

**FARIS DRAIN EXTENSION**  
**Municipality of Central Elgin**



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London, Ontario  
January 5, 2024

## **FARIS DRAIN EXTENSION**

### **Municipality of Central Elgin**

To the Mayor and Council of  
the Municipality of Central Elgin

Mayor and Council:

We are pleased to present our report on the extension and construction of a new farm culvert on the Faris Municipal Drain serving parts of Lots 13 to 15, Concessions 4 and 5 (geographic Yarmouth) in the Municipality of Central Elgin. The total watershed area contains approximately 55 hectares.

### **AUTHORIZATION**

This report was prepared pursuant to Section 78 of the Drainage Act. Instructions were received from your Municipality with respect to a motion of Council. The work was initiated by a request signed by one of the affected landowners.

### **HISTORY**

The Faris Drain was originally constructed pursuant to a report submitted by J.R. Spriet, P. Eng., dated October 19, 1998, and consisted of approximately 50 lineal meters of open drain and 224 lineal meters of 300mm to 400mm diameter concrete tile.

### **EXISTING DRAINAGE CONDITIONS**

A site meeting was held with respect to the project and through discussions the owner reported the following:

- that the owner, D. Ryckman (Roll No. 5-001), requested that the portion of the open portion of the Faris Drain be enclosed on his lands to better access his lands.

A field investigation and survey were completed. Upon reviewing our findings we note the following:

- the landowner currently does not have a crossing on the Faris Drain and has to access the other portion of their lands from Yarmouth Centre Road. Enclosing the drain would allow him better access to his lands.



## EXISTING DRAINAGE CONDITIONS (cont'd)

Preliminary design, cost estimates, and assessments were prepared and discussed with the owner to review the findings and preliminary proposals. Further input and requests were provided by the owner at that time and at later dates. Based on the proposed design it was decided to proceed with the request.

## DESIGN CONSIDERATIONS

The Drainage Coefficient method contained in the "DRAINAGE GUIDE FOR ONTARIO", Publication 29 by the Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) is typically used to design municipal drains. The Drainage Coefficient defines a depth of water that can be removed in a 24-hour period and is expressed in millimetres per 24 hours. The coefficient used to design this drain with respect to capacity was 38.1mm per 24 hrs.

We would like to point out that there have been no indications of any adverse soil conditions. It should be noted that no formal soil investigation has been made, with this information being provided by the owners.

The proposed design and report have been generally completed using the "GUIDE FOR ENGINEERS WORKING UNDER THE DRAINAGE ACT IN ONTARIO" OMAFRA Publication 852. Table B 2.2

## RECOMMENDATIONS

We are therefore recommending the following:

- that the existing open drain be enclosed and extended 52 lineal meters to connect to the Albertson Drain in the lands of D. Ryckman (Roll No. 5-001) for a total length of 100 lineal meters and be referred to as the Faris Drain Extension
- that the portions of the Faris Drain, replaced under this report, be officially abandoned from municipal status pursuant to Section 19 of the Drainage Act

## ENVIRONMENTAL CONSIDERATIONS AND MITIGATION MEASURES

There are no significant wetlands or sensitive areas within the affected watershed area or along the route of the drains. The proposed construction of the Faris Drain Extension includes quarry stone outlet protection and overflow swale. A temporary flow check of silt fencing is to be installed in the ditch downstream of the work for the duration of the construction.

## SUMMARY OF PROPOSED WORK

The proposed work consists of 100 meters of 450mm H.D.P.E. sewer pipe including related appurtenances.



## SCHEDULES

Four schedules are attached here to and form part of this report, being Schedule 'A' – Allowances, Schedule 'B' – Cost Estimate, Schedule 'C' – Assessment for Construction, Schedule 'D' – Assessment for Maintenance.

Schedule 'A' - Allowances. In accordance with Section 30 of the Drainage Act, allowances are provided for damages to lands and crops along the route of the drain as defined below.

Schedule 'B' - Cost Estimate. This schedule provides for a detailed cost estimate of the proposed work which is in the amount of \$30,000.00. This estimate includes engineering and administrative costs associated with this project.

Schedule 'C' - Assessment for Construction. This schedule outlines the distribution of the total estimated cost of construction over the roads and lands which are involved.

Schedule 'D' - Assessment for Maintenance. In accordance with Section 38 of the Drainage Act, this schedule outlines the distribution of future repair and/or maintenance costs for portions of, or the entire drainage works.

Drawing No. 1, Job No. 223317, and specifications form part of this report. They show and describe in detail the location and extent of the work to be done and the lands which are affected.

## ALLOWANCES

**DAMAGES:** Section 30 of the Drainage Act provides for the compensation to landowners along the drain for damages to lands and crops caused by the construction of the drain. The amount granted is based on \$3,613.00/ha. for closed drain. This base rate is multiplied by the hectares derived from the working widths shown on the plans and the applicable lengths.

Due to this being an existing open drain the right-of-way has been deemed to be granted, thus no further right-of-way is being provided at this time.

## ASSESSMENT DEFINITIONS

In accordance with the Drainage Act, lands that make use of a drainage works are liable for assessment for part of the cost of constructing and maintaining the system. These liabilities are known as benefit, outlet liability and special benefit liability as set out under Sections 22, 23, 24 and 26 of the Act.

**BENEFIT** as defined in the Drainage Act 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 higher market value or increased crop production or improved appearance or better control of surface or sub-surface water, or any other advantages relating to the betterment of lands, roads, buildings, or other structures.

**OUTLET** liability is assessed to lands or roads that may make use of a drainage works as an outlet either directly or indirectly through the medium of any other drainage works or of a swale, ravine, creek, or watercourse.





## ASSESSMENT

The entire costs of the open ditch enclosure are assessed to the benefitting landowner as shown on Schedule 'C' - Assessment for Construction.

A modified "Todgham Method" was used to calculate the assessments shown on Schedule 'D' - Assessment for Maintenance. This entailed breaking down the costs of the drain into sections along its route.

The remainder is then separated into Benefit and Outlet costs. The Benefit cost is distributed to those properties receiving benefit as defined under "Assessment Definitions", with such properties usually being located along or close to the route of the drain. The Outlet Costs are distributed to all properties within the watershed area of that section on an adjusted basis. The areas are adjusted for location along that section, and relative run-off rates. Due to their different relative run-off rates, road and residential properties have been assessed for outlet at higher rates than farmlands.

## GRANTS

It should be noted that the proposed enclosure is not eligible for the agricultural grant.

## MAINTENANCE

Upon completion of construction, all owners are hereby made aware of Sections 80 and 82 of the Drainage Act which forbid the obstruction of or damage or injury to a municipal drain.

After completion, the Faris Drain shall be maintained by the Municipality of Central Elgin at the expense of all upstream lands and roads assessed in Schedule 'D' - Assessment for Maintenance and in the same relative proportions until such time as the assessment is changed under the Drainage Act



Respectfully submitted,

SPRIET ASSOCIATES LONDON LIMITED

B. Widner, P.Eng.



## SCHEDULE 'A' - ALLOWANCES

## FARIS DRAIN EXTENSION

## Municipality of Central Elgin

In accordance with Section 30 of the Drainage Act, we determine the allowances payable to owners entitled thereto as follows:

CONCESSION	LOT	ROLL NUMBER (Owner)	Section 30 Damages	TOTALS
<b>FARIS DRAIN EXTENSION</b>				
5	S¼ 15	5-001 (D. Ryckman)	\$ 540.00	\$ 540.00
Total Allowances			540.00	\$ 540.00
<b>TOTAL ALLOWANCES ON THE FARIS DRAIN EXTENSION</b>			<b>\$</b>	<b><u>540.00</u></b>

**FARIS DRAIN EXTENSION****Municipality of Central Elgin**

We have made an estimate of the cost of the proposed work which is outlined in detail as follows:

**FARIS DRAIN EXTENSION**

Supply & installation of rodent gate, and quarry stone rip-rap protection  
around pipe and end of ditch

(Approximately 6m<sup>3</sup> quarry stone req'd)

Supply	\$	300.00
Installation	\$	700.00

Installation of the following H.D.P.E. pipe, including supply and installation  
of bedding and backfill material as required.

100 meters of 450mm dia. H.D.P.E. pipe

\$ 4,500.00

Supply of the above listed pipe

\$ 8,500.00

Supply and install one 900mm x 1200mm ditch inlet catchbasin, including berm  
and grate and ditching and conneciton of existing pipe to catchbasin

\$ 2,500.00

Backfilling of existing open ditch using on-site materials from ditch banks

\$ 3,000.00

Tile connections of existing drains and contingencies

\$ 1,000.00

Allowances under Sections 30 of the Drainage Act

\$ 540.00

**ADMINISTRATION**

Interest and Net Harmonized Sales Tax

\$ 1,130.00

Survey, Plan and Final Report

\$ 5,900.00

Expenses

\$ 690.00

Supervision and Final Inspection

\$ 1,240.00

**TOTAL ESTIMATED COST**

\$ 30,000.00

FARIS DRAIN EXTENSION

Municipality of Central Elgin

Job No. 223317

January 5, 2024

CON.	LOT	HECTARES AFFECTED	ROLL No. (OWNER)	TOTAL
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FARIS DRAIN EXTENSION

We assess the entire cost of this report to roll number: 5-001 (D. Ryckman)	\$ 30,000.00
	<u>\$ 30,000.00</u>



**FARIS DRAIN EXTENSION****Municipality of Central Elgin**

Job No. 223317

January 5, 2024

CON.	LOT	HECTARES AFFECTED		ROLL No. (OWNER)	PERCENTAGE OF MAINTENANCE COST
FARIS DRAIN EXTENSION					
4		13	17.0	1-307 (552129 Ontario Inc.)	17.0 %
4	Pt.	13	0.4	1-308 (B. Ryckman)	0.4
4		14	13.8	1-311 (E. House Estate)	13.8
4	Pt.	14	1.0	1-311-01 (G. & N. House)	2.0
4		14	6.7	1-312 (R. & J. Jones)	6.7
4		14	6.7	1-313 (B. & A. Waite)	6.7
4	Pt.	14	0.2	1-314 (T. Higgs)	0.4
4		14	1.9	1-305 (J. Lethbridge)	1.9
4		15	1.6	3-084 (J. & E. Corner)	1.6
4	Pt.	15	0.4	3-084-03 (L. & D. Corner)	0.8
5		14	0.4	4-096 (E. House Estate)	0.4
5		14	1.2	4-097 (P. & J. Faris)	1.2
5		15	0.1	5-001 (D. Ryckman)	37.6
					=====
TOTAL ASSESSMENT ON LANDS					90.5 %
					=====
Yarmouth Centre Road		1.8	Municipality of Central Elgin		6.2
Fruit Ridge Line		1.0	Municipality of Central Elgin		3.3
					=====
TOTAL ASSESSMENT ON ROADS					9.5 %
					=====
TOTAL ASSESSMENT FOR MAINTENANCE FOR THE FARIS DRAIN EXTENSION					100.0 %