

# **The Corporation of the Town of Essex**

## **By-Law Number 1913**

### **Being a by-law to authorize the relocation of Drainage Works pursuant to Sections 77(2) and 77(3) of the Drainage Act, R.S.O. 1990, c.**

#### **D. 17**

Whereas Council of The Corporation of the Town of Essex at its May 19 2020 regular meeting received and supported Drainage Report 2020-04 which Report recommends the adoption of a Engineers Letter of Opinion in reference to the recommended relocation of the Essex Outlet Drain so as to avoid conflict with a proposed overpass structure at King's Highway Number 3 and Victoria Avenue.

And Whereas, Section 25(2) of the Public Transportation and Highway Improvements Act, Ontario, R.S.O. 1990 c. P. 50 , provides that the Ministry of Transportation of Ontario can designate one or more engineers of the Ministry to be the engineer authorized to carry out the provisions of any Act for the purpose of drainage for the King's Highway and has all the same powers and shall perform all the duties required of an engineer appointed by a municipality;

And Whereas Section 77(3) of the Ontario Drainage Act, R.S.O. 1990, c. D. 17 (the "Act") provides that where the relocation of a Drainage works or part thereof referred to in subsection 77(2) of the Act is to be effected within the lands under the jurisdiction of the Road Authority, the engineer has the option to prepare a written opinion instead of a report.

Now therefore be it resolved that the Council of The Corporation of the Town of Essex enacts as follows:

1. That the Engineer's Letter of Opinion to relocate the Essex Outlet Drain as attached hereto as Schedule "A" to this by-law be approved and adopted and that the relocation of Drainage Works referenced therein be hereby authorized;
2. That the Mayor and Clerk be hereby authorized to sign such documents and give such assurances as may be necessary to give effect to this By-law.
3. That this by-law shall come into force and effect upon its final passing thereof.

**Read a first, a second and a third time and finally passed on May 19, 2020.**

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk

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March 20, 2020

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**Drainage Improvements to the Essex Outlet Drain**  
Highway 3  
City of Essex

Dear Mr. Nussio:

**Instruction**

The Ministry proposes a drainage realignment, contained within the Highway 3 property limits, for the Essex Outlet Drain. Specifics regarding the realignment can be found in Appendix A, Essex Outlet Drain – Recommended Plan.

The Ministry-proposed work, as it affects the Essex Outlet Drain, will not adversely affect the hydraulic capacity of the system as shown in the Appendix B, Final Highway 3 Culvert Hydrology and Condition Report. All of the works recommended (see Appendix B) shall be at the cost of the Ministry (Road Authority) and the entirety of the proposed work is on lands solely under the jurisdiction of the Ministry.

We hereby recommend that the realignment, as described in this letter, may proceed as set out in our written opinion in accordance with Section 77(3) of the Drainage Act. As such, a formal report under the Drainage Act is not required.

**Watershed Description**

The existing Highway 3 crossing of the Essex Outlet Drain serves as an outlet for a large urban storm drainage system within the Town of Essex. The Essex Outlet Drain is a regulated municipal drain and lies within the Canard River Subwatershed.

The Essex Outlet Drain is under the jurisdiction of Essex River Conservation Authority (ERCA) with respect to hydraulic performance and floodplain management, and the Ministry of Natural Resources and Forestry (MNRF) with respect to species at risk (SAR). Watershed characteristics for the Essex Outlet Drain sub-watershed were

determined using information obtained from the previously completed Preliminary Design drainage study, official Municipal Drain mapping obtained from the local municipalities and County of Essex, and topographic mapping from MNR.

### **Existing Conditions**

The Essex Outlet Drain, from its upstream limit to Highway 3, is an intermittent flowing, urbanized closed stormwater drainage system, and is not considered sensitive to fish habitat. The Drain is classified from its upstream limit to Essex Outlet Creek as a Class F drain, based on Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) mapping.

There is currently one crossing of the Essex Outlet Drain within Ministry property, approximately 30 m west of the intersection of Victoria Road and Highway 3. The Essex Outlet Drain, within Ministry property limits, has a linear trapezoidal conveyance feature with relatively uniform geometry.

### **Rationale and Design Considerations**

The drain realignment is required to accommodate the future Victoria Avenue underpass structure and embankment.

Proposed drainage conditions have been reviewed and hydrodynamic modeling has determined that there are no adverse impacts on upstream properties in terms of water surface elevations. Additionally, the report demonstrates that there are no adverse impacts on downstream properties in terms of peak flows during the design events.

### **Recommendations**

We recommend that the drainage realignment to the existing Essex Outlet Drain be constructed. The following provides a brief description of the realignment work on the Essex Outlet Drain (see Appendix B for full details):

- A new crossing culvert under Highway 3 at approximately Station 14+485 (300 m west of Victoria Avenue). To facilitate this crossing, a 4.26 m span, 2.44 m rise and a 97.84 m long concrete box culvert will be installed. The culvert length can be shortened by 27 m after the existing Highway 3 embankment is removed during construction.
- Realignment of the existing open channel drain with a 3.0 m flat bottom within Ministry property and tie into existing drain configuration both north and south of Highway 3.

All of the above works and costs recommended shall be entirely on lands solely under the jurisdiction of the Ministry. Therefore, a detailed summary of the items for construction and costs are not included as part of this letter.

The portions of the Essex Outlet Drain and associated structures within Ministry property limits will be maintained by the Ministry.

Sincerely

A handwritten signature in grey ink, appearing to read 'A. Naylor'.

Amanda Naylor, P.Eng.  
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