

**LAMONT DRAIN**  
**Municipality of West Elgin**



**SPRIET  
ASSOCIATES**  
**ENGINEERS & ARCHITECTS**

155 York Street  
London, Ontario N6A 1A8  
Tel. (519) 672-4100  
Fax (519) 433-9351  
E-mail MAIL@SPRIET.ON.CA

London, Ontario  
September 6, 2023

## **LAMONT DRAIN**

### **Municipality of West Elgin**

To the Mayor and Council of  
the Municipality of West Elgin

Mayor and Council:

We are pleased to present our report on the reconstruction of parts of the Lamont Municipal Drain serving parts of Lots 2 and 3, Concessions 3 and 4 in the Municipality of West Elgin. The total watershed area contains approximately 25.5 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 some of the affected landowners.

### **HISTORY**

The Lamont Drain was last reconstructed pursuant to a report submitted by H. H. Todgham, P. Eng. dated September 22, 1953 and consisted of the relaying of the existing tile, previously installed in 1940, from its outlet at the Drain No. 2 through Lot 3, Concession 3 to the south side of McLean Line, then westerly along the road allowance to its head at the half lot line of Lot 2, Concession 4.

### **EXISTING DRAINAGE CONDITIONS**

A site meeting held with respect to the project and through later discussions, the owners reported the following:

- that the landowner, D. Gilkes (Roll No. 10-104), indicated that their property, adjacent to McLean Line, was generally wet with the low-lying area increasing in size each year
- that the Drainage Superintendent for the Municipality of West Elgin indicated that the existing Lamont Drain was in a state of despair with the drain in several locations having less than 0.3 meters of cover



## EXISTING DRAINAGE CONDITIONS

- that the Road Superintendent for the Municipality of West Elgin indicated their intention to resurface Blacks Road and therefore would prefer the road crossings be done in advance
- that the general consensus was that the drain west of Blacks Road is no longer required

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

- that the existing drain lacks capacity and depth to adequately service the watershed area
- that the existing open drain, Drain No.2 requires a cleanout.

Preliminary design, cost estimates and assessments were prepared, and an informal public meeting was held to review the findings and preliminary proposals. Further input and requests were provided by the affected owners 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 38mm per 24 hrs.

We would like to point out that there have been indications of sandy 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.

## RECOMMENDATIONS

We are therefore recommending the following:

- that the existing Lamont Drain be reconstructed commencing at Drain No. 2 and travel southerly through the lands of D. McPhail (Roll No. 10-080) and across McLean Line. The drain will then continue south-westerly parallel to McLean Line through the lands of D. Gilkes (Roll No.10-104) to the west side of Blacks Road. The drain will then travel north-westerly across the McLean Line Road allowance to its head just within the lands of E. Johnston (Roll No. 10-079) for a total length of 800 lineal meters
- that catchbasins be installed along the course of the drain to alleviate surface ponding
- that the road cuts be done by open cut to minimize costs



## RECOMMENDATIONS (cont'd)

- that the Drain No.2 be cleaned out under maintenance to lower the standing water level.
- that the existing Lamont Drain be officially abandoned from municipal status pursuant to Section 19 of the Drainage Act

Due to the indications of poor soil conditions our design includes the wrapping of tile joints with geotextile and a contingency allowance for crushed stone bedding wrapped with geotextile where and if necessary. These areas are typically identified at the time of construction but may only become apparent after construction is completed.

## 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 Lamont Drain includes quarry stone outlet protection and surface inlets which greatly help reduce the overland surface flows and any subsequent erosion. A temporary flow check of silt fencing is to be installed in the ditch downstream of the tile outlet for the duration of the construction.

## SUMMARY OF PROPOSED WORK

The proposed work consists of approximately 822 lineal meters of 300mm (12") to 450mm (18") diameter concrete field tile and HDPE sewer pipe, including related appurtenances.

## SCHEDULES

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

Schedule 'A' - Allowances. In accordance with Sections 29 and 30 of the Drainage Act, allowances are provided for right-of-way and 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 \$140,500.00. 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. 223128, 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 installed with wheel machine. This base rate is multiplied by the hectares derived from the working widths shown on the plans and the applicable lengths.

**RIGHT-OF-WAY** Section 29 of the Drainage Act provides for an allowance to the owners whose land must be used for the construction, repair, or future maintenance of a drainage works.

For tile drains where the owners will be able to continue to use the land, the allowance provides for the right to enter upon such lands, and at various times for the purpose of inspecting such drain, removing obstructions, and making repairs. Also, the allowance provides for the restrictions imposed on those lands to protect the right-of-way from obstruction or derogation. The amounts granted for right-of-way on tile drains is based on a percentage of the value of the land designated for future maintenance. Therefore, the amount granted is based on \$6,670.00/ha. through cropped lands. This value is multiplied by the hectares derived from the width granted for future maintenance and the applicable lengths.

## 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.

In addition, a Public Utility or Road Authority shall be assessed for and pay all the increased cost to a drainage works due to the construction and operation of the Public Utility or Road Authority. This may be shown as either benefit or special assessment.

## ASSESSMENT

A modified "Todgham Method" was used to calculate the assessments shown on Schedule 'C'- Assessment for Construction. This entailed breaking down the costs of the drain into sections along its route. Special Assessments were then extracted from each section.



## ASSESSMENT (cont'd)

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, roads have been assessed for outlet at higher rates than cleared farmlands.

The actual cost of the work involving this report, with the exception of Special Assessments, is to be assessed on a pro-rata basis against the lands and roads liable for assessment for benefit, outlet, and for special assessments as shown in detail below and on Schedule 'C' - Assessment for Construction. The Special Assessments shall be levied as noted in the Section "Special Assessment".

## SPECIAL ASSESSMENT

In accordance with Section 26 of the Drainage Act, Special Assessments have been made against the Municipality of West Elgin being the increased cost to the drainage work for installing HDPE pipes across their road allowance on the Main Drain due to the construction and operation of McLean Line and Blacks Road. The Special Assessments shall be made up of the actual cost of this work and both the final and estimated values of the Special Assessment are to be calculated as follows:

Main Drain	Cost of Work	Less Equivalent Drain Cost (Fixed)	Plus Administration Cost	Plus Interest & Net H.S.T.	Special Assessment
McLean Line 375mm dia.	\$4,900.00	\$1,040.00	\$1,500.00	\$130.00	\$5,490.00
Blacks Road 300mm dia.	\$4,600.00	\$880.00	\$1,500.00	\$130.00	\$5,350.00
McLean Line 200mm dia.	\$5,700.00	\$1,100.00	\$1,500.00	\$150.00	\$6,250.00
McLean Line 300mm dia.	\$7,000.00	\$1,490.00	\$1,500.00	\$180.00	\$7,190.00

The above special assessments shall not apply for future maintenance purposes.

If any additional work is required to the drainage works due to the existence of buried utilities such as gas pipelines, communications cables, etc. or if any of the utilities require relocation or repair, then, the extra costs incurred shall be borne by the utility involved in accordance with the provisions of Section 26 of the Drainage Act.





## GRANTS

In accordance with the provisions of Section 85 of the Drainage Act, a grant **may** be available for assessments against privately owned parcels of land which are used for agricultural purposes and eligible for the Farm Property Class Tax rate. Section 88 of the Drainage Act directs the Municipality to make application for this grant upon certification of completion of this drain. The Municipality will then deduct the grant from the assessments prior to collecting the final assessments.

## 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 entire Lamont Drain shall be maintained by the Municipality of West 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

Repairs or improvements to any road culvert or bridge or sub-surface road crossing required by the performance of this work and for future repair and/or replacement, shall be the responsibility of the applicable Road Authority, entirely at their cost.

Respectfully submitted,

SPRIET ASSOCIATES LONDON LIMITED

JMS:



J.M. Spriet, P.Eng.



## SCHEDULE 'A' - ALLOWANCES

## LAMONT DRAIN

## Municipality of West Elgin

In accordance with Sections 29 and 30 of the Drainage Act, we determine the allowances payable to owners entitled thereto as follows:

CONCESSION	LOT	ROLL NUMBER (Owner)	Section 29 Right-of-Way	Section 30 Damages	TOTALS
<b>MAIN DRAIN</b>					
3	SE½ 2	10-079 (E. Jonhston)	\$ 40.00	\$ 30.00	\$ 70.00
3	SW½ 3	10-080 (D. McPhail)	3,440.00	2,790.00	6,230.00
4	NW½ 3	10-104 (D. Gilkes)	1,270.00	1,040.00	2,310.00
			=====		
Total Allowances			\$ 4,750.00	\$ 3,860.00	\$ 8,610.00
			=====		
<b>TOTAL ALLOWANCES ON THE MAIN DRAIN</b>					<b>\$ 8,610.00</b>
					<b><u>8,610.00</u></b>
<b>TOTAL ALLOWANCES ON THE LAMONT DRAIN</b>					<b>\$ 8,610.00</b>
					<b><u>8,610.00</u></b>



**LAMONT DRAIN****Municipality of West Elgin**

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

**MAIN DRAIN**

6 meters of 450mm dia., H.D.P.E. plastic sewer pipe including rodent gate, quarry stone rip-rap protection around pipe and end of ditch and brushing as required for outlet.

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

Supply	\$	900.00
Installation	\$	1,300.00

Installation of the following concrete tile and H.D.P.E. sewer pipe, including supply and installation of geotextile around tile joints, and bedding as required.

30 meters of 300mm dia. H.D.P.E. pipe	\$	1,500.00
194 meters of 350mm dia. concrete tile	\$	5,600.00
511 meters of 450mm dia. concrete tile	\$	14,800.00
Supply of the above listed tile / pipe	\$	25,600.00

Strip, stockpile and releve topsoil from tile trench and adjacent working area (4m wide) specified on drawings (approx. 800m)

\$ 4,800.00

16 meters of 375mm H.D.P.E. dia. Sewer pipe

Supply	\$	1,000.00
Installation under McLean Line by open cut	\$	3,900.00

16 meters of 300mm H.D.P.E. dia. Sewer pipe

Supply	\$	700.00
Installation under Blacks Road by open cut	\$	3,900.00

22 meters of 200mm H.D.P.E. dia. Sewer pipe

Supply	\$	500.00
Installation under McLean Line by open cut	\$	5,200.00

27 meters of 300mm H.D.P.E. dia. Sewer pipe

Supply	\$	1,100.00
Installation under McLean Line by open cut	\$	5,900.00

Contingency amount for increased cost due to poor soil conditions

Installation of tile on crushed stone bedding with excavator (400 meters)	\$	8,400.00
Supply & delivery of 19mm crushed stone (Approx. 140 tonnes req'd)	\$	4,900.00

Supply and install four 600mm x 600mm on-line catchbasins, one 900mm x 1200mm on-line ditch inlet catchbasin and one 600mm x 600mm offset catchbasin including berms, ditching, tees and any required prefab fittings and removal of existing basins as required

\$ 12,400.00

Exposing and locating existing tile drains and utilities

\$ 900.00

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Tile connections and contingencies	\$ 4,000.00
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Allowances under Sections 29 & 30 of the Drainage Act	\$ 8,610.00
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**ADMINISTRATION**

Interest and Net Harmonized Sales Tax	\$ 3,220.00
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Survey, Plan and Final Report	\$ 16,900.00
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Expenses	\$ 710.00
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Supervision and Final Inspection	\$ <u>3,760.00</u>
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<b>TOTAL ESTIMATED COST</b>	<b>\$ <u>140,500.00</u></b>
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## SCHEDULE 'C' - ASSESSMENT FOR CONSTRUCTION

## LAMONT DRAIN

## Municipality of West Elgin

Job No. 223128

September 6, 2023

\* = Non-agricultural

CON.	LOT	HECTARES AFFECTED	ROLL No. (OWNER)	BENEFIT	OUTLET	TOTAL
<b>MAIN DRAIN</b>						
3	SW½	2	1.2	10-077 (R-D Gilkes Inc.)	\$ 2,858.00	\$ 2,858.00
3	SE½	2	5.9	10-079 (E. Jonhston)	1,460.00	14,054.00
3	SW½	3	10.2	10-080 (D. McPhail)	35,940.00	7,289.00
4	NE½	2	0.1	10-102 (J. & B. Johnston)		238.00
4	NW½	3	6.1	10-104 (D. Gilkes)	7,990.00	11,052.00
TOTAL ASSESSMENT ON LANDS				\$ 45,390.00	\$ 35,491.00	\$ 80,881.00
Blacks Road				8,230.00	5,097.00	13,327.00
McLean Line				\$ 14,960.00	7,052.00	22,012.00
TOTAL ASSESSMENT ON ROADS				\$ 23,190.00	\$ 12,149.00	\$ 35,339.00
<b>SPECIAL ASSESSMENT</b> against the Municipality of West Elgin						
for the increased cost of installing 375mm dia. Sewer Pipe across McLean Line						\$ 5,490.00
<b>SPECIAL ASSESSMENT</b> against the Municipality of West Elgin						
for the increased cost of installing 300mm dia. Sewer Pipe across Blacks Road						\$ 5,350.00
<b>SPECIAL ASSESSMENT</b> against the Municipality of West Elgin						
for the increased cost of installing 200mm dia. Sewer Pipe across McLean Line						\$ 6,250.00
<b>SPECIAL ASSESSMENT</b> against the Municipality of West Elgin						
for the increased cost of installing 300mm dia. Sewer Pipe across McLean Line						\$ 7,190.00
TOTAL ASSESSMENT ON THE MAIN DRAIN						\$ 140,500.00
TOTAL ASSESSMENT ON THE LAMONT DRAIN						\$ 140,500.00

## SCHEDULE 'D' - ASSESSMENT FOR MAINTENANCE

## LAMONT DRAIN

## Municipality of West Elgin

Job No. 223128

September 6, 2023

CON.	LOT	HECTARES AFFECTED		ROLL No. (OWNER)	PERCENTAGE OF MAINTENANCE COST
<b>MAIN DRAIN</b>					
3	SW½	2	1.2	10-077 (R-D Gilkes Inc.)	3.5 %
3	SE½	2	5.9	10-079 (E. Jonhston)	18.0
3	SW½	3	10.2	10-080 (D. McPhail)	30.8
4	NE½	2	0.1	10-102 (J. & B. Johnston)	0.3
4	NW½	3	6.1	10-104 (D. Gilkes)	18.4
					=====
TOTAL ASSESSMENT ON LANDS					71.0 %
					=====
Blacks Road		0.8	Municipality of West Elgin		11.2 %
McLean Line		1.2	Municipality of West Elgin		17.8
					=====
TOTAL ASSESSMENT ON ROADS					29.0 %
					=====
TOTAL ASSESSMENT FOR MAINTENANCE ON THE MAIN DRAIN					100.0 %



# SCHEDULE OF NET ASSESSMENT

## LAMONT DRAIN

### Municipality of West Elgin

(FOR INFORMATION PURPOSES ONLY)

Job No. 223128

September 6, 2023

\* = Non-agricultural

ROLL NUMBER (OWNER)	TOTAL ASSESSMENT	GRANT	ALLOWANCES	APPROX. NET
10-077 (R-D Gilkes Inc.)	\$ 2,858.00	\$ 953.00	\$	\$ 1,905.00
10-079 (E. Jonhston)	15,514.00	5,171.00	70.00	10,273.00
10-080 (D. McPhail)	43,229.00	14,410.00	6,230.00	22,589.00
10-102 (J. & B. Johnston)	238.00	79.00		159.00
10-104 (D. Gilkes)	19,042.00	6,347.00	2,310.00	10,385.00
Blacks Road	\$ 13,327.00			\$ 13,327.00
Special Assessment	5,350.00			5,350.00
McLean Line	22,012.00			22,012.00
Special Assessments	18,930.00			18,930.00
<b>TOTALS</b>	<b>\$ 140,500.00</b>	<b>\$ 26,960.00</b>	<b>\$ 8,610.00</b>	<b>\$ 104,930.00</b>