



ENGINEER'S REPORT

(Drainage Act, RSO 1990, c. D.17)

PROJECT	Bondy No. 1 Drain Maintenance Schedules of Assessment (Geographic Township of Colchester South) Town of Essex, County of Essex Project No. D22-063
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August 16, 2023

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PREAMBLE

MUNICIPAL DRAINS AND THE DRAINAGE ACT

The "Drainage Act" is one of the oldest pieces of legislation in Ontario, passed in 1859. It provides a democratic procedure for the construction, improvement and maintenance of drainage works. A procedure whereby the Municipality may assist in providing a legal drainage outlet for surface and subsurface waters not attainable under common law. Accordingly, provides much-needed assistance to facilitate the problems of obtaining a legal drainage outlet, engineering and cost distribution.

The Drainage Act provides a legal procedure by which an "area requiring drainage" may receive an outlet drain constructed to dispose of excess stormwater runoff to a sufficient outlet. This drainage infrastructure is otherwise known as a "Municipal Drain". Municipal Drains are identified by Municipal By-Law that adopts an Engineer's Report. The drainage engineer has the obligation to prepare an unbiased Engineer's Report based on information presented in written form, orally, and from visual inspection; in accordance with currently accepted design criteria. These reports form the legal basis for construction and management of the Municipal Drain. As such, an Engineer's Report shall contain specific details such as plans, profiles, and specifications that define the location, size and depth of the drainage infrastructure, together with establishing how costs are shared amongst all stakeholders.

Through the democratic procedure, the Engineer's Report is presented to all Stakeholders in front of Municipal Council (or a Drainage Board appointed by Council) for consideration. The Drainage Act provides an appeal process to address various aspects of Municipal Drains. These appeal bodies are the Court of Revision, the Ontario Drainage Tribunal and the Drainage Referee.

For additional information, Fact Sheets, and reference materials regarding the Drainage Act and Municipal Drains, please visit: <http://www.omafra.gov.on.ca/english/landuse/drainage.html>

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PROJECT **Bondy No. 1 Drain**
Maintenance Schedules of Assessment
(Geographic Township of Colchester South)
Town of Essex, County of Essex
Project No. D22-063

August 16, 2023

Mayor and Municipal Council
Corporation of the Town of Essex
33 Talbot Street South
Essex, Ontario, N8M 1A8

I. INTRODUCTION

In accordance with the instructions received by email on June 23, 2022, from the Town of Essex's Clerk, Robert Auger, we have undertaken a review of the existing drainage works and the drainage area served by the Bondy No. 1 Drain. This investigation was initiated by a resolution passed by Council appointing our firm to prepare an Engineer's Report for the variation of the assessments on the Bondy No. 1 Drain, so that the cost of any future maintenance works to the Bondy No. 1 Drain may be fairly assessed. These instructions, our investigations, and this assessment report are all in accordance with Section 76 of the "Drainage Act, RSO 1990, Chapter D.17, as amended 2021".

II. BACKGROUND

The Bondy No. 1 Drain has been established as a Municipal Drain with the downstream portion consisting of an open drain configuration and the upstream portion consisting of a tiled drainage system. This Municipal Drain provides drainage to the lands and roads located solely within the Town of Essex. The Bondy No. 1 Drain commences from its top end at the east end of Lot 90, at Station 0+000.0, and continues downstream as a tiled drain in a southwesterly direction through private lands to the north side of County Road 50. The Municipal Drain continues downstream in a southwesterly direction through private lands as an open drain, where it crosses Levergood Drive and Erie Shores Drive to its outlet into Lake Erie, at Station 1+992.7. The tiled portion of this drain also includes a second auxiliary drain, along with erosion control measures by way of berms and grassed waterways (ie. Water and Sediment Control Structures - WASCoBs). The watershed of the Bondy No. 1 Drain is irregularly shaped and provides a sufficient outlet for the various contributing lands. The topography of the associated lands is relatively mild and the natural land gradient appears to be in a southwesterly direction. The Bondy No. 1 Drain provides a drainage outlet for a mix of residential and agricultural lands. This Municipal Drain is predominantly located within the Perth Clay Loam and Wauseon Sandy Loam soil types. These soils are categorized as Hydrological Soil Group C and are described as poorly drained with a low infiltration rate when thoroughly wetted and consist chiefly of soils with a layer that impedes the downward movement of water and soil with moderately fine to fine structure. As a result, these soils require effective artificial drainage to be productive.

III. DRAINAGE HISTORY

A review of the Town of Essex drainage records indicates that the Bondy No. 1 Drain is an existing Municipal Drain that has been repaired and improved on numerous occasions through the auspices of the Drainage Act. From our review, we have found several Engineer's Reports prepared through the provisions of the Drainage Act for the Bondy No. 1 Drain. However, we have outlined the following relevant Engineer's Reports that we utilized as a reference for carrying out this project:

- a) **January 19, 1949**, Engineer's Report for the "Bondy No. 1 Drain", prepared by C.G.R. Armstrong, P.Eng., was carried out through the Township of Colchester South By-Law No. 656. The improvements completed under this report included the installation of a concrete tile drain within Lot 90 and Lot 93. These works also included the excavation, brushing and grubbing of the open drain from Lot 93 to its outlet into Lake Erie within R.P. 1057. These works were conducted to provide adequate drainage to the affected lands and roads within the watershed.
- b) **July 26, 1968**, Engineer's Report for the "Lower Portion of the Bondy No. 1 Drain", prepared by C.G.R. Armstrong, P.Eng., was carried out through the Township of Colchester South By-Law No. 1164. The improvements completed under this report included the installation of a concrete tile drain within Lot 94, upstream of County Road 50. These works also included the excavation, brushing and grubbing of the open drain from Lot 94 to its outlet into Lake Erie within R.P. 1057. These works were conducted to provide adequate drainage to the affected lands and roads within the watershed, by providing additional depth to safely convey runoff to the outlet.
- c) **September 20, 1977**, reconsidered Engineer's Report for the "Auxilliary Drain to Bondy Drain No. 1", prepared by M. Armstrong, P.Eng., was carried out through the Township of Colchester South By-Law 1440. The improvements completed under this report included the installation of an auxiliary plastic tile drain within Lots 91 through 93, installed parallel to the existing tile drain. These works were conducted to address excessive erosion and insufficient drainage for the affected lands and roads within the watershed.
- d) **January 30, 1987**, Engineer's Report for the "Bondy No. 1 Drain Outlet", prepared by N.J. Peralta, P.Eng., was carried out through the Township of Colchester South By-Law No. 1863. The improvements completed under this report included the extension of the existing road crossing culvert under Erie Shores Drive and the improvements to the open channel into Lake Erie. These works were conducted to control the runoff, address the accumulation of sand at the outlet, and reduce the occurrence of blockages.
- e) **January 10, 1997**, Engineer's Report for the "Bondy No. 1 Drain", prepared by N.J. Peralta, P.Eng. and G. Rood, P.Eng, was carried out through the Township of Colchester South By-Law No. 2412. The improvements completed under this report included the installation of water and sediment control structures (berms, grassed waterways, and inlet structures) within Lots 90 through 94, together with extending the existing auxiliary drain upstream through Lot 90. These works were conducted to address excessive surface erosion over the tiled portion of the drainage system.

- f) **February 11, 2010**, Engineer's Report for the "Bondy No. 1 Drain Crossings (for Harrow Wind Farm Drainage)", prepared by G. Rood, P.Eng., was carried out through the Town of Essex By-Law No. 1011. The improvements completed under this report included the replacement of the drainage tiles and improvements to the existing berms to be altered by the installation of new access roads facilitating the Wind Farm construction.

From our detailed research of the above Engineer's Reports, we have determined that generally speaking, portions of the Municipal Drain are still defined and governed by the portions of 1949, 1968, 1977, 1987, 1997, and the 2010 Engineer's Reports and By-Laws, extending over the entire length from Station 0+000.0 to Station 1+992.7. Collectively, these Engineer's Reports govern the design provisions for any future maintenance works over the entire reach of the drain. Currently, the costs for such maintenance works are to be assessed against the lands and roads outlined within these reports. We find that the 1987 and 1997 reports generally identify the latest watershed boundary limits contributing flows to the Bondy No.1 Drain. As such, these reports were utilized as a starting point in establishing the area of land contributing to the proposed improvements.

IV. PURPOSE OF REPORT

The Town of Essex is proposing to undertake maintenance works on the Bondy No. 1 Drain. The intended maintenance works consist of cutting brush and trees along the side slopes, together with the removal of accumulated sediment along the open drain portion of the Bondy No. 1 Drain, and any other maintenance works required to provide a sufficient outlet.

Since the completion of the 1987 and 1997 Engineer's Reports and By-Laws, various changes have taken place within the drainage area and around the watershed boundaries. In general, many properties have been subdivided and/or merged, drainage patterns have been altered, and land uses have changed. All of the above changes are not properly reflected by the Schedule of Assessment contained within the governing By-Laws and it is necessary to prepare a new Maintenance Schedule of Assessment to properly account for all of the lands and roads affected by the entire length of the Bondy No. 1 Drain.

V. ON-SITE MEETING

With the intention of performing maintenance on the Bondy No. 1 Drain, along with the need for a new Maintenance Schedule of Assessment to distribute costs for this work, it was determined that an On-Site Meeting would be conducted to introduce both matters at the same time.

Upon reviewing all pertinent drainage information, together with the discussions with the Town of Essex staff, we arranged to schedule the required On-Site Meeting. The On-Site Meeting was scheduled for August 17, 2022, located near 118 Levergood Drive, and the following stakeholders were in attendance at said meeting:

Name	Property
Laurie & Jim Freeman	Landowners – 792 Erie Shores Drive
Leslie Leroux and Terry Bains	Landowners – 107 Levergood Court
Lisa Durocher	Landowner – 728 County Road 50 West
Robin Martin and Ken Laird	Landowners – 796 Erie Shores Drive
John Kay	Landowner – 155 Crystal Beach Road
Jill Kennedy	Landowner – 709 County Road 50 West
Jean Stewart	Landowner – 161 Crystal Beach Road
Bernard Gorski	Landowner
Joe Gorski	Landowner
Rick Levergood	Landowner – 788 County Road 50 West
Dave & Donna Couvillon	Landowners – 815 Erie Shores Drive
Terry & Sherry Barris	Landowners – 790 Erie Shores Drive
Catherine Deslippe	Landowner – 789 Erie Shores Drive
Velo Todorovski	Landowner – 791 Erie Shores Drive
Brian Sadaï	Landowner – 743 County Road 50 West
Terry Bale	Landowner – 718 Levergood Drive
Gary Freisinger	Landowner – 794 Erie Shores Drive
Liz Carreira	Landowner – 798 Levergood Court
Wayne Campbell	Landowner – 801 Erie Shores Drive
Mark Fishleigh	County of Essex
Percy Dufour	Town of Essex Drainage Board
Lindsay Dean	Town of Essex Drainage Superintendent
Tony Peralta, P.Eng.	N.J. Peralta Engineering Ltd.
Matthew Shiha, EIT	N.J. Peralta Engineering Ltd.

At the onset of this meeting, Lindsay Dean made introductions and generally advised that the Town of Essex is proposing to undertake maintenance works on the Bondy No. 1 Drain, based on the request of affected landowners. Upon review of the governing By-Laws for this drain, the Municipality has found that the governing Schedules of Assessment were insufficient for the purposes of assessing the costs of any future maintenance work within the Bondy No. 1 Drain.

Tony Peralta provided additional information that pertains to the status of this Municipal Drain and the financial responsibilities of the stakeholders through the Drainage Act. It was further explained that several reports prepared over the years had identified various improvements within the drainage system and the general cost distribution of these improvements to the affected stakeholders. Since the completion of these reports, there have been significant changes to the overall watershed limit and the use of land within this watershed. However, the technical details outlined within these governing reports provide an adequate drain profile and working corridor provisions for the Town of Essex to conduct maintenance on the Bondy No. 1 Drain.

As a result of the above information, the Municipality initiated the preparation of the Engineer's Report for the reassessment of costs for the Bondy No. 1 Drain, through Section 76 of the Drainage Act. The

landowners were further advised that the maintenance works would likely be conducted following the approval and adoption of the new Maintenance Schedule of Assessment under Municipal By-Law.

The landowners were further advised that the scope of this report will focus solely on the reassessment of costs for the Bondy No. 1 Drain and will not make recommendations to include any physical improvements to the drain. It was emphasized that no improvements will be recommended under this report unless there is a change in scope through instruction from the Municipality.

It was also noted that the costs related to the preparation of this Report and said engineering fees are likely to be assessed to all landowners within the drain's watershed that benefit and/or contribute to the Bondy No. 1 Drain. The proportion of costs shall be distributed based on the new Maintenance Schedule of Assessment prepared under this report. The landowners were further advised that the work to prepare the new Maintenance Schedule Report would not be eligible for grants through the current policies set by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). However, the actual costs associated with the maintenance works are likely eligible for such a grant for those properties that meet the requirements.

The landowners were further advised of the Drainage Act processes with respect to the Report submission. The Municipality will further circulate the report to the affected landowners, with a notice of the Consideration Meeting, followed by the Court of Revision. The landowners were further reminded of their rights to appeal to the appropriate governing bodies.

Various landowners raised general concerns and questioned the initiation of the intended report. Tony Peralta provided scenarios to help illustrate the need to update the current distribution of cost by identifying properties that would not be assessed any costs based on the governing schedules of assessment for the Bondy No. 1 Drain. Once the affected landowners had a better understanding of the scope and scale of the Updated Maintenance Schedule Report, the landowners further questioned the extent of the forthcoming maintenance works. It was determined that a separate maintenance meeting will likely be conducted following the adoption of the Engineer's Report. Further discussion ensued regarding future land developments and other matters outside the scope of this project.

At the conclusion of the meeting, the landowners were advised that, as part of the Engineer's review of the watershed, individual property Owners may be contacted to review the drainage patterns of their lands, in order for the Engineer to accurately assess the affected lands within the watershed. Otherwise, landowners that continue to form part of this drainage scheme are likely to receive further notices of upcoming meetings going forward.

On this note, the On-Site Meeting had concluded.

VI. INVESTIGATIONS AND FINDINGS

In order to confirm the watershed areas for the Bondy No. 1 Drain, we reviewed and investigated all of the latest Engineer's Reports on this drain, its tributary branches and all neighbouring drains in its vicinity. As such, we reviewed the latest Engineer's Report for the Bondy No. 2 Drain, Langlois-Arner Drain, Crystal Beach Drainage System, Bellcreech Beach Drainage System, and the West Townline Drain. Furthermore, we utilized current LiDAR information to cross-check the watershed limits at various locations throughout the

watershed. Through these investigations, we find that additional lands, not formerly assessed, contribute to this drainage system and have been included within this watershed. Furthermore, we found that since the last Engineer's Report was created, various lands have been created through severances that have not been accounted for in the governing By-Laws. All of the above investigations not only provided us with the correct watershed area but also provided us with accurate information to assist us with the preparation of our Maintenance Schedules of Assessment for this project. Therefore, we recommend that the Town of Essex add copies of this Report to all applicable drainage folders, for reference when future drainage reports are prepared on said drains so that changes caused by this new Maintenance Schedule of Assessment can be accounted for in those future reports.

Generally speaking, the Municipal Drain extends from its top end at Station 0+000.0 commencing at a catch basin located at the east end of Lot 90, where it meanders in a southwesterly direction as a twinned drainage tile connected by various inlet structures. The twinned drainage tile is accompanied by water and sediment erosion control structures at various locations, where this system extends to the north side of County Road 50. From the north side of County Road 50, the Municipal Drain continues as an open drain, crossing County Road 50, Levergood Drive, and Erie Shores Drive, where it terminates at its outlet into Lake Erie, at approximately Station 1+992.7. The past improvements conducted on the Bondy No. 1 Drain were cumulative and specific to the needs of the watershed at that time. As such, no one By-Law governs over the entire length of this Municipal Drain. As a result, the various engineer's reports prepared over the years independently govern the various components of the drainage system.

VII. RECOMMENDATIONS

Maintenance Schedule of Assessment

Through our review of the governing reports for this Municipal Drain, we found that various reports were prepared over the years that provided specific improvements and/or additions to the drainage infrastructure within the Bondy No. 1 Drain. As a result, the distribution of costs for each report was specific to the improvements provided in each report. Therefore, when future maintenance is required on multiple components of the drainage infrastructure, no one governing assessment schedule could effectively be utilized for the distribution of future maintenance costs. Our investigations further confirm the need for an updated maintenance schedule of assessment for holistic maintenance works on the primary portions of the Bondy No. 1 Drain. Therefore, in order to properly assess any future maintenance works to the Bondy No. 1 Drain, we recommend that the updated Maintenance Schedules of Assessment be provided as attached herein and labelled **Appendix "A"**.

When future maintenance works are performed on the Bondy No. 1 Drain, we recommend that it be maintained in the future by the Town of Essex. Based on the parameters of the Bondy No. 1 Drain, this Municipal Drain has two (2) primary configurations that convey runoff to its outlet. The upstream portion of the drain consists of a twinned drain tile configuration and the downstream portion of this drain consists of an open drain configuration into Lake Erie. Therefore, in addition to providing an updated maintenance schedule of assessment for the overall length of the Bondy No. 1 Drain, we have identified two (2) distinct sections of this drain where maintenance provisions have been established and the cost distribution of these portions shall be shared on the following basis:

1. Entire Drain Length (Station 0+000.0 to Station 1+992.7)

When future maintenance works are performed over the entire length of the Bondy No. 1 Drain, we recommend that the cost for these works of future maintenance shall be shared by the abutting landowners and upstream affected lands and roads, following the same proportions established within the **Future Maintenance Schedule of Assessment #1: Bondy No. 1 Drain – Entire Drain (Station 0+000 to Station 1+992.7)** attached herein. This Schedule of Assessment has been developed based on an assumed cost of **\$50,000.00** and the future maintenance costs shall be levied pro-rata to the affected lands and roads that are adjacent to and situated upstream of this section of drain for which future maintenance works have been carried out. Therefore, when **\$50,000.00** worth of future maintenance work is expended on the entire length of the drain, the assessment to each of the individual affected property owners and roads shall be levied per the noted Maintenance Schedule of Assessment. It should be clearly understood that the amounts shown within this Schedule are only for prorating future maintenance costs for the drain and do not form part of the current cost for the work.

2. Upstream Portion (Station 0+000.0 to Station 1+399.3)

When future maintenance works are performed strictly between Station 0+000.0 and Station 1+399.3 within the Bondy No.1 Drain, we recommend that it be maintained in the future by the Town of Essex. This reach of the Municipal Drain extends as a twinned drainage tile, together with various water and sediment erosion control structures, from the top end and continuing southwesterly through private property to the north side of County Road 50. The cost for these works of future maintenance shall be shared by the abutting landowner and upstream affected lands and roads, following the same proportions established within the **Future Maintenance Schedule of Assessment #2: Bondy No. 1 Drain – Upstream Portion (Station 0+000.0 to Station 1+399.3)** attached herein. This Schedule of Assessment has been developed based on an assumed cost of **\$30,000.00** and the future maintenance costs shall be levied pro-rata to the affected lands and roads that are situated adjacent to and upstream of this section of drain for which future maintenance works have been carried out. Therefore, when **\$30,000.00** worth of future maintenance work is expended on this section of the drain, the assessment to each of the individual affected property owners and roads shall be levied per the noted Maintenance Schedule of Assessment. It should be clearly understood that the amounts shown within this Schedule are only for prorating future maintenance costs for the drain and do not form part of the current cost for the work.

The attached Future Maintenance Schedule of Assessment for this upstream portion of the Bondy No. 1 Drain shall be utilized only for the maintenance of the twinned drainage tile, the associated drainage structures, together with the water and sediment erosion control structures that form part of the drainage system. The maintenance work would include the drainage tiles, all associated catchbasins, the erosion control berms, any quarried limestone erosion protection, together with the clay backfill, topsoil topping, granular driveways and grassed waterway construction. If spot maintenance is performed within the specified area of the drain, it is recommended that only those lands adjacent and upstream of the maintenance site be assessed for any future costs.

3. Downstream Portion (Station 1+399.2 to Station 1+992.7)

When future maintenance works are performed strictly between Station 1+399.2 and Station 1+992.7 within the Bondy No.1 Drain, we recommend that it be maintained in the future by the Town of Essex. This reach of the Municipal Drain extends as an open drain configuration from the north side of County Road 50, continuing in a southwesterly direction through private lands and across Levergood Drive and Erie Shores Drive to its outlet into Lake Erie. The cost for these works of future maintenance shall be shared by the abutting landowner and upstream affected lands and roads, following the same proportions established within the **Future Maintenance Schedule of Assessment #3: Bondy No. 1 Drain – Downstream Portion (Station 1+399.2 to Station 1+992.7)** attached herein. This Schedule of Assessment has been developed based on an assumed cost of **\$30,000.00** and the future maintenance costs shall be levied pro-rata to the affected lands and roads that are situated adjacent to and upstream of this section of drain for which future maintenance works have been carried out. Therefore, when **\$30,000.00** worth of future maintenance work is expended on this section of the drain, the assessment to each of the individual affected property owners and roads shall be levied per the noted Maintenance Schedule of Assessment. It should be clearly understood that the amounts shown within this Schedule are only for prorating future maintenance costs for the drain and do not form part of the current cost for the work.

The attached Future Maintenance Schedule of Assessment for this downstream portion of the Bondy No. 1 Drain shall be utilized only for the maintenance of the open drain and outlet, together with the flushing of sediment material within any existing municipal roadway crossing structures in the drain. If spot maintenance is performed within the specified area of the open drain, it is recommended that only those lands adjacent and upstream of the maintenance site be assessed for any future costs. It shall be noted that this schedule shall not be utilized for any other maintenance and repair works being conducted to any of the roadway crossing structures. These existing structures are to be assessed in a different fashion, as outlined below.

Should concrete, asphalt or other special surfaces over the drainage system require removal as part of the maintenance work, these surfaces shall be repaired or replaced as part of the work. Likewise, if any fencing, gate, decorative walls or other special features exist that will be impacted by the maintenance work, they are also to be removed and restored or replaced as part of the maintenance work. However, the cost of the supply and installation of any special surface material other than select imported clay, topsoil topping and granular driveways, along with any special feature, where applicable, shall be assessed entirely to the benefiting owner.

Future Maintenance on Existing Drain Crossings

In order to establish a mechanism by which the Municipality can undertake maintenance works on the existing drain crossings, we recommend that said existing structures as identified herein, be maintained in the future as part of the drainage works. From our review of the existing structures within the Bondy No. 1 Drain, the following structures were noted and a mechanism shall be provided herein so that the Municipality can undertake future maintenance works on the identified structures and allocated future maintenance costs for same can be properly assessed to the affected landowners. These structures are as follows:

Bridge 1 - County of Essex for County Road 50

The existing road crossing extending from Station 1+405.7 to Station 1+419.7 serves as access across County Road 50 and was identified within the 1949 and 1968 Engineer's Reports. Therefore, this structure is considered a legal entity with respect to the Bondy No. 1 Drain. This existing road crossing culvert and end treatments facilitates the use of County Road 50 and is under the jurisdiction of the County of Essex.

Bridge 2 - Town of Essex for Levergood Drive

The existing road crossing extending from Station 1+683.0 to Station 1+699.2 serves as access across Levergood Drive and was identified within the 1949 and 1968 Engineer's Reports. Therefore, this structure is considered a legal entity with respect to the Bondy No. 1 Drain. This existing road crossing culvert and end treatments facilitates the use of Levergood Drive and is under the jurisdiction of the Town of Essex.

Bridge 3 - Town of Essex for Erie Shores Drive

The existing road crossing extending from Station 1+882.8 to Station 1+904.2 serves as access across Erie Shores Drive and was identified within the 1949 and 1968 Engineer's Reports, and was further improved as part of the 1987 Engineer's Report. Therefore, this structure is considered a legal entity with respect to the Bondy No. 1 Drain. This existing road crossing culvert and end treatments facilitates the use of Levergood Drive and is under the jurisdiction of the Town of Essex.

As noted above, each road crossing structure within the Bondy No. 1 Drain is within or under the jurisdiction of a road authority or public utility. Therefore, under no circumstances shall any of the costs for the maintenance or replacement of these structures be assessed to any upstream lands within the drain's watershed. Furthermore, when future maintenance is required to these structures, each governing road authority or public utility may elect to carry out the future works on these structures using their own forces, through Section 69 of the Drainage Act, if they choose to do so. If these structures are to be replaced under an Engineer's Report through the provisions of the Drainage Act, it is recommended that Section 26 be utilized for the increased cost to the project as a result of their existence.

Pedestrian Footbridges

It shall be noted that "pedestrian footbridges" currently span over the existing Municipal Drain. These footbridges currently do not hinder or alter the flows within the Bondy No. 1 Drain. As such, these structures shall be considered private structures and shall not form part of this Municipal Drain. Therefore, the maintenance and upkeep of these structures shall be the sole responsibility of the adjacent Owner(s)/Occupant(s). However, in the event that these structures become an obstruction to the flows within the drain, or cause damage to the Municipal Drain, these obstructions must be addressed and/or removed through Sections 80(1) and 80(2) of the "Drainage Act, RSO 1990, Chapter D.17, as amended 2021".

VIII. ASSESSMENT SCHEDULES AND MAINTENANCE WORKS

We have prepared a Schedule of Assessment to be utilized for assessing costs against the affected lands and roads for any future maintenance works conducted to the Bondy No. 1 Drain and same has been attached herein. As previously mentioned, the assessment proportions as outlined within the Maintenance

Schedules of Assessment has been established on the basis of an assumed future maintenance cost assigned to each portion of the Municipal Drain, and it should be understood that the maintenance charges outlined in the attached Maintenance Schedule of Assessment should not be made until such time that maintenance works have been conducted and expended. The actual cost of maintenance work on the open drain shall be assessed against the lands and roads in the same relative proportions as shown herein, subject to any future variations that may be made under the authority of the Drainage Act.

Assessment Components

The total individual assessments within the Maintenance Schedule of Assessment, comprises of two (2) separate assessment components, including:

- i. *Benefit is defined as 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 subsurface water, or any other advantages relating to the betterment of lands, roads, buildings or other structures, as it relates to Section 22 of the Drainage Act.*
- ii. *Outlet Liability is defined as part of the cost of the construction, improvement or maintenance of a drainage works that is required to provide such outlet or improved outlet, as it relates to Section 23 of the Drainage Act.*

Assessment Rationale

Benefit Assessment - The removal of trees, brush and debris, along with the excavation of accumulated sediment within the open channel will drastically improve the flow of water through the drainage system. The improvements to the drain will enhance the hydraulic capacity of the channel and provide a sufficient outlet for the drainage system. As a result, the properties located close to the Municipal Drain channel/tile benefit from the improvements to the open drain, reducing the backup of flood water and potential damages to their property. Therefore, the Benefit Assessment shown within the Construction Schedule of Assessment is levied against those properties that reside in close proximity to the drain, based on the definition provided above.

Outlet Assessment – According to the parameters set within Section 23 of the Drainage Act, all lands which utilize the Bondy No. 1 Drain as a drainage outlet may be assessed for Outlet Liability. As further outlined within Section 23(3) of the Drainage Act, the Outlet Assessment is “...based on the volume and rate of flow of the water artificially caused to flow...”. Based on the characteristics of the lands that contribute flow to the Municipal Drain, runoff factors have been applied based on the land use of each property to reflect the actual amount of water that is artificially collected and discharged into the drain. Therefore, developed lands (residential, commercial lots and roads) have an increased run-off factor applied to their assessment. Contrarily, lands which have surface (or subsurface) runoff that exit the watershed or contain woodlots would have a decreased run-off factor applied to their assessment.

Open-Drain Maintenance Works

For the purposes of future maintenance on the entire length of the drain, all costs shall be levied against the lands and roads within the watershed in accordance with the attached Maintenance Schedules of

Assessment. The physical dimensions and parameters which control and facilitate the extent of maintenance works permitted on this Municipal Drain shall be limited to that which had been set out and constructed as part of the following Engineer's Reports:

- i. From Station 0+000.0 to Station 1+399.3 – These works extend within private lands from its top end at the east limit of Lot 90, downstream to the north limit of County Road 50. These works are collectively governed by the 1949, 1968, 1977, 1997, and the 2010 Engineer's Reports.
- ii. From Station 1+399.3 to Station 1+992.7 – These works extend from the north side of County Road 50, downstream through private lands and crossing Levergood Drive and Erie Shores Drive, to its outlet into Lake Erie. These works are collectively governed by the 1968 and 1997 Engineer's Reports.

IX. SPECIAL CONSIDERATIONS

Future Developments

The assessments derived within the Schedules of Assessments have been evaluated based on the current conditions and existing developments. It is anticipated that additional areas within the Bondy No. 1 Drain watershed are slated for future residential developments. These future developments will create higher runoff from each site and will result in increased flows into the Bondy No. 1 Drain. Therefore, if the Town of Essex is prepared to approve the increased total flow volumes from the future developments (through Stormwater Management provisions or a free discharge), we recommend that an update to the "Outlet Assessments" shall be established for each future development site, through Section 65 or Section 76 of the Drainage Act.

X. DRAWINGS

Attached, as part of this report, we have provided a plan that illustrates the Bondy No. 1 Drain watershed and sub-watershed areas, the location of the drain and its structures, as well as a listing of the affected landowners. The plan has been reduced in scale and attached to herein and labelled as **Appendix "B"**. However, full scale drawings can be viewed at the Town of Essex Municipal Offices, if required.

XI. GRANTS

It should be understood that no grant is available to privately owned agricultural lands used for the preparation of the Engineer's Report conducted under Section 76 of the Drainage Act. However, in accordance with the provisions of Section 85 through Section 90 of the "Drainage Act, RSO 1990, Chapter D.17, as amended 2021", when maintenance works are conducted to the Bondy No. 1 Drain in the future, a grant up to the amount of 1/3 of the assessments eligible for a grant, may be made in respect of the maintenance assessments made upon privately owned lands used for agricultural purposes. Based on the current Agricultural Drainage Infrastructure Program (ADIP), "lands used for agricultural purposes" may be eligible for a grant in the amount of up to 1/3 of their total assessment. The policy defines "lands used for agricultural purposes" as those lands eligible for the "Farm Property Class Tax Rate". The Municipal Clerk

has provided this information to the Engineer from the current property tax roll and the Engineer has further confirmed this information with the AGMaps Geographic Information Portal Services through OMAFRA. Properties that meet the criteria for "lands used for agricultural purposes" are shown in the attached Assessment Schedules under the subheading "**5. PRIVATELY OWNED – AGRICULTURAL LANDS (grantable)**" and are expected to be eligible for the 1/3 grant from OMAFRA.

XII. REPORT COSTS

We would also recommend that all engineering costs and expenses related to the preparation, distribution, and consideration of this report be included as an expense to the drainage works and assessed in the same proportions as set out in the new **Future Maintenance Schedule of Assessment #1: Bondy No. 1 Drain-Entire Drain (Station 0+000 to Station 1+992.7)**, attached herein.

All of which is respectfully submitted,

N.J. PERALTA ENGINEERING LTD.

Antonio B. Peralta, P.Eng.

ABP/kk



APPENDIX "A"

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APPENDIX A-1

Future Maintenance Schedule of Assessment #1 Entire Drain

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FUTURE MAINTENANCE SCHEDULE OF ASSESSMENT #1
Bondy No. 1 Drain - Entire Drain (Station 0+000 to Station 1+992.7)

3. MUNICIPAL LANDS:

Parcel ID Number	Tax Roll Number	Con. or Plan Number	Lot or Part of Lot	Acres Owned	Acres Affected	Hectares Affected	Owner's Name	Value of Benefit	Value of Outlet	TOTAL VALUE
	Erie Shores Drive				2.09	0.846	Town of Essex	\$ 468.00	\$ 131.00	\$ 599.00
	Levergood Court				0.33	0.134	Town of Essex	\$ 103.00	\$ 20.00	\$ 123.00
	Levergood Drive				2.39	0.967	Town of Essex	\$ 596.00	\$ 220.00	\$ 816.00
	Crystal Beach Road				1.11	0.449	Town of Essex	\$ 174.00	\$ 151.00	\$ 325.00
	County Road 50				2.30	0.931	County of Essex	\$ 508.00	\$ 410.00	\$ 918.00
Total on Municipal Lands.....								\$ 1,849.00	\$ 932.00	\$ 2,781.00

4. PRIVATELY OWNED - NON-AGRICULTURAL LANDS:

Parcel ID Number	Tax Roll Number	Con. or Plan Number	Lot or Part of Lot	Acres Owned	Acres Affected	Hectares Affected	Owner's Name	Value of Benefit	Value of Outlet	TOTAL VALUE
4	670-02550	1	95	1.14	0.73	0.295	Bruce Ferriss and Kimberly Dufour	\$ 124.00	\$ 84.00	\$ 208.00
5	670-02600	1	94	0.73	0.73	0.295	David & Lisa Durocher	\$ 171.00	\$ 70.00	\$ 241.00
6	670-02650	1	94	0.67	0.67	0.271	David & Lisa Durocher	\$ 157.00	\$ 51.00	\$ 208.00
8	670-02750	1	94	0.33	0.33	0.134	Andrew & Wendy Quick	\$ 39.00	\$ 47.00	\$ 86.00
9	670-02800	1	94	1.53	1.53	0.619	Ronald & Patricia Deschaine	\$ 134.00	\$ 134.00	\$ 268.00
13	670-28300	R.P. 1392	69	0.09	0.09	0.036	Kenneth & Vicki Kyle	\$ 4.00	\$ 10.00	\$ 14.00
14	670-28400	R.P. 1392	Pt. 64 & 65 to 68	0.42	0.42	0.170	Donna Dunsmore	\$ 20.00	\$ 33.00	\$ 53.00
15	670-28500	R.P. 1392	63 & Pt. 64	0.10	0.10	0.040	Herbert Alfaro	\$ 5.00	\$ 11.00	\$ 16.00
16	670-28600	R.P. 1392	62	0.09	0.09	0.036	Margaret Malone	\$ 4.00	\$ 10.00	\$ 14.00
17	670-28700	R.P. 1392	60 to 61	0.17	0.17	0.069	Robert Arquette and Willy Renard	\$ 8.00	\$ 15.00	\$ 23.00
18	670-28705	R.P. 1392	59 to 58	0.17	0.17	0.069	Mickal Menogue	\$ 8.00	\$ 15.00	\$ 23.00
19	670-28800	R.P. 1392	53, 54, Pt. 55, 56-59	0.40	0.40	0.162	Jill Jimmerfield and Ronald Kennedy	\$ 19.00	\$ 34.00	\$ 53.00
20	670-28900	R.P. 1392	Pt. 49 to 52	0.39	0.39	0.158	John Weir	\$ 18.00	\$ 34.00	\$ 52.00
21	670-29000	R.P. 1392	Pt. 49 & 46 to 48	0.30	0.30	0.121	John & Gloria Stewart	\$ 14.00	\$ 26.00	\$ 40.00

4. PRIVATELY OWNED - NON-AGRICULTURAL LANDS: Continued

Parcel ID Number	Tax Roll Number	Con. or Plan Number	Lot or Part of Lot	Acres Owned	Acres Affected	Hectares Affected	Owner's Name	Value of Benefit	Value of Outlet	TOTAL VALUE
22	670-29100	R.P. 1392	Pt. 43, 44 & 45	0.24	0.24	0.097	Tamara Deneau	\$ 11.00	\$ 21.00	\$ 32.00
23	670-29300	R.P. 1392	Pt. 43 & 40 to 42	0.28	0.28	0.113	Sharon Boehk	\$ 13.00	\$ 24.00	\$ 37.00
24	670-29400	R.P. 1392	37 to 39	0.26	0.26	0.105	Stephen & Laura Hasulo	\$ 12.00	\$ 27.00	\$ 39.00
25	670-29500	R.P. 1392	34 to 36	0.26	0.26	0.105	Kenneth Chapman	\$ 12.00	\$ 27.00	\$ 39.00
27	670-31000	R.P. 1466	Pt. Blk 'A'	0.49	0.49	0.198	Daniel & Jenny Jenner	\$ 60.00	\$ 40.00	\$ 100.00
28	670-31001	R.P. 1466	Pt. Blk 'A'	2.06	2.06	0.834	Kyle & Sara Morency	\$ 340.00	\$ 106.00	\$ 446.00
29	670-31003	1	95	3.00	3.00	1.214	Terry Bale	\$ 695.00	\$ 184.00	\$ 879.00
30	670-31007	1	95	0.98	0.98	0.397	Dwayne & Lucy Barris	\$ 198.00	\$ 54.00	\$ 252.00
31	670-31009	1	95	0.49	0.49	0.198	Brian Sadai, Mary St. Pierre and	\$ 57.00	\$ 40.00	\$ 97.00
32	670-31010	1	95	0.64	0.64	0.259	BCE (Essex) Inc.	\$ 110.00	\$ 46.00	\$ 156.00
33	670-31012	1	95	2.59	2.59	1.048	Daniel & Diane Hannigan	\$ 604.00	\$ 159.00	\$ 763.00
34	670-31050	R.P. 1466	Pt. Blk 'A'	1.42	1.42	0.575	Michael McNamara	\$ 162.00	\$ 73.00	\$ 235.00
35	670-31075	1	95	0.90	0.90	0.364	Robert, Suzanne, Julianne and John	\$ 106.00	\$ 59.00	\$ 165.00
36	670-31100	R.P. 1466	Pt. 9 & 10	0.22	0.11	0.045	Sheryl & Robert Sloan	\$ 13.00	\$ 6.00	\$ 19.00
37	670-31200	R.P. 1466	Pt. 9 & 8	0.25	0.13	0.051	Jillian Yost & Norman Barton	\$ 15.00	\$ 7.00	\$ 22.00
38	670-31300	R.P. 1466	Pt. 6 & 7	0.23	0.11	0.046	Michael, Jane, David & Katherine	\$ 13.00	\$ 6.00	\$ 19.00
39	670-31400	R.P. 1466	Pt. 6 & 5	0.22	0.11	0.044	Michael McNamara	\$ 13.00	\$ 6.00	\$ 19.00
40	670-31500	R.P. 1466	4	0.14	0.07	0.028	Robert & Joan Nagle and Victoria	\$ 8.00	\$ 3.00	\$ 11.00
41	670-31600	R.P. 1466	3	0.14	0.07	0.028	Robert & Joan Nagle and Victoria	\$ 8.00	\$ 3.00	\$ 11.00
42	670-31700	R.P. 1466	2	0.18	0.09	0.037	Ronald & Murray Inverarity	\$ 11.00	\$ 4.00	\$ 15.00
43	670-31800	R.P. 1466	1	0.18	0.09	0.037	Mcnamara Michael	\$ 11.00	\$ 4.00	\$ 15.00
44	670-31900	R.P. 1057	19 & 20	0.17	0.08	0.034	Tyson Joseph and Deborah Sissons-	\$ 20.00	\$ 4.00	\$ 24.00
45	670-32000	R.P. 1057	18	0.11	0.06	0.024	Deslippe Catherine	\$ 14.00	\$ 3.00	\$ 17.00
46	670-32100	R.P. 1057	17	0.12	0.06	0.024	Velo & Victoria Todorovski	\$ 14.00	\$ 3.00	\$ 17.00
47	670-32200	R.P. 1057	16	0.12	0.06	0.025	George Bolton	\$ 14.00	\$ 3.00	\$ 17.00
48	670-32300	R.P. 1057	15	0.12	0.06	0.025	George & Bonnie Ioanidis	\$ 14.00	\$ 3.00	\$ 17.00
49	670-32400	R.P. 1057	13 & 14	0.22	0.11	0.045	Andre & Kristine Bezaire	\$ 26.00	\$ 8.00	\$ 34.00
50	670-32500	R.P. 1057	12	0.11	0.05	0.022	Charlene Atkins	\$ 13.00	\$ 2.00	\$ 15.00
51	670-32600	R.P. 1057	11	0.11	0.05	0.022	Wayne Campbell	\$ 13.00	\$ 2.00	\$ 15.00
52	670-32700	R.P. 1057	8, 9 & 10	0.28	0.17	0.069	Jospeh & Lisa Brochu	\$ 40.00	\$ 10.00	\$ 50.00
53	670-32750	R.P. 1057	6 & 7	0.11	0.09	0.036	Orrie Levergood	\$ 21.00	\$ 1.00	\$ 22.00
54	670-32900	R.P. 1057	4 & 5	0.15	0.10	0.040	Leslie Leroux and Terrence Baines	\$ 23.00	\$ 4.00	\$ 27.00
55	670-33000	R.P. 1057	3	0.10	0.05	0.021	Gregory Bolton	\$ 12.00	\$ 2.00	\$ 14.00
56	670-33100	R.P. 1057	2	0.10	0.05	0.021	James Johnstone and Gloria Lemieux	\$ 12.00	\$ 2.00	\$ 14.00
57	670-33300	1	96	0.44	0.44	0.178	Sawyer Grant and Ryan Tilson	\$ 103.00	\$ 22.00	\$ 125.00
58	670-33400	1	96	0.71	0.71	0.287	Elizabeth Carreira	\$ 167.00	\$ 20.00	\$ 187.00
59	670-33500	R.P. 1057	28	0.11	0.11	0.045	Ralph Carreira	\$ 26.00	\$ 9.00	\$ 35.00

4. PRIVATELY OWNED - NON-AGRICULTURAL LANDS: Continued

Parcel ID Number	Tax Roll Number	Con. or Plan Number	Lot or Part of Lot	Acres Owned	Acres Affected	Hectares Affected	Owner's Name	Value of Benefit	Value of Outlet	TOTAL VALUE
60	670-33600	R.P. 1057	27	0.09	0.09	0.036	Robin Martin	\$ 21.00	\$ 7.00	\$ 28.00
61	670-33700	R.P. 1057	24 & 25	0.09	0.09	0.036	Gary Freisinger and Judith Seagull	\$ 21.00	\$ 7.00	\$ 28.00
62	670-33800	R.P. 1057	24 & 25	0.18	0.18	0.073	Laurie Freeman	\$ 42.00	\$ 10.00	\$ 52.00
63	670-33900	R.P. 1057	23	0.09	0.09	0.036	Terrence & Sherri-Lynne Barris	\$ 21.00	\$ 7.00	\$ 28.00
64	670-34000	R.P. 1057	21 & 22	0.18	0.18	0.073	Chelsea, Shawn & Krsiti Couture	\$ 42.00	\$ 10.00	\$ 52.00
65	670-34200	R.P. 1057	34 & 35	0.15	0.15	0.061	Terrance Baines and Leslie Leroux	\$ 35.00	\$ 6.00	\$ 41.00
66	670-34300	R.P. 1057	33	0.09	0.09	0.036	Gary & Judith Freisinger	\$ 21.00	\$ 6.00	\$ 27.00
67	670-34400	R.P. 1057	32	0.09	0.09	0.036	Gary & Judith Freisinger	\$ 21.00	\$ 6.00	\$ 27.00
68	670-34500	R.P. 1057	31	0.09	0.09	0.036	Gary Freisinger and Judith Seagull	\$ 21.00	\$ 6.00	\$ 27.00
69	670-34600	R.P. 1057	30	0.09	0.09	0.036	Shaun & Felicia Miller	\$ 21.00	\$ 6.00	\$ 27.00
70	670-34700	R.P. 1057	29	0.55	0.55	0.223	Elizabeth Carreira and Bart Atkins	\$ 129.00	\$ 22.00	\$ 151.00
71	670-34800	R.P. 1057	36 to 39	0.36	0.36	0.146	Marc Bechard	\$ 84.00	\$ 13.00	\$ 97.00
72	670-34900	1	96	0.66	0.66	0.267	Jihad Mitri	\$ 34.00	\$ 47.00	\$ 81.00
Total on Privately Owned - Non-Agricultural Lands.....								\$ 4,242.00	\$ 1,724.00	\$ 5,966.00

5. PRIVATELY OWNED - AGRICULTURAL LANDS (grantable):

Parcel ID Number	Tax Roll Number	Con. or Plan Number	Lot or Part of Lot	Acres Owned	Acres Affected	Hectares Affected	Owner's Name	Value of Benefit	Value of Outlet	TOTAL VALUE
1	660-22700	1	88 & 89	95.19	75.00	30.352	Thomas Lypps	\$ 1,966.00	\$ 6,615.00	\$ 8,581.00
2	670-00100	1	90 & 91	139.60	80.39	32.533	Gorski Land Holdings Inc.	\$ 5,715.00	\$ 6,905.00	\$ 12,620.00
3	670-02500	1	95	67.94	4.09	1.655	Thaddeus & Catherine Gorski	\$ 456.00	\$ 127.00	\$ 583.00
7	670-02700	1	94	112.45	44.50	18.009	Gyori Farms Inc.	\$ 2,746.00	\$ 3,700.00	\$ 6,446.00
10	670-02900	1	93	93.50	44.20	17.887	Gorski Land Holdings Inc.	\$ 3,222.00	\$ 2,164.00	\$ 5,386.00
11	670-03100	1	92	106.86	34.39	13.917	Gorski Land Holdings Inc.	\$ 2,195.00	\$ 2,215.00	\$ 4,410.00
12	670-03300	1	91	89.80	1.00	0.405	Gorski Land Holdings Inc.	\$ 156.00	\$ 67.00	\$ 223.00
26	670-30900	R.P. 1466	11 to 20, Pt. Blk 'A'	14.66	13.00	5.261	Trustees of Bouf's Mutual Benefit Association	\$ 1,145.00	\$ 387.00	\$ 1,532.00
73	670-35000	1	96	22.40	11.87	4.804	Richard & Barbara Levergood	\$ 1,308.00	\$ 164.00	\$ 1,472.00
Total on Privately Owned - Agricultural Lands (grantable).....								\$ 18,909.00	\$ 22,344.00	\$ 41,253.00
TOTAL ASSESSMENT					342.15	138.466		\$ 25,000.00	\$ 25,000.00	\$ 50,000.00

1 Hectare = 2.471 Acres

D22-063

August 16, 2023

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APPENDIX A-2

Future Maintenance Schedule of Assessment #2
Upstream Portion (Station 0+000 to Station 1+399.3)

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FUTURE MAINTENANCE SCHEDULE OF ASSESSMENT #2

Bondy No. 1 Drain - Upstream Portion (Station 0+000 to Station 1+399.3)

3. MUNICIPAL LANDS:

Parcel ID Number	Tax Roll Number	Con. or Plan Number	Lot or Part of Lot	Acres Owned	Acres Affected	Hectares Affected	Owner's Name	Value of Benefit	Value of Outlet	TOTAL VALUE
	County Road 50				1.15	0.465	County of Essex	\$ 112.00	\$ 140.00	\$ 252.00
Total on Municipal Lands.....								\$ 112.00	\$ 140.00	\$ 252.00

4. PRIVATELY OWNED - NON-AGRICULTURAL LANDS:

Parcel ID Number	Tax Roll Number	Con. or Plan Number	Lot or Part of Lot	Acres Owned	Acres Affected	Hectares Affected	Owner's Name	Value of Benefit	Value of Outlet	TOTAL VALUE
4	670-02550	1	95	1.14	0.73	0.295	Bruce Ferriss and Kimberly Dufour	\$ 109.00	\$ 57.00	\$ 166.00
5	670-02600	1	94	0.73	0.73	0.295	David & Lisa Durocher	\$ 150.00	\$ 47.00	\$ 197.00
6	670-02650	1	94	0.67	0.67	0.271	David & Lisa Durocher	\$ 138.00	\$ 34.00	\$ 172.00
8	670-02750	1	94	0.33	0.33	0.134	Andrew & Wendy Quick	\$ 34.00	\$ 32.00	\$ 66.00
Total on Privately Owned - Non-Agricultural Lands.....								\$ 431.00	\$ 170.00	\$ 601.00

5. PRIVATELY OWNED - AGRICULTURAL LANDS (grantable):

Parcel ID Number	Tax Roll Number	Con. or Plan Number	Lot or Part of Lot	Acres Owned	Acres Affected	Hectares Affected	Owner's Name	Value of Benefit	Value of Outlet	TOTAL VALUE
1	660-22700	1	88 & 89	95.19	75.00	30.352	Thomas Lypps	\$ 1,727.00	\$ 4,459.00	\$ 6,186.00
2	670-00100	1	90 & 91	139.60	80.39	32.533	Gorski Land Holdings Inc.	\$ 5,021.00	\$ 4,655.00	\$ 9,676.00
3	670-02500	1	95	67.94	4.09	1.655	Thaddeus & Catherine Gorski	\$ 400.00	\$ 86.00	\$ 486.00
7	670-02700	1	94	112.45	44.50	18.009	Gyori Farms Inc.	\$ 2,413.00	\$ 2,494.00	\$ 4,907.00
10	670-02900	1	93	93.50	44.20	17.887	Gorski Land Holdings Inc.	\$ 2,831.00	\$ 1,458.00	\$ 4,289.00
11	670-03100	1	92	106.86	34.39	13.917	Gorski Land Holdings Inc.	\$ 1,928.00	\$ 1,493.00	\$ 3,421.00
12	670-03300	1	91	89.80	1.00	0.405	Gorski Land Holdings Inc.	\$ 137.00	\$ 45.00	\$ 182.00
Total on Privately Owned - Agricultural Lands (grantable).....								\$ 14,457.00	\$ 14,690.00	\$ 29,147.00
TOTAL ASSESSMENT					342.15	138.466		\$ 15,000.00	\$ 15,000.00	\$ 30,000.00

1 Hectare = 2.471 Acres

D22-063

August 16, 2023

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APPENDIX A-3

Future Maintenance Schedule of Assessment #3
Downstream Portion (Station 1+399.3 to Station 1+992.7)

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FUTURE MAINTENANCE SCHEDULE OF ASSESSMENT #3

Bondy No. 1 Drain - Downstream Portion (Station 1+399.2 to Station 1+992.7)

3. MUNICIPAL LANDS:

Parcel ID <u>Number</u>	Tax Roll <u>Number</u>	Con. or Plan <u>Number</u>	Lot or Part <u>of Lot</u>	Acres <u>Owned</u>	Acres <u>Affected</u>	Hectares <u>Affected</u>	<u>Owner's Name</u>	Value of <u>Benefit</u>	Value of <u>Outlet</u>	TOTAL <u>VALUE</u>
	Erie Shores Drive				2.09	0.846	Town of Essex	\$ 1,063.00	\$ 63.00	\$ 1,126.00
	Levergood Court				0.33	0.134	Town of Essex	\$ 235.00	\$ 9.00	\$ 244.00
	Levergood Drive				2.39	0.967	Town of Essex	\$ 1,354.00	\$ 105.00	\$ 1,459.00
	Crystal Beach Road				1.11	0.449	Town of Essex	\$ 396.00	\$ 73.00	\$ 469.00
	County Road 50				2.30	0.931	County of Essex	\$ 1,142.00	\$ 199.00	\$ 1,341.00
Total on Municipal Lands.....								\$ 4,190.00	\$ 449.00	\$ 4,639.00

4. PRIVATELY OWNED - NON-AGRICULTURAL LANDS:

Parcel ID <u>Number</u>	Tax Roll <u>Number</u>	Con. or Plan <u>Number</u>	Lot or Part <u>of Lot</u>	Acres <u>Owned</u>	Acres <u>Affected</u>	Hectares <u>Affected</u>	<u>Owner's Name</u>	Value of <u>Benefit</u>	Value of <u>Outlet</u>	TOTAL <u>VALUE</u>
4	670-02550	1	95	1.14	0.73	0.295	Bruce Ferriss and Kimberly Dufour	\$ -	\$ 41.00	\$ 41.00
5	670-02600	1	94	0.73	0.73	0.295	David & Lisa Durocher	\$ -	\$ 33.00	\$ 33.00
6	670-02650	1	94	0.67	0.67	0.271	David & Lisa Durocher	\$ -	\$ 24.00	\$ 24.00
8	670-02750	1	94	0.33	0.33	0.134	Andrew & Wendy Quick	\$ -	\$ 22.00	\$ 22.00
9	670-02800	1	94	1.53	1.53	0.619	Ronald & Patricia Deschaine	\$ -	\$ 64.00	\$ 64.00
13	670-28300	R.P. 1392	69	0.09	0.09	0.036	Kenneth & Vicki Kyle	\$ 10.00	\$ 5.00	\$ 15.00
14	670-28400	R.P. 1392	Pt. 64 & 65 to 68	0.42	0.42	0.170	Donna Dunsmore	\$ 45.00	\$ 16.00	\$ 61.00
15	670-28500	R.P. 1392	63 & Pt. 64	0.10	0.10	0.040	Herbert Alfaro	\$ 11.00	\$ 5.00	\$ 16.00
16	670-28600	R.P. 1392	62	0.09	0.09	0.036	Margaret Malone	\$ 10.00	\$ 5.00	\$ 15.00
17	670-28700	R.P. 1392	60 to 61	0.17	0.17	0.069	Robert Arquette and Willy Renard	\$ 18.00	\$ 7.00	\$ 25.00
18	670-28705	R.P. 1392	59 to 58	0.17	0.17	0.069	Mickal Menogue	\$ 18.00	\$ 7.00	\$ 25.00
19	670-28800	R.P. 1392	53, 54, Pt. 55, 56-59	0.40	0.40	0.162	Jill Jimmerfield and Ronald Kennedy	\$ 43.00	\$ 17.00	\$ 60.00
20	670-28900	R.P. 1392	Pt. 49 to 52	0.39	0.39	0.158	John Weir	\$ 42.00	\$ 16.00	\$ 58.00
21	670-29000	R.P. 1392	Pt. 49 & 46 to 48	0.30	0.30	0.121	John & Gloria Stewart	\$ 32.00	\$ 12.00	\$ 44.00

4. PRIVATELY OWNED - NON-AGRICULTURAL LANDS: Continued

<u>Parcel ID</u> <u>Number</u>	<u>Tax Roll</u> <u>Number</u>	<u>Con. or Plan</u> <u>Number</u>	<u>Lot or Part</u> <u>of Lot</u>	<u>Acres</u> <u>Owned</u>	<u>Acres</u> <u>Affected</u>	<u>Hectares</u> <u>Affected</u>	<u>Owner's Name</u>	<u>Value of</u> <u>Benefit</u>	<u>Value of</u> <u>Outlet</u>	<u>TOTAL</u> <u>VALUE</u>
22	670-29100	R.P. 1392	Pt. 43, 44 & 45	0.24	0.24	0.097	Tamara Deneau	\$ 26.00	\$ 10.00	\$ 36.00
23	670-29300	R.P. 1392	Pt. 43 & 40 to 42	0.28	0.28	0.113	Sharon Boehk	\$ 30.00	\$ 12.00	\$ 42.00
24	670-29400	R.P. 1392	37 to 39	0.26	0.26	0.105	Stephen & Laura Hasulo	\$ 28.00	\$ 13.00	\$ 41.00
25	670-29500	R.P. 1392	34 to 36	0.26	0.26	0.105	Kenneth Chapman	\$ 28.00	\$ 13.00	\$ 41.00
27	670-31000	R.P. 1466	Pt. Blk 'A'	0.49	0.49	0.198	Daniel & Jenny Jenner	\$ 136.00	\$ 19.00	\$ 155.00
28	670-31001	R.P. 1466	Pt. Blk 'A'	2.06	2.06	0.834	Kyle & Sara Morency	\$ 774.00	\$ 51.00	\$ 825.00
29	670-31003	1	95	3.00	3.00	1.214	Terry Bale	\$ 1,581.00	\$ 88.00	\$ 1,669.00
30	670-31007	1	95	0.98	0.98	0.397	Dwayne & Lucy Barris	\$ 451.00	\$ 26.00	\$ 477.00
31	670-31009	1	95	0.49	0.49	0.198	Brian Sadai, Mary St. Pierre and	\$ 131.00	\$ 19.00	\$ 150.00
32	670-31010	1	95	0.64	0.64	0.259	BCE (Essex) Inc.	\$ 249.00	\$ 22.00	\$ 271.00
33	670-31012	1	95	2.59	2.59	1.048	Daniel & Diane Hannigan	\$ 1,373.00	\$ 76.00	\$ 1,449.00
34	670-31050	R.P. 1466	Pt. Blk 'A'	1.42	1.42	0.575	Michael McNamara	\$ 369.00	\$ 35.00	\$ 404.00
35	670-31075	1	95	0.90	0.90	0.364	Robert, Suzanne, Julianne and John	\$ 240.00	\$ 28.00	\$ 268.00
36	670-31100	R.P. 1466	Pt. 9 & 10	0.22	0.11	0.045	Sheryl & Robert Sloan	\$ 30.00	\$ 3.00	\$ 33.00
37	670-31200	R.P. 1466	Pt. 9 & 8	0.25	0.13	0.051	Jillian Yost & Norman Barton	\$ 33.00	\$ 3.00	\$ 36.00
38	670-31300	R.P. 1466	Pt. 6 & 7	0.23	0.11	0.046	Michael, Jane, David & Katherine	\$ 30.00	\$ 3.00	\$ 33.00
39	670-31400	R.P. 1466	Pt. 6 & 5	0.22	0.11	0.044	Michael McNamara	\$ 29.00	\$ 3.00	\$ 32.00
40	670-31500	R.P. 1466	4	0.14	0.07	0.028	Robert & Joan Nagle and Victoria	\$ 19.00	\$ 1.00	\$ 20.00
41	670-31600	R.P. 1466	3	0.14	0.07	0.028	Robert & Joan Nagle and Victoria	\$ 19.00	\$ 1.00	\$ 20.00
42	670-31700	R.P. 1466	2	0.18	0.09	0.037	Ronald & Murray Inverarity	\$ 24.00	\$ 2.00	\$ 26.00
43	670-31800	R.P. 1466	1	0.18	0.09	0.037	Mcnamara Michael	\$ 25.00	\$ 2.00	\$ 27.00
44	670-31900	R.P. 1057	19 & 20	0.17	0.08	0.034	Tyson Joseph and Deborah Sissons-	\$ 45.00	\$ 2.00	\$ 47.00
45	670-32000	R.P. 1057	18	0.11	0.06	0.024	Deslippe Catherine	\$ 32.00	\$ 2.00	\$ 34.00
46	670-32100	R.P. 1057	17	0.12	0.06	0.024	Velo & Victoria Todorovski	\$ 32.00	\$ 2.00	\$ 34.00
47	670-32200	R.P. 1057	16	0.12	0.06	0.025	George Bolton	\$ 33.00	\$ 2.00	\$ 35.00
48	670-32300	R.P. 1057	15	0.12	0.06	0.025	George & Bonnie Ioanidis	\$ 33.00	\$ 2.00	\$ 35.00
49	670-32400	R.P. 1057	13 & 14	0.22	0.11	0.045	Andre & Kristine Bezaire	\$ 59.00	\$ 4.00	\$ 63.00
50	670-32500	R.P. 1057	12	0.11	0.05	0.022	Charlene Atkins	\$ 29.00	\$ 1.00	\$ 30.00
51	670-32600	R.P. 1057	11	0.11	0.05	0.022	Wayne Campbell	\$ 29.00	\$ 1.00	\$ 30.00
52	670-32700	R.P. 1057	8, 9 & 10	0.28	0.17	0.069	Jospeh & Lisa Brochu	\$ 91.00	\$ 5.00	\$ 96.00
53	670-32750	R.P. 1057	6 & 7	0.11	0.09	0.036	Orrie Levergood	\$ 48.00	\$ -	\$ 48.00
54	670-32900	R.P. 1057	4 & 5	0.15	0.10	0.040	Leslie Leroux and Terrence Baines	\$ 53.00	\$ 2.00	\$ 55.00
55	670-33000	R.P. 1057	3	0.10	0.05	0.021	Gregory Bolton	\$ 27.00	\$ 1.00	\$ 28.00
56	670-33100	R.P. 1057	2	0.10	0.05	0.021	James Johnstone and Gloria Lemieux	\$ 27.00	\$ 1.00	\$ 28.00
57	670-33300	1	96	0.44	0.44	0.178	Sawyer Grant and Ryan Tilson	\$ 235.00	\$ 11.00	\$ 246.00
58	670-33400	1	96	0.71	0.71	0.287	Elizabeth Carreira	\$ 379.00	\$ 10.00	\$ 389.00

4. PRIVATELY OWNED - NON-AGRICULTURAL LANDS: Continued

Parcel ID Number	Tax Roll Number	Con. or Plan Number	Lot or Part of Lot	Acres Owned	Acres Affected	Hectares Affected	Owner's Name	Value of Benefit	Value of Outlet	TOTAL VALUE
59	670-33500	R.P. 1057	28	0.11	0.11	0.045	Ralph Carreira	\$ 59.00	\$ 4.00	\$ 63.00
60	670-33600	R.P. 1057	27	0.09	0.09	0.036	Robin Martin	\$ 48.00	\$ 3.00	\$ 51.00
61	670-33700	R.P. 1057	24 & 25	0.09	0.09	0.036	Gary Freisinger and Judith Seagull	\$ 48.00	\$ 3.00	\$ 51.00
62	670-33800	R.P. 1057	24 & 25	0.18	0.18	0.073	Laurie Freeman	\$ 96.00	\$ 5.00	\$ 101.00
63	670-33900	R.P. 1057	23	0.09	0.09	0.036	Terrence & Sherri-Lynne Barris	\$ 48.00	\$ 3.00	\$ 51.00
64	670-34000	R.P. 1057	21 & 22	0.18	0.18	0.073	Chelsea, Shawn & Krsiti Couture	\$ 96.00	\$ 5.00	\$ 101.00
65	670-34200	R.P. 1057	34 & 35	0.15	0.15	0.061	Terrance Baines and Leslie Leroux	\$ 80.00	\$ 3.00	\$ 83.00
66	670-34300	R.P. 1057	33	0.09	0.09	0.036	Gary & Judith Freisinger	\$ 48.00	\$ 3.00	\$ 51.00
67	670-34400	R.P. 1057	32	0.09	0.09	0.036	Gary & Judith Freisinger	\$ 48.00	\$ 3.00	\$ 51.00
68	670-34500	R.P. 1057	31	0.09	0.09	0.036	Gary Freisinger and Judith Seagull	\$ 48.00	\$ 3.00	\$ 51.00
69	670-34600	R.P. 1057	30	0.09	0.09	0.036	Shaun & Felicia Miller	\$ 48.00	\$ 3.00	\$ 51.00
70	670-34700	R.P. 1057	29	0.55	0.55	0.223	Elizabeth Carreira and Bart Atkins	\$ 293.00	\$ 10.00	\$ 303.00
71	670-34800	R.P. 1057	36 to 39	0.36	0.36	0.146	Marc Bechard	\$ 192.00	\$ 6.00	\$ 198.00
72	670-34900	1	96	0.66	0.66	0.267	Jihad Mitri	\$ 76.00	\$ 23.00	\$ 99.00
Total on Privately Owned - Non-Agricultural Lands.....								\$ 8,234.00	\$ 827.00	\$ 9,061.00

5. PRIVATELY OWNED - AGRICULTURAL LANDS (grantable):

Parcel ID Number	Tax Roll Number	Con. or Plan Number	Lot or Part of Lot	Acres Owned	Acres Affected	Hectares Affected	Owner's Name	Value of Benefit	Value of Outlet	TOTAL VALUE
1	660-22700	1	88 & 89	95.19	75.00	30.352	Thomas Lypps	\$ -	\$ 3,175.00	\$ 3,175.00
2	670-00100	1	90 & 91	139.60	80.39	32.533	Gorski Land Holdings Inc.	\$ -	\$ 3,314.00	\$ 3,314.00
3	670-02500	1	95	67.94	4.09	1.655	Thaddeus & Catherine Gorski	\$ -	\$ 61.00	\$ 61.00
7	670-02700	1	94	112.45	44.50	18.009	Gyori Farms Inc.	\$ -	\$ 1,776.00	\$ 1,776.00
10	670-02900	1	93	93.50	44.20	17.887	Gorski Land Holdings Inc.	\$ -	\$ 1,038.00	\$ 1,038.00
11	670-03100	1	92	106.86	34.39	13.917	Gorski Land Holdings Inc.	\$ -	\$ 1,063.00	\$ 1,063.00
12	670-03300	1	91	89.80	1.00	0.405	Gorski Land Holdings Inc.	\$ -	\$ 32.00	\$ 32.00
26	670-30900	R.P. 1466	11 to 20, Pt. Blk 'A'	14.66	13.00	5.261	Trustees of Bouf's Mutual Benefit Association	\$ 2,602.00	\$ 186.00	\$ 2,788.00
73	670-35000	1	96	22.40	11.87	4.804	Richard & Barbara Levergood	\$ 2,974.00	\$ 79.00	\$ 3,053.00
Total on Privately Owned - Agricultural Lands (grantable).....								\$ 5,576.00	\$ 10,724.00	\$ 16,300.00
TOTAL ASSESSMENT					342.15	138.466		\$ 18,000.00	\$ 12,000.00	\$ 30,000.00

1 Hectare = 2.471 Acres

D22-063

August 16, 2023

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APPENDIX "B"

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WATERSHED PLAN

OF THE

BONDY DRAIN No. 1

IN THE

TOWN OF ESSEX

(Geographic Township of Colchester South)

IN THE

COUNTY OF ESSEX • ONTARIO

TOWN OF ESSEX

MAYOR: SHERRY BONDY
CLERK: JOSEPH MALANDRUCCOLO
DRAINAGE SUPERINTENDENT: LINDSAY DEAN

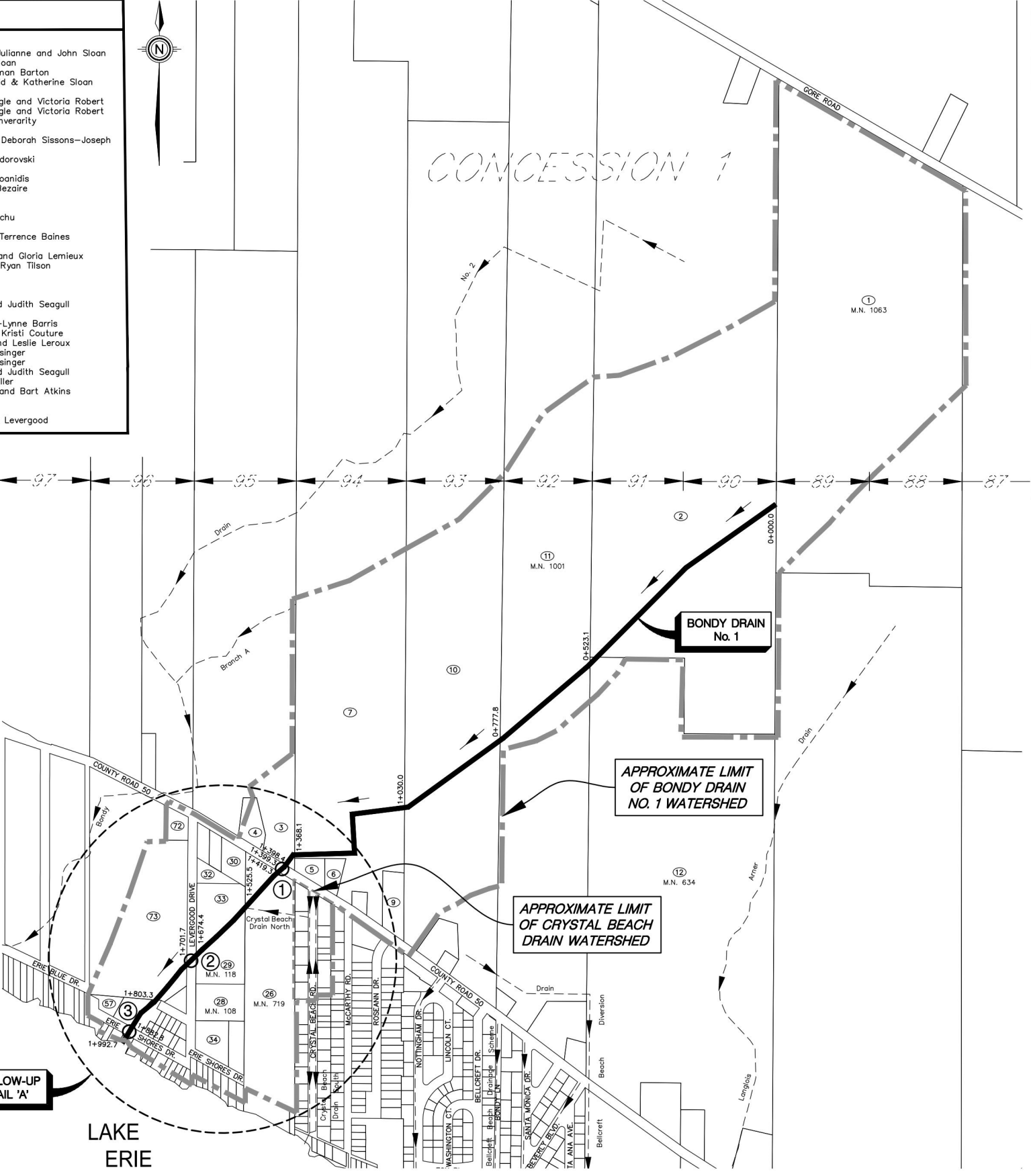
PARCEL I.D.	ROLL #	OWNER
1	660-22700	Thomas Lypps
2	670-00100	Gorski Land Holdings Inc.
3	670-02500	Thaddeus & Catherine Gorski
4	670-02550	Bruce Ferriss and Kimberly Dufour
5	670-02600	David & Lisa Durocher
6	670-02650	David & Lisa Durocher
7	670-02700	Gyori Farms Inc.
8	670-02750	Andrew & Wendy Quick
9	670-02800	Ronald & Patricia Deschaine
10	670-02900	Gorski Land Holdings Inc.
11	670-03100	Gorski Land Holdings Inc.
12	670-03300	Gorski Land Holdings Inc.
13	670-28300	Kenneth & Vicki Kyle
14	670-28400	Donna Dunsmore
15	670-28500	Herbert Alfaro
16	670-28600	Margaret Malone
17	670-28700	Robert Arquette and Willy Renard
18	670-28750	Mickal Menogue
19	670-28800	Jill Jimmerfield and Ronald Kennedy
20	670-28900	John Weir
21	670-29000	John & Gloria Stewart
22	670-29100	Tamara Deneau
23	670-29300	Sharon Boehk
24	670-29400	Stephen & Laura Hasulo
25	670-29500	Kenneth Chapman
26	670-30900	Trustees of Bouf's Mutual Bene
27	670-31000	Daniel & Jenny Jenner
28	670-31001	Kyle & Sara Morency
29	670-31003	Terry Bale
30	670-31007	Dwayne & Lucy Barris
31	670-31009	Brian Sadal, Mary St. Pierre and Andrea Toth
32	670-31010	BCE (Essex) Inc.
33	670-31012	Daniel & Diane Hannigan

PARCEL I.D.	ROLL #	OWNER
34	670-31050	Michael McNamara
35	670-31075	Robert, Suzanne, Julianne and John Sloan
36	670-31100	Sheryl & Robert Sloan
37	670-31200	Jillian Yost & Norman Barton
38	670-31300	Michael, Jane, David & Katherine Sloan
39	670-31400	Michael McNamara
40	670-31500	Robert & Joan Nagle and Victoria Robert
41	670-31600	Robert & Joan Nagle and Victoria Robert
42	670-31700	Ronald & Murray Inverarity
43	670-31800	Monamara Michael
44	670-31900	Tyson Joseph and Deborah Sissons-Joseph
45	670-32000	Deslippe Catherine
46	670-32100	Velo & Victoria Todorovski
47	670-32200	George Bolton
48	670-32300	George & Bonnie Ioanidis
49	670-32400	Andre & Kristine Bezaire
50	670-32500	Charlene Atkins
51	670-32600	Wayne Campbell
52	670-32700	Jospeh & Lisa Brochu
53	670-32750	Orrie Levergood
54	670-32900	Leslie Leroux and Terrence Baines
55	670-33000	Gregory Bolton
56	670-33100	James Johnstone and Gloria Lemieux
57	670-33300	Sawyer Grant and Ryan Tilson
58	670-33400	Elizabeth Carreira
59	670-33500	Ralph Carreira
60	670-33600	Robin Martin
61	670-33700	Gary Freisinger and Judith Seagull
62	670-33800	Laurie Freeman
63	670-33900	Terrence & Sherri-Lynne Barris
64	670-34000	Chelsea, Shawn & Kristi Couture
65	670-34200	Terrence Baines and Leslie Leroux
66	670-34300	Gary & Judith Freisinger
67	670-34400	Gary & Judith Freisinger
68	670-34500	Gary Freisinger and Judith Seagull
69	670-34600	Shaun & Felicia Miller
70	670-34700	Elizabeth Carreira and Bart Atkins
71	670-34800	Marc Becharad
72	670-34900	Jihad Mitri
73	670-35000	Richard & Barbara Levergood



BLOW UP DETAIL 'A'

Scale = 1:2,000



SEE BLOW-UP
DETAIL 'A'

- DENOTES OVERALL WATERSHED LIMITS
- - - DENOTES SUB-WATERSHED LIMITS
- XX - DENOTES PARCEL IDENTIFICATION NUMBER
- XX - DENOTES BRIDGE IDENTIFICATION NUMBER AND LOCATION

WATERSHED PLAN

Scale = 1:5,000

THESE DRAWINGS HAVE BEEN REDUCED IN SIZE AND
THE SCALE THEREFORE VARIES.
FULL SCALE DRAWINGS CAN BE VIEWED AT THE
MUNICIPAL OFFICES IF REQUIRED.



DATE: AUG 16, 2023

DESIGNED BY:
M.J.S./A.B.P.

DRAWN BY:
M.J.S.

CHECKED BY:
A.B.P.

PROJECT No.:
D22-063

SHEET No.:
1 OF 1



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Consulting Engineers

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