by the relevant governing body.

## 2.7 Fences

The Contractor will be permitted to remove fences to the extent necessary to allow for the construction of the drain. Unless specifically noted in the Contract documents, disturbed fences shall be restored in as good of condition as they were found. Fences should be handled in such a manner to prevent any unnecessary damage. Where feasible, cutting of the fence and subsequently patching the fence shall be avoided. The Contractor shall not leave any fence open when not working in the immediate area and shall replace the fence in a timely manner.

Fences damaged beyond repair as a result of the Contractor's negligence shall be replaced with new materials similar to the existing fence to the satisfaction of the Contract Administrator, and all costs incurred shall be at the Contractor's expense.

## 2.8 Livestock and Standing Crops

The Contractor shall notify all property owners with a minimum 48 hours' notice prior to removing a fence that may contain livestock, or prior to damaging to any standing crops. The Contractor shall be responsible for all loss or injury of livestock, or damage to crops if they fail to provide 48 hours' notice to the relevant property owner.

Following notification, the property owner shall be responsible to keep the livestock clear of the construction activities until all such activities have concluded.

## 2.9 Material Disposal

The Contractor is responsible to remove and dispose of all excess construction materials off-site prior to demobilizing from the site.

## 2.10 Removal of Large Stones and Rock

The Contractor shall haul all stones greater than 300mm in diameter that remain at the ground surface following construction to a location approved by the property owner or, if there is no suitable location, disposed of off-site. Extra costs for such stone relocation/removal shall be to the discretion of the Contract Administrator.

## 2.11 Damage by Vehicles and Other Equipment

Throughout all construction activities, the Contractor shall be responsible maintain all road surfaces impacted by the construction activities. This maintenance shall include but not be limited to scraping mud from the road surfaces, repairing potholes, etc.

If at any time, in the opinion of the Contract Administrator, damage is being or is likely to be done to any road or other infrastructure that is not included in the scope of work, by the Contractor's vehicles or other equipment, the Contractor shall, on the direction of the Contract Administrator and at the Contractor's own expense make changes in or substitutions for such vehicles or other equipment or shall in some manner remove the cause of such damage to the satisfaction of the Contract Administrator.

## 2.12 Equipment and Material Staging

Construction equipment and materials shall be staged in the areas specified in the Contract Documents. No construction equipment or materials shall be left unattended within five (5) metres of any road ROW.

## 2.13 Deficient Items

Deficient items as noted by the Contract Administrator shall be remedied by the Contractor in a timely manner. The Contract Administrator shall, at their discretion, have the authority to holdback up to **250%** of the value of a deficient item. If the deficient item is not remedied in a reasonable time frame, the Contract Administrator shall notify the Contractor, and, at the Contract Administrator's discretion, procure an alternative Contractor to complete the work and any outstanding payment associated with the deficient item shall be forfeited by the original Contractor.

## 2.14 Construction Document Errors

The Contractor shall notify the Contract Administrator immediately with respect to any errors or omissions with any of the construction contract documents. The Contractor shall be responsible for

any decisions they make of their own accord to correct such errors or omissions and no extra charge shall be incurred because of said decisions.

The Contractor and Contract Administrator shall, in a timely manner, rectify the errors and omissions and adjust the contract documents as the situation warrants.

## 2.15 Alterations to Work

The Contract Administrator shall have the power to make alterations in the work and the Contractor shall proceed to make such changes without causing delay. Such alterations shall in no way render the Contract void.

The valuation of such alterations shall be determined as a result of negotiations between the Contractor and Contract Administrator, but in all cases the Contract Administrator shall maintain the final responsibility for the decision. Where such changes involve additional work similar to other items in the Contract, the price for the additional work shall be determined after consideration is given to the bid price for similar items.

Furthermore, in the event that the quantity of any provisional item exceeds the quantity specified in the Bid Form by more than 150%, the Contract Administrator may request revised unit pricing resulting from economies of scale, and the Contractor shall provide updated unit pricing within one (1) working day.

No claims for a variation or alteration in the increased or decreased price shall be valid unless done in pursuance of an order form from the Contract. In no case shall the Contractor commence work that they consider to be an extra charge before receiving approval from the Contract Administrator.

## 2.16 Liquidated Damages

It is agreed by the parties to the Contract, that if this Contract is not substantially performed by the required date specified in the Contract Documents without prior consultation with the Contract Administrator and Owner, that the Contractor may be subject to **daily liquidated damages of \$500 plus HST** for each and every calendar day's delay in finishing the work to the discretion of the Contract Administrator and Owner.

## 2.17 Sub-Contractors

The Contractor shall not sublet the whole or part of this Contract without the approval of the Contract Administrator.

## 2.18 Payment

Progress payments equal to 87% of the value of work completed and materials incorporated shall be made to the Contractor on a monthly basis. The remaining 13% of the work completed shall consist of a 10% Statutory Holdback and a 3% Warranty Holdback for the project.

Payments shall be made on the written request and submission of a proper invoice by the Contractor to the Contract Administrator or Owner. A proper invoice submission, in addition to the definition provided in the Construction Act shall require the following:

- Quantities and unit prices shall be provided for with adequate supporting documentation shall be provided by the Contractor for all necessary items. For extras in the Contract, the Contract Administrator may request a detailed labour and material breakdown.
- A current clearance certificate from the Workplace Safety and Insurance Board (WSIB).
- A detailed unit summary page denoting all payable line items, applicable holdbacks, taxes, etc.

If any of these requirements are not met to the satisfaction of the Contract Administrator, the Contract Administrator shall promptly notify the Contractor, at which time the Contractor shall revise the invoice. Prompt payment procedures shall not begin until the Contract Administrator receives a proper invoice to the satisfaction of the Contract Administrator.

### **2.19 Project Completion/Substantial Performance**

For all intents and purposes, for this project, the substantial performance date shall be deemed to be the same as the completion date of the project and any documentation indicating such shall represent both the date of substantial performance and project completion. Substantial performance shall be determined as per its definition in the Construction Act.

### **2.20 Statutory Holdback**

As per the Construction Act, a 10% Statutory Holdback shall not be due until 60 days from the date of Substantial Performance. This payment shall be released once the Contractor provides a Statutory Declaration that all material and/or labour incorporated in the work has been fully paid for.

### **2.21 Warranty Holdback**

A 3% Warranty Holdback shall not be paid for a minimum one year from the date of Substantial Performance. If the Contract Administrator notifies the Contractor in writing of any deficient items prior to the expiration of the warranty period, they shall be remedied promptly by the Contractor notwithstanding that the rectification of the work may extend beyond the end of the warranty period. The warranty holdback shall not be considered due until all outstanding deficient items have been rectified by the Contractor to the satisfaction of the Contract Administrator.

### **2.22 Tests**

The cost for testing of materials supplied to the job by the Contractor shall be borne by the Contractor.

The Contract Administrator shall have the authority to subject any lengths of any pipe to a competent testing laboratory to ensure the adequacy of the pipe. If any pipe supplied by the Contractor is



determined to be inadequate to meet the applicable governing standards, the Contractor shall bear the full responsibility to remove and/or replace all such inadequate pipe with pipe that satisfies the requirements of said governing standards.

### **2.23 Species at Risk**

The Contractor is responsible to ensure that during construction, no extirpated, endangered, threatened, or special concern species or their habitats are adversely affected. Should a Species at Risk be encountered, the Contractor shall notify the Contract Administrator immediately and follow the Ministry's guidelines and guidance regarding handling of the species, measures to exclude the species from the site, safety considerations, etc.

### **2.24 Weather**

The Contractor shall make every effort to avoid working in weather conditions that may increase the difficulty of construction activities. Should the Contractor choose to work during periods of frequent rainfall or snow, or excessively hot or cold weather, etc., extra charges resulting from working in unfavourable construction conditions caused by such weather may not be applicable and shall be to the discretion of the Contract Administrator.

### **2.25 Dewatering**

The Contractor shall dewater excavations/trenches and maintain the groundwater level at least 0.5m below the excavation bases, thereby facilitating proper completion of the work in reasonably dry, stable conditions. If a specific line item for dewatering is not included with the Contract, the cost of such dewatering shall be included with the bid of the associated line items and no additional payments shall apply if the Contractor is required to complete damming, pumping, etc. in order to facilitate construction works.

The dewatering system shall be discharged a minimum 20m away from its re-entry point to the drain to encourage water filtration. The quality of the water re-entering the watercourse shall be to the satisfaction of the Contract Administrator and should additional means be required to ensure suitable water quality (i.e. filter bags, settling ponds, check dams, geo-textile, etc.), they shall be negotiated as an extra item at the time of construction.

### **2.26 Erosion and Sediment Control**

Appropriate erosion and sediment control measures shall be in place for the entirety of construction and the Contractor shall regularly monitor and maintain said measures. The Contractor shall ensure that the site is left each day with appropriate controls to avoid erosion. No construction activities which may cause sediment to be conveyed downstream of the working area shall commence until appropriate erosion and sediment control measures are in place.

## 2.27 Seeding

Grass seed shall be fresh, and clean seed, and unless specified elsewhere be as per OPSS.MUNI 804 Standard Roadside Mix which is duplicated below for convenience. It shall be applied at a rate of 130kg per 10,000m<sup>2</sup>:

- 50 % Creeping red fescue
- 10% Kentucky Bluegrass
- 35% Perennial Ryegrass
- 5% White clover

If a nurse crop is required, it shall be fall rye grain or winter wheat grain applied at a rate of 60 kg per 10,000m<sup>2</sup>.

## 3 General Specifications for Tile Drains

### 3.1 Alignment

The Contractor shall contact the Contract Administrator to establish the approximate course of the drain at the onset of construction and provide a minimum 48 hours' notice to do so. The drain shall run in as straight a line as possible throughout its length.

Where an existing drain is to be removed and replaced by the new drain, or where the new drain is to be installed parallel to the existing drain, or between two runs of existing drains, the Contractor shall locate the existing drain(s) at intervals along the course of the drain such that the disturbance of any existing drainage systems is minimized. The frequency of drain locating shall be to the discretion of the Contractor and should be generally more frequent in areas where the existing drain is turning to avoid disturbance of the existing system. The costs of locating shall be included in the bid price and the Contractor shall be responsible to repair any tiles that are damaged during the drain locating at no additional cost.

### 3.2 Profile

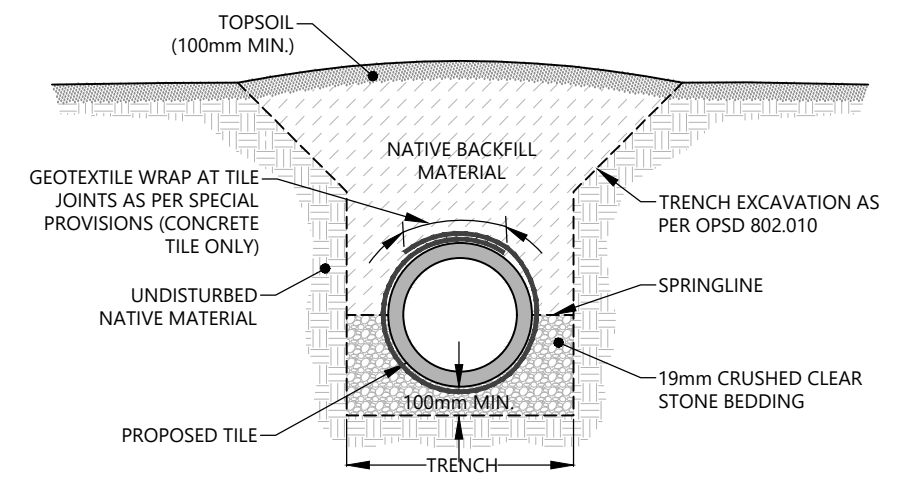
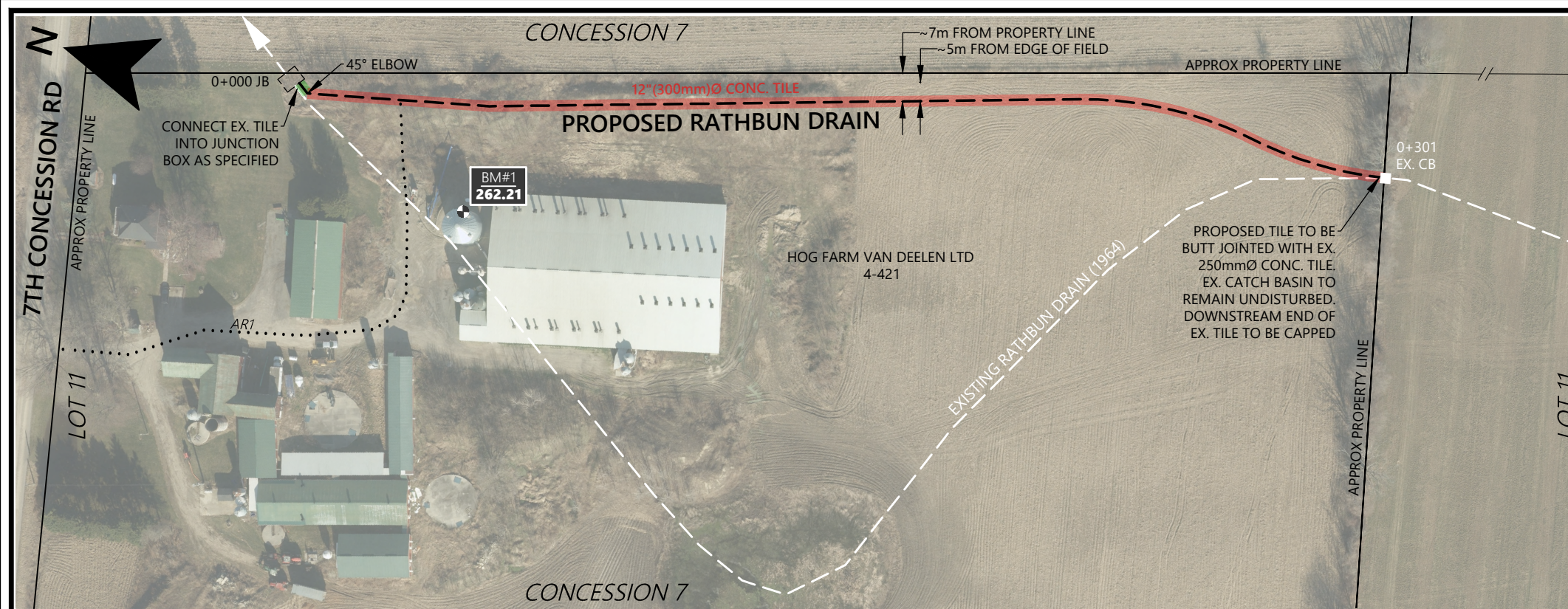
The profile drawing shows the elevations and gradients that the tile drain shall be installed at as well as the approximate depth of cuts from the existing ground elevation to the proposed invert of the pipe in key locations. The cuts are noted for the convenience of the Contractor, however, benchmarks will govern the final elevation of the drain. Accurate grade control must be maintained by the Contractor during the installation of any tile drains to the satisfaction of the Contract Administrator.

When installing a drain towards a fixed point such as a previously installed bore pipe, the Contractor shall confirm the elevations of such a fixed point at a sufficient distance away from the pipe in order to allow for any minor adjustments to the pipe grade as required.

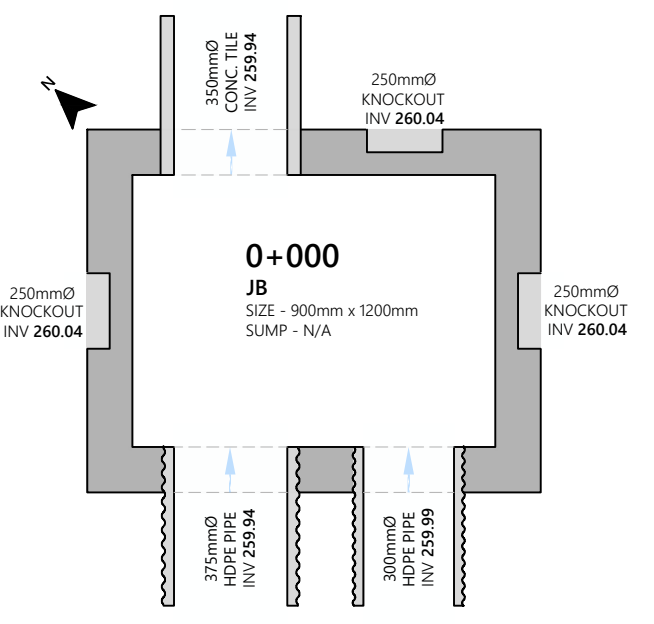
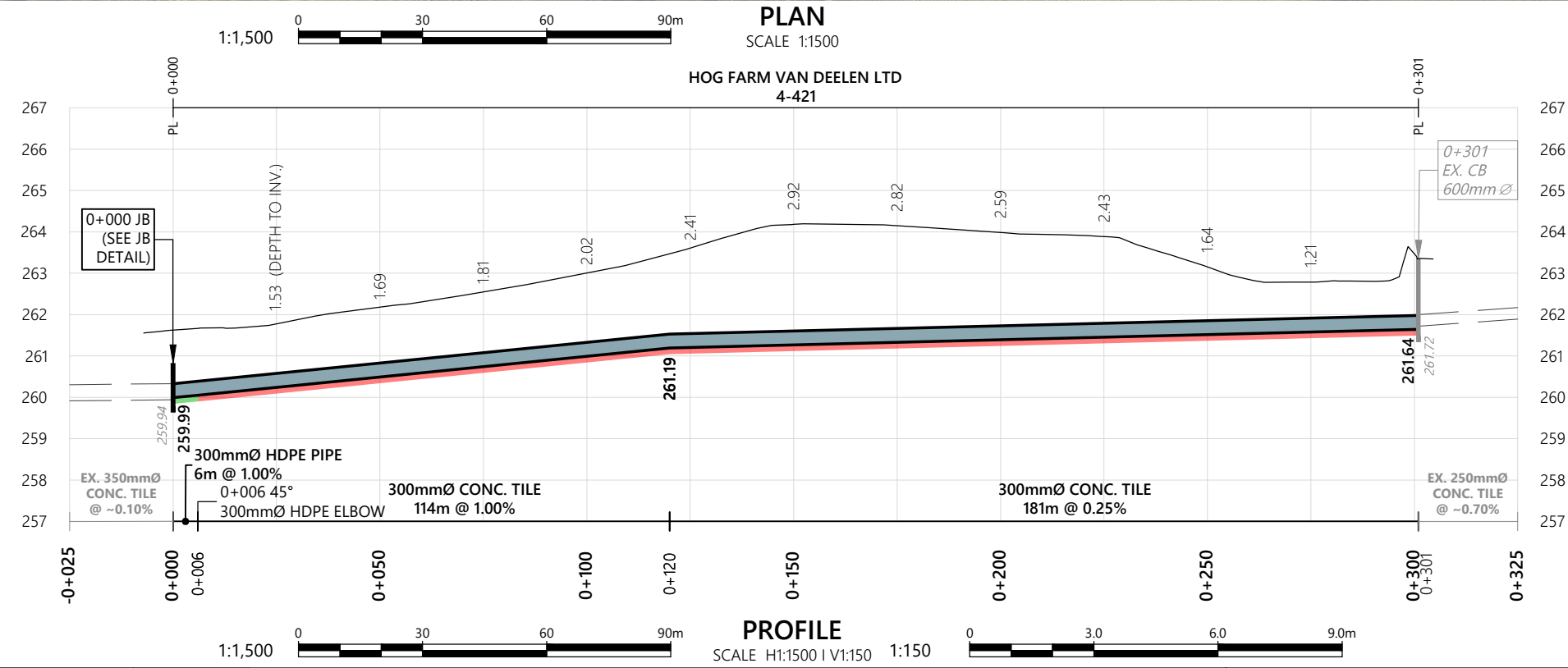
### 3.3 Trench Crossings

The Contractor shall not cross any backfilled trench with any construction equipment, except at one designated crossing location on each property. The Contractor shall ensure that the bedding and backfill material at this designated crossing location is properly placed and compacted to adequately support the equipment and vehicles that may cross the trench. The Contractor shall be responsible for any damage to the new tile resulting from the crossing of the drain.

Appendix B  
Drawings

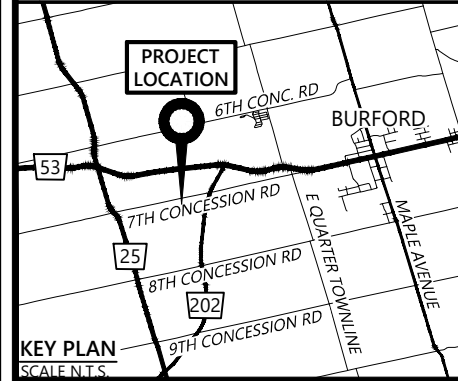


**DRAIN INSTALLATION ON STONE BEDDING (TYP.)**  
N.T.S.



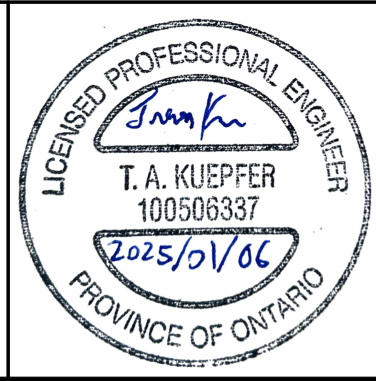
**JB DETAIL**  
SCALE 1:25

**BENCHMARKS**  
BENCHMARK No. 1 ELEVATION=262.21m  
'X' IN CONCRETE ON EAST SIDE OF CONCRETE PAD FOR GRAIN BIN THAT IS LOCATED ON NORTH SIDE OF EXISTING BARN ON LOT 11 CONCESSION 7.



**LEGEND**

APPROX. PROPERTY LINE	— — — — —	JUNCTION BOX	□
PROPERTY SHARED BETWEEN LOT LINES	// //	ACCESS ROUTE PATH	.....
PR. TILE	— — — — —		
EX. TILE	— — — — —		
BENCHMARK LOCATION, NUMBER, & ELEVATION	BM#1 ELEV		
EX. CATCH BASIN	□		



PROJECT			
<b>RATHBUN MUNICIPAL DRAIN RELOCATION 2025</b>			
<b>STREAMLINE</b> ENGINEERING INC.		CLIENT	
		<b>COUNTY OF Brant</b> Simply Grand	
ISSUE / REVISION	DATE	DRAWING	DRAWING NO.
ISSUED FOR REPORT	JAN 2025	<b>PLAN &amp; PROFILE</b>	<b>1</b> OF <b>1</b>
DESIGNED CK	DRAWN CK	CHECKED TK	PROJECT NO. 0017