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Town of Tecumseh
Public Council Meeting
Tuesday, November 12, 2013
5:30 PM
Tecumseh Town Hall

MEETING:

I. CALL TO ORDER

II. ROLL CALL

III. DISCLOSURE OF PECUNIARY INTEREST

IV. INTRODUCTION AND PURPOSE OF MEETING

The purpose of the meeting is to consider and receive public comment on the October 15, 2013 Drainage Report prepared by Crozier Baird Engineers, for the repair and improvement to the Gouin Drain.

V. DELEGATIONS

- A. Theresa and Roland Veilleux, Property Owners
Re: Gouin Drain

VI. COMMUNICATIONS

- A. Town of Tecumseh, Notice of Public Council Meeting, October 21, 2013 - *Re: Gouin Drain*
- B. Manager Engineering Services, Report No 56-13, November 4, 2013 - *Re: Gouin Drain - Consider Engineer's Drainage Report*

VII. ADJOURNMENT

Notice of Consideration
October 21, 2013

To: Affected Property Owners and Agencies

**Re: Consideration of the Drainage Report
For the Repair and Improvement to the
Gouin Drain**

12.6	PRESENTED TO PUBLIC COUNCIL: NOVEMBER 12, 2013
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PLEASE TAKE NOTICE that on October 15, 2013, Ms. Halliday Pearson, P.Eng., of Crozier Baird Engineers, filed with the Clerk's Office the Drainage Report (Report) dated October 15, 2013, for the repair and improvement to the Gouin Drain (Drain).

A copy of the Report is attached hereto, including plans, profiles, specifications and schedules of assessment.

The Council of the Town of Tecumseh will consider the Report at the following date, time and place:

Date: Tuesday, November 12, 2013
Time: 5:30 pm
Place: Tecumseh Town Hall, Council Chambers
917 Lesperance Road
Tecumseh, Ontario

As a party affected by these drainage works, your attendance is encouraged and requested at the meeting.

Persons wishing to make comment at the meeting are asked to contact the Director of Staff Services/Clerk, Laura Moy at 519-735-2184 [Ext 116]; or Deputy Clerk, Susan Mazzei at 519-735-2184 [Ext 117].

For questions relating to the Drain and should you be unable to attend the meeting, please contact the Drainage Superintendent, Phil Bartnik, P.Eng., at 519-735-2184 [Ext 148].

Laura Moy
Director, Staff Services/Clerk

This document is available in alternate formats upon request.



THE CORPORATION OF THE
TOWN OF TECUMSEH

Public Works & Environmental Services
Report No. 56/13

12.6

PRESENTED TO
PUBLIC COUNCIL:
NOVEMBER 12, 2013

TO: Mayor and Members of Council
FROM: Phil Bartnik, P.Eng., Manager, Engineering Services
DATE: November 4, 2013
SUBJECT: Gouin Drain – Consider Engineer's Drainage Report

RECOMMENDATIONS

It is recommended that:

1. Crozier Baird Engineers be directed to *set aside* their Drainage Report for the Repair and Improvement to the Gouin Drain, dated October 15, 2013 as prepared by Halliday Pearson, P. Eng. at the request of the Landowners of Roll No. 570-44000; and that
2. The Landowners of Roll No. 570-44000 abandoning their request for the Repair and Improvement to the Gouin Drain (enclosure of a portion of the Gouin Drain), be assessed the project engineering costs incurred to date in the amount of \$6,795.72.

BACKGROUND

The Town received a Request for Repair and Improvement of a Municipal Drain ("Request") in accordance with Section 78 of *The Drainage Act*, ("Act") from Mr. Roland Veilleux of 1835 Shawnee Road, for the repair and improvement to the Gouin Drain on June 10, 2010.

Council accepted the recommendation of the Manager, Engineering Services, under Report No.42/10, at their meeting held July 27, 2010, passed the following resolution:

"That Bruce Crozier, P.Eng., of Bruce D. Crozier Engineering Inc. be appointed Drainage Engineer to:

- a) make an examination of the area requiring drainage as described in the Request for Repair and Improvement as submitted by Roland Veilleux for the Gouin Drain, dated June 10, 2010; and to,*
- b) prepare a report in accordance with Section 8(1) of The Drainage Act;*

As recommended by the Manager, Engineering Services, under Report No. 42/10, dated July 19, 2010."

An on-site meeting with the affected property owner was held on January 25, 2011 with the Town's Drainage Superintendent and the appointed Drainage Engineer. A record of the meeting is included in the Drainage Report.

The appointed Drainage Engineer filed the Report with the Town on October 15, 2013.

COMMENTS

Engineer’s Drainage Report

Crozier Baird Engineers prepared a Drainage Report to enclose a portion of the Gouln Drain at 1835 Shawnee Road for a new access culvert over the Gouln Drain, which included design drawings and specifications, an assessment schedule for the proposed works, and future maintenance assessments for the culvert. The attached figure depicts the section of the Gouln Drain that is located on the Veilleux property.

Notice of Drainage Works

Upon filing the Report with the Clerk, a copy of the Report is to be sent together with a notice of the date of the Council meeting at which the Report will be considered, to:

1. Affected property owners, within the initiating municipality, according to the last revised assessment roll;
2. The Clerk of every other municipality in which any land or road is assessed for drainage works or compensation, or other allowances provided in the Report;
3. The Essex Region Conservation Authority (ERCA);
4. Any railway, public utility or road authority affected by the report; and
5. Minister of Natural Resources where land under jurisdiction may be affected by the report. (Section 41 of the Act)

Consideration by Council

Subject to the discretion of Council, the Report may be:

- a) Referred back to the Drainage Engineer for reconsideration if it appears that there are, or may be errors in the report or for any other reason the report should be reconsidered ; or
- b) Provisionally approve by giving first and second readings to a Provisional By-law.

Council or the Requestor does have the option of not proceeding at this point; however, the party withdrawing the request, Council or the Requestor, would be responsible for the costs to date. Further, if Council decided not to proceed it may be liable for damages by the Requestor as defined in Section 79 of the Act.

Following provisional adoption of the By-law, a meeting of the Court of Revision will be scheduled to allow any affected owner of land assessed for the drainage works to appeal their assessed costs subject to the following:

- a) Any land or road has been assessed too high or too low; or
- b) Any land or road that should have been assessed has not been assessed; or
- c) Due consideration has not been given as to type of use of land.

Comments Received Prior to the Consideration Meeting

In advance of the Council meeting to consider the Report, the Drainage Superintendent received comments from the Landowner of Roll No. 570-44000 indicating that they wished to abandon their request for the Repair and Improvement to the Gouln Drain. The property owners were informed that it would be Administration’s recommendation that all project costs incurred to date would be assessed to the property owners.

Recommendation

Administration therefore recommends that:

1. Crozier Baird Engineers be directed to *set aside* their Drainage Report for the Repair and Improvement to the Gouin Drain, dated October 15, 2013 as prepared by Halliday Pearson, P. Eng. at the request of the Landowners of Roll No. 570-44000; and that
2. The Landowners of Roll No. 570-44000 abandoning their request for the Repair and Improvement to the Gouin Drain (enclosure of a portion of the Gouin Drain), be assessed the project engineering costs incurred to date in the amount of \$6,795.72.

CONSULTATIONS

Staff Services/Clerk
Financial Services
Crozier Baird Engineers

FINANCIAL IMPLICATIONS

There is no cost to the Town of Tecumseh. 100% of the costs will be recovered from the Landowners of Roll No. 570-44000 (Mr. & Mrs. Veilleux @ 1835 Shawnee Road). The property owner does have the option of having their assessed costs placed on their taxes, debentured over a five-year period.

LINK TO STRATEGIC PRIORITIES

This report is not linked to the Town’s Strategic Priorities; however, there is a role of the Town to assist land owners in drainage matters.

This report has been reviewed by senior Administration as indicated below and recommended for submission by the CAO.

Prepared by:



Phil Bartnik, P.Eng.
Manager, Engineering Services

Reviewed by:



Daniel Piescic, P.Eng.
Director, Public Works & Environmental Services

Reviewed by:



Luc Gagnon, CPA, CA
Director, Financial Services/Treasurer

Reviewed by:



Laura Moy
Director, Staff Services/Clerk

Recommended by:



Tony Haddad, MSA, CMO, CPFA
Chief Administrative Officer

Attachment(s):

1. Drainage Report for the “Enclosing a Portion of the Gouin Drain”, as prepared by Halliday Pearson, P. Eng. of Crozier Baird Engineers and dated October 15, 2013.
2. Figure: Gouin Drain – 1835 Shawnee Road

PB

Internet Mapping Framework



Map center: 114 886 4684499

20 m.

This map is a user generated static output from an internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



- Legend**
- Civic Address Points
 - Boundaries
 - Windsor Roads
 - Streets
 - Municipal Drains
 - Tecumseh Assessment
 - Municipal Boundary
 - Tecumseh
 - Other
 - Water



Scale: 1:553






crozierbaird

**ENGINEERS
PLANNERS
ARCHITECTS**

Enclosing a Portion of the Gouin Drain

Town of Tecumseh

March 15, 2011

Revised October 15, 2013

(Final – Council Consideration)

Project No. 13-061

27 Princess Street, Unit 102
Leamington, ON N8H 2X8
T. 519.326.6161

www.crozierbaird.ca

CROZIER BAIRD ENGINEERS
IS A DIVISION OF
MATTHEW J. BAIRD
CONSULTING SERVICES INC.

March 15, 2011
Revised October 15, 2013

The Corporation of the Town of Tecumseh
917 Lesperance Road
Tecumseh, Ontario
N8N 1W9

Mayor and Municipal Council

Subject: Enclosing a Portion of the Gouin Drain
In the Town of Tecumseh
Our File Reference 13-061

1.0 Authorization

Pursuant to Section 78 of the Drainage Act, 1990, the Corporation of the Town of Tecumseh accepted a request for the repair and improvement to a portion of the Gouin Drain, located immediately west of Shawnee Road. The firm of Bruce, D. Crozier Engineering Inc., now known as Crozier Baird Engineers, was subsequently appointed to make an examination and prepared a report under the provisions of the Drainage Act.

As requested by Council, we have made an examination of the area being part of Lot 14, Plan 1222 in the Town of Tecumseh.

2.0 Current Drainage Report

The current drainage report for the Gouin Drain was prepared by William J. Settingington, P.Eng. and dated January 28, 1987.

3.0 Purpose of Report

The purpose of this report is to provide for the enclosure of a portion of the Gouin Drain abutting property owned by Theresa Veilleux, Roll No. 570-44000. On April 9, 2010 a building permit was issued for the proposed garage and house additions for the aforementioned property. The Town advised that a portion of the Gouin Drain would have to be enclosed in order for the proposed additions to satisfy the requirements of Section 5.39 (setbacks from Municipal Drains and water courses) of the Township of Sandwich South Zoning By-Law.

This report provides a description and estimated cost of the proposed work and a recommendation for distribution of the construction and incidental costs related to the work. This report further provides for the distribution of future maintenance costs. The assessments provided in this report are based upon the estimated cost of the work. These assessments would be pro-rated to the actual cost of the project upon completion of the works.

4.0 Site Meeting and Project History

On Tuesday, January 25, 2011, a meeting was held at the location of the proposed works, being 1835 Shawnee Road, Tecumseh.

The following people attended the meeting:

<u>Name of Attendee</u>	<u>Municipal Address</u>
Roland Veilleux	Owner of 1835 Shawnee Road
Rob Filipov, P.Eng.	Town of Tecumseh
Halliday Pearson	Crozier Baird Engineers
Kris Kretschmann	Crozier Baird Engineers

Mr. Veilleux stated that he wished to construct an extension to his garage as well as a circular driveway to service his property. He further stated that the Town of Tecumseh required that the Municipal Drain be enclosed prior to constructing the garage extension.

Ms. Pearson stated that a report would be produced that will be forwarded to the Town. Town Council will consider the report a regular meeting of Council at which all affected property owners will be invited to attend.

Mr. Filipov stated that upon receipt of the completed report, a meeting will be held to discuss the report recommendations prior to submitting the report to Council.

A copy of the draft report was submitted to the property owners for their review and comments. Upon review of the draft report, Mrs. Veilleux contacted the Town and objected to the report's recommendation that the works be assessed to the adjacent property owner as a Special Benefit. Mrs. Veilleux suggested a letter be sent to all of the owners within the Gouin Drain drainage area advising them of cost sharing for the proposed works.

In January of 2012, correspondence from the Town advised Mrs. Veilleux the enclosure is considered a Special Benefit and that all charges for that Special Benefit would be assessed to the property owner, as the Town nor the other properties that use the drain benefit from the proposed enclosure.

Since January 2012 there has been no activity on this file until recently when the Town's new Drainage Superintendent made contact with the property owners in July 2013.

A number of site meetings and follow-up phone conversations were held between the owners and the Drainage Superintendent discussing the draft report and possible revisions.

Based on those meetings and discussions, the Engineer's Drainage Report was revised and the length of the proposed enclosure modified.

5.0 Topographical Survey

The survey commenced at the west limit of Shawnee Road. The survey continued westerly for approximately 80 metres along the open portion of the drain to the existing 600mm diameter concrete pipe.

6.0 Existing Conditions

The existing 600mm diameter corrugated steel pipe within the drain is not currently identified as part of the Gouin Drain. The hydraulic capacity of the existing pipe is satisfactory; however, as the culvert was not installed under an Engineer's Report, we are unsure of the construction methods used. The pipe appears to be in poor condition after an inspection revealed that the west end of the pipe is crushed. The inverts of the pipe have not been embedded 10% below theoretical drain

bottom, as required by the Essex Region Conservation Authority.

The existing open portion of the drain appears to be in satisfactory condition with minimal vegetation and sediment visible in the drain.

7.0 Recommendations

We would recommend the removal of the existing 9.0 metres of 600mm diameter corrugated steel pipe. We would further recommend the installation of 31.2 metres of new 600mm diameter aluminized corrugated steel pipe with sloped gabion stone end of pipe protection. The new gravel driveways shall each be 6.0 metres in width and provide access to the existing garage as well as the proposed garage. Silt fencing shall be installed in the drain bottom as sediment control downstream of the working area.

We would further recommend that this enclosure be identified as part of the Gouin Drain.

8.0 Fisheries Issues

The Gouin Drain is a Type 'F' drain. A Type 'F' drain is considered to have intermittent or ephemeral flow. A drain with ephemeral flow is typically dry for more than two consecutive months.

We would recommend the following measures be utilized to mitigate damage to the drain during construction:

- No work shall be undertaken between March 15 and June 30
- All work shall be completed in the dry
- Culverts shall be installed with a minimum of 10.0% embedment
- All disturbed soils shall be stabilized upon completion of the work
- Silt fence sediment control shall be implemented during construction
- The Contractor shall prevent entry of petroleum products, debris and deleterious substances into the water.

9.0 Drawings and Specifications

Attached to this report is Drawing No. 13-049 Sheet 1, 2 and 3 which include a plan indicating the location of the proposed works and the affected lands. Details and cross-sections of the recommended works are also included. Specifications are included in this report showing the dimensions, grades, disposal of material, working areas for construction and future maintenance, and other particulars of the recommended work.

10.0 Working Area

The areas available to the Contractor to be used for the purpose of constructing the recommended works of this report and for construction and future maintenance as provided for under Section 63 of "The Drainage Act, 1990" are described as a corridor 5.0 metres in width lying immediately south of and adjoining to this portion of the Gouin Drain.

11.0 Estimate of Cost

Our estimate of the total cost of this work, including all incidental expenses, is the sum of TWENTY SEVEN THOUSAND, FOUR HUNDRED AND FIFTY FIVE----- dollars (\$27,455.00) made up as follows:

CONSTRUCTION

- | | | | |
|-----|-------|--|--------------------|
| 1) | L.S. | Existing drain sideslopes and bottom to be cleaned of all topsoil and vegetation for total length of pipe including cleaning of drain bottom for 6.0 metres at each end of the structure. All material shall be loaded, hauled and disposed of offsite complete at \$ <u>800.00</u> Lump Sum. | \$ <u>800.00</u> |
| 2) | L.S. | Remove existing 600mm diameter CSP culvert, granular material and headwalls and dispose of offsite complete at \$ <u>500.00</u> Lump Sum. | \$ <u>500.00</u> |
| 3) | 31.2 | Metres of 600 mm diameter galvanized corrugated steel pipe, 2.0mm thick, 68 x 13mm corrugations supplied and set complete at \$ <u>140.00</u> per metre. | \$ <u>4,368.00</u> |
| 4) | 45.0 | Tonnes of Granular 'A' material, as per O.P.S.S. 1010, supplied, placed and compacted to construct driveways complete at \$ <u>21.00</u> per tonne. | \$ <u>945.00</u> |
| 5) | 70.0 | Tonnes of Granular 'B' material as per O.P.S.S. 1010 supplied, placed and compacted as backfill material complete at \$ <u>18.00</u> per tonne. | \$ <u>1,260.00</u> |
| 6) | 115.0 | Tonnes of sand to be supplied, placed, graded and compacted as backfill material over the pipe complete at \$ <u>18.00</u> per tonne. | \$ <u>2,070.00</u> |
| 7) | 30.0 | Square metres of 100 – 230mm diameter gabion stone sloped end of pipe protection to be supplied and laid 300 mm thick on 270R Terrafix filter fabric complete at \$ <u>45.00</u> per square metre. | \$ <u>1,350.00</u> |
| 8) | L.S. | Supplying, installing and maintaining silt fence erosion protection at downstream location from structure complete at \$ <u>300.00</u> Lump Sum. | \$ <u>300.00</u> |
| 9) | L.S. | Construct 1.0 metre wide swale extending east from driveway, approximately 15.0 metres, complete at \$ <u>500.00</u> Lump Sum. | \$ <u>500.00</u> |
| 10) | L.S. | The Contractor shall provide a traffic control plan to the Town of Tecumseh for approval before construction commences. The Contractor shall supply, install and maintain the necessary signage during the construction period according to the latest revision of the Ontario Traffic Manual Book 7, Temporary Conditions, complete at \$ <u>502.00</u> Lump Sum. | \$ <u>502.00</u> |

11) 215.0	Square metres of restoration to be undertaken within the grassed working area south of the drain including the supply and placement of good quality grass seed complete at \$ <u>2,125.00</u> Lump Sum.	\$ <u>2,125.00</u>
12) L.S.	Existing saplings on the south side of the drain shall be removed and transplanted prior to commencing construction. Upon completion of construction, saplings shall be replanted along the south top of drain bank complete at \$ <u>500.00</u> Lump Sum. Note: Contractor shall transplant these saplings, as described above, or replace damaged saplings at their cost.	\$ <u>500.00</u>
13) ---	Contingency Allowance to be used only upon approval from Engineer and/ or Drainage Superintendent.	\$ <u>750.00</u>
		=====
Sub Total for Construction (Excluding H.S.T.)		\$ 15,970.00

INCIDENTALS

Site Meeting and Survey	\$ 800.00
Design, report, estimate and specifications	\$ 3,650.00
Assistants and expenses, typing report and drafting	\$ 2,015.00
Attendance at Meeting to Consider and Court of Revision	\$ 880.00
Tender documents	\$ 800.00
ERCA Permit Fee	\$ 115.00
Construction Inspection (5 days at \$550.00/day, if required)	\$ 2,750.00
=====	
TOTAL FOR INCIDENTALS	\$ 11,010.00
TOTAL FOR CONSTRUCTION (brought forward)	\$ 15,970.00
H.S.T. PAYABLE (1.76% Non-recoverable H.S.T.)	\$ 475.00
=====	
TOTAL ESTIMATE	\$ 27,455.00
=====	

12.0 Assessment

Assessments to lands are provided in the attached Schedule of Assessment in three separate columns being Special Benefit, Benefit and Outlet. Section 1 of the Drainage Act provides the following definitions:

“Special Benefit” means any additional work or feature included in the construction, repair or improvement of a drainage works that has no effect on the functioning of the drainage works.

“Benefit” means the advantages to any lands, roads, buildings or other structures from the construction, improvement, repair or maintenance of a drainage works such as will result in a high market value or increased crop production or improved appearance or better control of surface or subsurface water, or any other advantages relating to the betterment of lands, roads, buildings or other structures.

“Outlet Liability” means the part of the cost of the construction, improvement or maintenance of a drainage works that is required to provide such outlet or improved outlet.

We would recommend that 100.0% of the associated construction and incidental costs be assessed as Special Benefit to the lands owned by Theresa Veilleux, Roll No. 570-44000. As this enclosure is being constructed to serve only private lands, we have assessed the lands for Special Benefit.

13.0 Maintenance

Access culvert and enclosures identified, as part of the Gouin Drain, shall be maintained by the Town of Tecumseh, in accordance with the Drainage Act. Maintenance would include minor works to the access culvert, bedding, backfill and end of pipe protection. The cost to supply and replace any surface material other than Granular ‘A’ shall be assessed 100% to the benefitting landowner. Any special features, such as fencing or gates, impacted by the maintenance works shall be removed and restored or replaced as part of the works; however, the cost to remove and reinstall or replace a special feature shall be assessed 100% to the benefitting landowner.

Should the enclosure require future maintenance, we would recommend that 100% of the cost to restore the 14.8 metres of enclosure be assessed 100% to the lands with Roll No. 570-44000. Should the driveway portions of the enclosure require future maintenance, we would recommend that 75% of the maintenance costs be assessed to lands with Roll No. 570-44000 with the remaining 25% being assessed to the upstream lands and roads in accordance with the current by-law.

14.0 Grant

As the benefitting lands are not listed by the Municipal Property Assessment Corporation as having Farm Property Class Tax Rate, the assessment is ineligible for a grant in accordance with the provisions of Sections 85, 86 and 87 of “The Drainage Act, 1990”. This parcel will, therefore, be ineligible for a grant for construction and future maintenance.

All of which is respectfully submitted.

**CROZIER BAIRD ENGINEERS
27 PRINCESS STREET, UNIT 102
LEAMINGTON, ONTARIO
N8H 2X8**

Halliday P. Pearson

Halliday P. Pearson, P. Eng.



SPECIFICATIONS
ENCLOSING A PORTION
OF THE GOUIN DRAIN
IN THE
TOWN OF TECUMSEH
PROJECT REFERENCE 13-061

1.0 PIPE MATERIAL

The Contractor shall supply and install, a new 600mm galvanized corrugated steel pipe, 2.0mm thick with 68 x 13mm corrugations, 31.2 metres long.

2.0 WORKING AREA

The Contractor shall restrict his equipment to a 5.0 metre area measured from the south top of drain bank.

3.0 DISPOSAL OF EXCAVATED MATERIAL

The Contractor shall dispose of all surplus excavated material offsite at a location determined by him at his expense.

4.0 LOCATION AND ELEVATION OF CULVERT

The location and elevations of the new culvert shall be according to the drawings, 13-061 Sheets 1 to 3.

5.0 PLACEMENT OF CULVERT

- a) The Contractor shall excavate all vegetation, topsoil and existing granular material from the bank slopes and bottom of the existing drain, complete along with hauling materials off site. The required work includes, supplying and installing a new 31.2 metre long galvanized corrugated steel pipe with sloped gabion stone (300 mm) end of pipe protection.
- b) The Contractor shall carefully unload, handle and place the specified pipe so as not to damage same. Damaged material or distorted from improper installation will not be accepted.
- c) The Contractor shall perform the excavation, placement of pipe and backfill in a dry condition and shall provide all required pumps and/or equipment to enable the work to proceed in the dry.

6.0 PIPE BACKFILL

After the pipe has been set, the Contractor shall backfill the pipe with granular "B" material in the driveway area, according to the attached plan and as per O.P.S.S. Spec 1010. The backfill material shall be carefully placed so damage to or movement of the culvert is avoided and backfill materials shall be placed in layers not exceeding 300 mm in thickness,

6.0 PIPE BACKFILL - Continued

loose measurement. Each layer shall be thoroughly compacted in place to a Standard Proctor Density of 98% by means of mechanical compactors. The equipment and method of compacting the backfill material shall be to the full satisfaction of the Commissioner in charge. The remaining 18 metres of pipe shall be backfilled using compacted sand material. Each layer shall be thoroughly compacted in place by means of mechanical compactors. The equipment and method of compacting the backfill material shall be to the full satisfaction of the Commissioner in charge.

The Contractor shall use a plumb bob at each end of the culvert during the backfilling operation to determine if the pipe is rolling or peaking as a result of the backfilling operation.

7.0 QUARRIED ROCK END PROTECTION

Where specified and after the corrugated steel pipe has been set and backfilled the Contractor shall install quarried rock erosion protection at each end of the pipe.

The backfill over the ends of the pipe arch shall be set on a slope of 1½ metres horizontal to 1 metre vertical from the bottom of the corrugated steel pipe to the top of each side slope and between both side slopes. The top 300 mm in thickness of the backfill over the ends of the corrugated steel pipe shall be quarried rock. The quarried rock shall be placed on a slope of 1½ metres horizontal to 1 metre vertical from the bottom of the corrugated steel pipe to the top of each side slope of the drain and between both side slopes. The quarried rock shall have a minimum dimension of 100 mm and a maximum dimension of 230 mm. Prior to placing quarried rock end protection over the granular material, the Contractor shall lay a non woven geotextile filter fabric equal to a "Terrafix 270R" or approved equal. The geotextile filter fabric shall extend from the bottom of the pipe arch to the top of each side slope of the drain and between both side slopes of the drain. The Contractor shall take extreme care not to damage the geotextile filter fabric when placing the quarried rock on top of the filter fabric. The geotextile filter fabric and quarried rock shall be placed to the complete satisfaction of the Town Drainage Superintendent.

8.0 ALIGNMENT

The alignment of the enclosure throughout shall be to the full satisfaction of the Commissioner in charge. The whole of the work shall be done in a neat, thorough and workmanlike manner to the full satisfaction of the Commissioner in charge.

9.0 LOCATION OF STRUCTURES, ETC.

The Contractor shall satisfy himself as to the exact location, nature and extent of any existing structure, utility or other object which he may encounter during the course of the work. The Contractor shall indemnify and save harmless, the Town and the Engineer for any damages which he may cause or sustain during the progress of the work. He shall not hold the Town or the Engineer liable for any legal action arising out of any claims brought about by such damage caused by him.

10.0 DAMAGE TO TRAVELLED PORTION OF MUNICIPAL ROAD

The Contractor will be responsible for any damage caused by him to any portion of the municipal road system, especially to the travelled portion. When excavation work is being carried out and the excavation equipment is placed on the travelled portion of a road, the travelled portion shall be protected by having the excavation equipment placed on satisfactory timber planks or timber pads. If any parts of the travelled portion of the road is damaged by the Contractor, the Municipality shall have the right to have the necessary repair work done by its employees and the cost of all labour and materials used to carry out the repair work shall be deducted from the Contractor's contract and credited to the Municipality.

11.0 CONSTRUCTION SAFETY

The Contractor shall comply with all the requirements of the Occupational Health and Safety Act, 1990 and the regulations passed in connection therewith, as administered by the Ontario Ministry of Labour and all subsequent amendments of the said Act.

The Contractor shall exercise all possible precaution against injury to persons or property resulting from his work. The Contractor shall leave no trenches, pits, holes or excavations uncovered, without providing sufficient protection at all times. The Contractor shall install, erect and provide barricades, signs, traffic cones, flashers, lights, plates, warning and other devices, materials and personnel as may be required and at his own expense in order to provide for the safe passage and control of traffic and to ensure public safety. All traffic control shall be in accordance with the latest standards of the Ministry of Transportation.

12.0 CERTIFICATE OF CLEARANCE

The Contractor will be required to submit to the Municipality a Certificate of Good Standing from the Workplace Safety & Insurance Board prior to the commencement of the work and the Contractor will be required to submit to the Municipality, a Certificate of Clearance for the project from the Workplace Safety & Insurance Board before final payment is made to the Contractor.

13.0 PROGRESS ORDERS

Monthly progress orders for payment shall be furnished to the Contractor by the Commissioner in charge; said orders shall not be for more than 90% of the value of the work done and the materials furnished on the site. The paying of the full 90% does not imply that any portion of the work has been accepted. The remaining 10% will be paid 45 days after the final acceptance and completion of the work.

14.0 CLEANING UP

The Contractor shall leave the whole of the site of the work in a neat, thorough and workmanlike appearance to the full satisfaction of the Commissioner. He shall haul away any excess earth from the site. He shall haul to the site, sufficient earth to fill any depressions caused by his work at his own expense. The site shall be left as close as possible in the same condition as it was prior to the commencement of the work.

15.0 MEASUREMENT AND PAYMENT

Payment for the work shall be on a unit price basis unless otherwise indicated and shall include all the work shown on the accompanying drawings and specifications.

16.0 MAINTAINING FLOW

The Contractor shall maintain the flow of any drainage works encountered in the progress of the work and at no expense to the Owner. The Contractor shall obtain written approval from the Commissioner in charge to stop up any drain and if necessary provide pumping equipment, build necessary by-passes, etc. at no expense to the Owner.

17.0 COMMISSIONER

Where the work "Commissioner" is used in this specification, it shall mean the person or persons appointed by the Council of the Municipality having jurisdiction, to superintend the work.

The Commissioner will be permitted to make minor variations in the work so long as these variations will result in a more satisfactory project or a more economical one. These variations, however, must not be such as to change the intent of the work performed nor are they to reduce the standard of quality.

18.0 NOTIFICATION OF WORK

Prior to commencing any work of installing the extension of the culvert or removing any existing structures, the Contractor shall inform the Town Drainage Superintendent of his intent to commence work at least 48 hours prior to commencing any work. The Owner or Contractor shall endeavour to install and complete the new structure without delay once he has commenced the work. If for any reason the work does not proceed continuously then the Owner or Contractor shall notify the Drainage Superintendent in advance of any backfilling operation or headwall construction so that he may schedule inspection of same. The completed work must be done to the satisfaction of the Town Drainage Superintendent and be approved by him.

19.0 MAINTENANCE

The Contractor shall repair and make good at his expense any damages or faults in the work that may appear within one year after its completion (as evidenced by the final inspection report), as the result of imperfect or defective work done or materials furnished. Nothing herein contained shall be construed as any way restricting or limiting the liability of the Contractor under the appropriate laws under which the work is being done.

SPECIFICATIONS
ENVIRONMENTAL PROTECTION SPECIAL PROVISIONS
FOR THE
GOVIN DRAIN
IN THE
TOWN OF TECUMSEH
PROJECT REFERENCE 13-061

1.0 GENERAL

These Environmental Protection Special Provisions shall apply and form part of this Contract. All costs associated to conforming with these Special Provisions shall be included in the Tender prices bid.

2.0 FIRES

Fires and burning of rubbish on site will be permitted only with special approval from the Town.

3.0 DISPOSAL OF WASTES

The Contractor shall not bury rubbish and waste materials on site unless approved by the Engineer and all applicable approving authorities. The site shall be maintained free of accumulated waste and rubbish. All waste materials should be disposed of in a legal manner at a site approved by all local approving authorities and the Engineer.

The Contractor shall not allow deleterious substances, waste or volatile materials such as mineral spirits, or paint thinner, to enter into waterways, storm or sanitary sewers.

The disposal of dredge material where applicable shall be in accordance with the above.

4.0 POLLUTION CONTROL

The Contractor shall maintain under this Contract temporary erosion, sediment and pollution control features installed.

The Contractor shall control emissions from equipment and plant to local authorities emission requirements.

The Contractor shall not cause excessive turbidity when performing in-water work. The Contractor shall not allow any debris, fill or other foreign matter to enter into the waterway. The Contractor shall remove from the waterway, all extraneous materials resulting from in-water work.

The Contractor shall abide by local noise By-Laws for the duration of the Contract.

Spills of deleterious substances into waterways and on land shall be immediately contained by the Contractor and the Contractor shall cleanup in accordance with Provincial regulatory requirements. All spills shall be reported to the Ontario Spills Action Centre (1-800-268-6060), local authorities having jurisdiction and the Engineer.

4.0 POLLUTION CONTROL - Continued

To reduce the risk of fuel entering the waterway, refuelling of machinery must take place a safe distance from the waterway. The Contractor shall note that the Engineer or the Owner takes no responsibility for spills, this shall be the sole responsibility of the Contractor.

5.0 WHMIS

The Contractor shall comply with the requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of hazardous materials and regarding labelling and the provision of material safety data sheets acceptable to Labour Canada.

6.0 DRAINAGE

The Contractor shall not pump water containing suspended materials into waterways, sewers or drainage systems. The Contractor shall be solely responsible for the control, disposal or runoff of water containing suspended materials or other harmful substances in accordance with these specifications, and local authority requirements. The Contractor shall provide temporary drainage and pumping as necessary to keep excavations and site free from water. The Contractor shall install and maintain sediment control devices as indicated on the Contract Drawing and as directed by the Engineer.

7.0 PROTECTION OF VEGETATION

The Contractor shall exercise the utmost caution to ensure that existing trees and plants on-site and on adjacent properties are not damaged or disturbed unless noted otherwise in the Removals Special Provisions of this Contract. The Contractor shall restrict tree removal to areas indicated on the Contract Drawings and/or designated on-site. No trees or shrubs shall be removed without the approval of the Engineer.

8.0 DUST CONTROL

The Contractor will be solely responsible for controlling dust nuisance resulting from his operations, both on the site and within adjacent right-of-ways.

Water and calcium chloride shall be applied to areas on or adjacent to the site as authorized by the Engineer as being necessary and unavoidable for the prevention of dust nuisance or hazard to the public. No payment will be made for dust control unless otherwise specified in the Special Provisions.

9.0 RESTRICTIONS FOR IN-WATER WORKS

The Contractor shall only perform in-water works during times when conditions permit reasonable production rates to be achieved. The Contractor shall be required to adopt good house keeping practices that minimize disturbance to the site and the adjacent waterway.

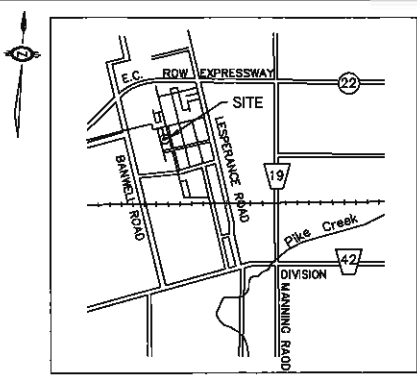
9.0 RESTRICTIONS FOR IN-WATER WORKS - Continued

The Contractor shall note that this Project is subject to approval from the Essex Region Conservation Authority and as such, any possible turbidity caused by the construction of the shore protection works is of key importance.

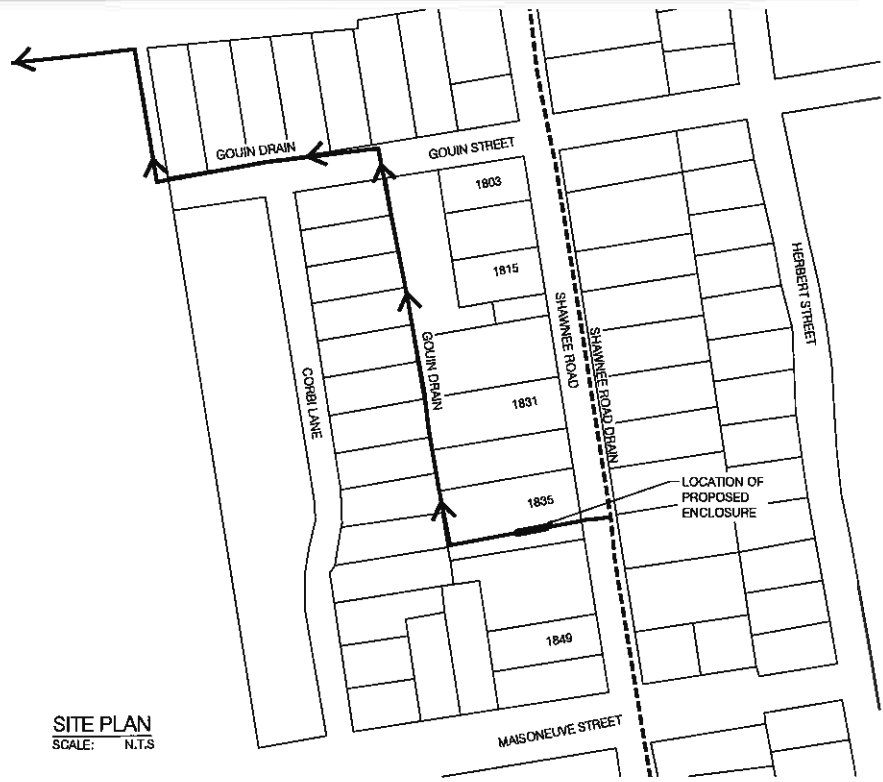
The Contractor shall minimize the turbidity (sedimentation) produced by any in-water works construction or operations. The Contractor will be ordered to cease operations if, in the opinion of the Engineer or authorities having jurisdiction, the in-water work is producing unacceptable amounts of turbidity in the waterway. Based on this, the Contractor shall either adjust his operation(s) to produce lower turbidity levels, wait for more favourable conditions before operations will be allowed to continue, or undertake approved mitigating measures (e.g. sediment control, etc.). All costs associated with the above will be the sole responsibility of the Contractor, and no claims for extras or delays will be considered.

10.0 FISH HABITAT

No work shall be undertaken when there is likelihood of adverse effects on fish spawning or fish habitat in downstream waters.



KEY PLAN
SCALE: N.T.S.



SITE PLAN
SCALE: N.T.S.

crozierbaird
ENGINEERS

27 PRINCESS STREET, SUITE #102
LEAMINGTON, ONTARIO
N8H 2X8
A DIVISION OF MATTHEW J. BAIRD CONSULTING SERVICES INC.

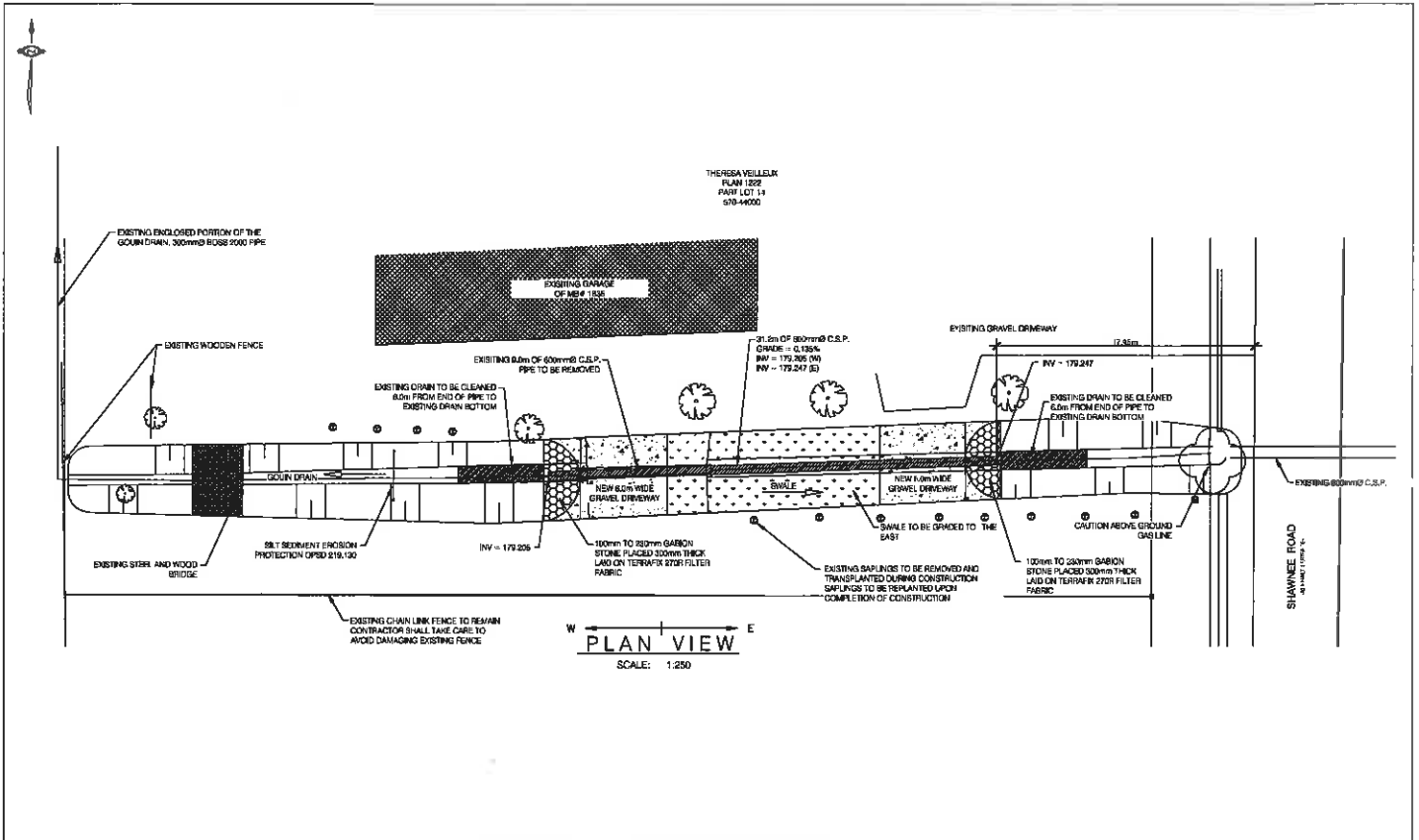
PROJECT TITLE
ENCLOSURE OF A PORTION OF THE
GOUIN DRAIN IN THE TOWN OF
TECUMSEH

OWNER
THERESA VEILLEUX, ROLL NO. 570-44000
1835 SHAWNEE ROAD
IN THE TOWN OF TECUMSEH

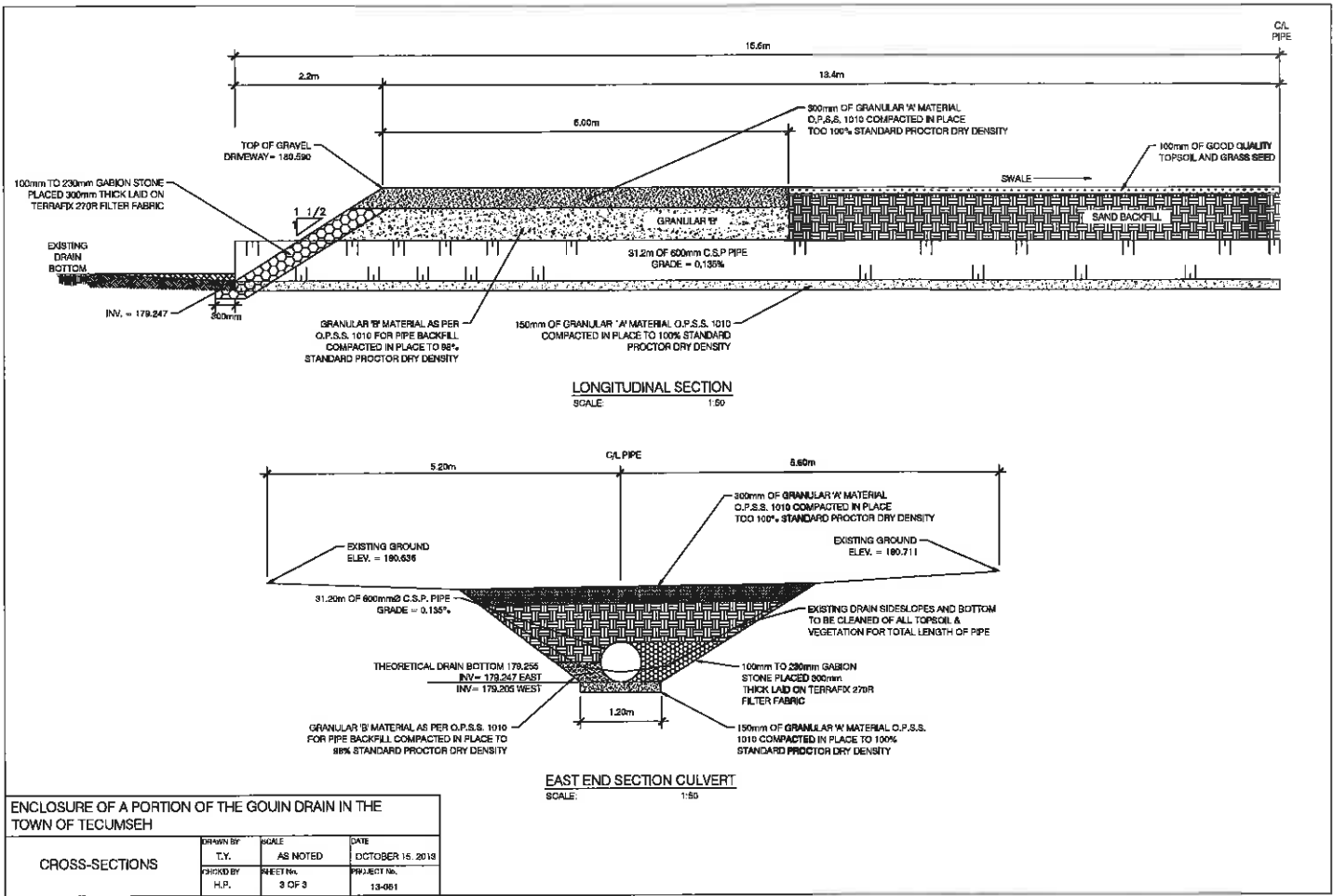


Halliday P. Pearson
HALLIDAY P. PEARSON, P.ENG.

DRAWN BY	SCALE	DATE
T.V.	N.T.S.	OCTOBER 15, 2013
CHECKED BY	SHEET No.	PROJECT No.
H.P.	1 of 3	13-051



ENCLOSURE OF A PORTION OF THE GOUIN DRAIN IN THE TOWN OF TECUMSEH				BENCHMARK ELEVATION 161.445 METRES		BENCHMARK LOCATION: TOP NUT OF FIRE HYDRANT LOCATED IN FRONT OF MS# 1836 ON SHAWNEE ROAD				
PLAN VIEW	DRAWN BY	SCALE	DATE	Ø/VERT SIZE	PIPE LENGTH	PIPE GAUGE	CORRUPTIONS	Ø/VERT TYPE	PIPE INVERT ELEVATIONS	
		T.Y. CHECKED BY H.P.	AS NOTED SHEET No. 2 OF 3	OCTOBER 15, 2013 PROJECT No. 13-061	600mm Ø	31.2 METRES	2.0 mm	68 x 13 mm	ALUMINIZED C.S.P.	UPSTREAM END
									DOWNSTREAM END	179,205 METRES



ENCLOSURE OF A PORTION OF THE GOUIN DRAIN IN THE TOWN OF TECUMSEH			
CROSS-SECTIONS	DRAWN BY	SCALE	DATE
	T.Y.	AS NOTED	OCTOBER 16, 2018
	CHECKED BY	SHEET No.	PROJECT No.
	H.P.	3 OF 3	13-001