



BURNSIDE

Paradise Bay and Bayshore Road Drainage



Municipality of Meaford

Information Meeting No. 1

May 21, 2025

Agenda

1. Municipal Drain Background
2. Investigations since On-site Meeting
3. Proposed Improvement Options
4. Cost Estimate
5. Next Steps

What is a Municipal Drain?

- Drainage Act
- Community Project
- Legal Existence
- Municipal Infrastructure
- **User Pay System**



Example of the outlet of a closed Municipal Drainage System



Example of an open Municipal Drainage System

Watershed Boundary

What is a Watershed Boundary?

- **A watershed boundary is a divide that defines an area draining to a particular watercourse.**
- Rain falling on our side of a watershed boundary will flow to our drain and on the other side will flow to another watercourse.
- This line should represent the high ground on your property.



Investigations Since On-Site Meeting

Background

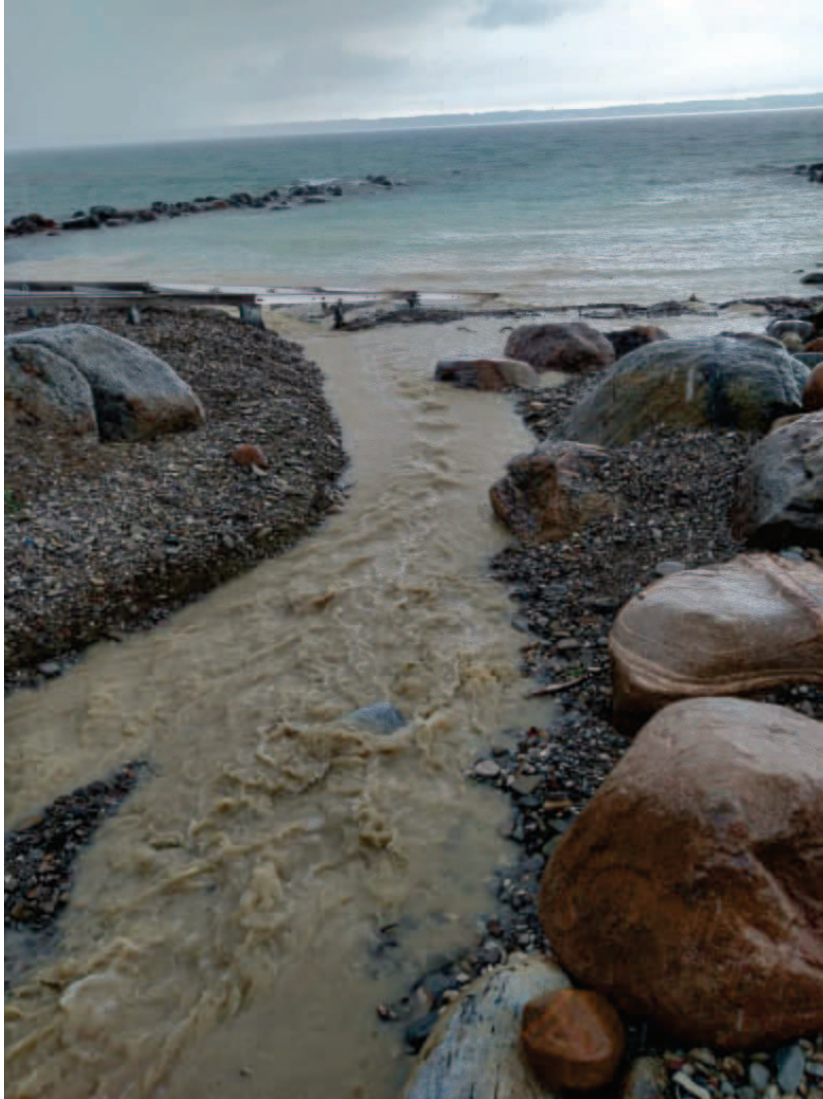
What started this project?

- Petition for Drainage Works due to flooding and erosion on the Campbell and Deskur properties
- Subsequent Petition for Drainage as a result of flooding over Bayshore Road



On-Site Meeting held September 2024

Existing Conditions



Erosion on the Deskur / Campbell Property Line
August 2022



Erosion Protection on the Deskur / Campbell Property Line
September 2024

Existing Conditions



Erosion on the Deskur / Campbell Property Line
June 2022



Erosion Protection on the Deskur / Campbell Property Line
September 2024

Existing Conditions



Flow Route on the Deskur / Campbell Property Line
August 2022



Flow Route on the Deskur / Campbell Property Line
September 2024

Existing Conditions



Culvert Blow Out Under Paradise Bay Road
August 2022



Culvert Under Paradise Bay Road
September 2024

Existing Conditions



Artley Road Ditch Cleanout
April 2022



Artley Road Ditch
September 2024

Existing Conditions



Looking West - Artley Road from Bayshore Road
September 2024



Looking East - Laneway to Smith, Holmes and Weis properties
From Bayshore Road
September 2024

Existing Conditions

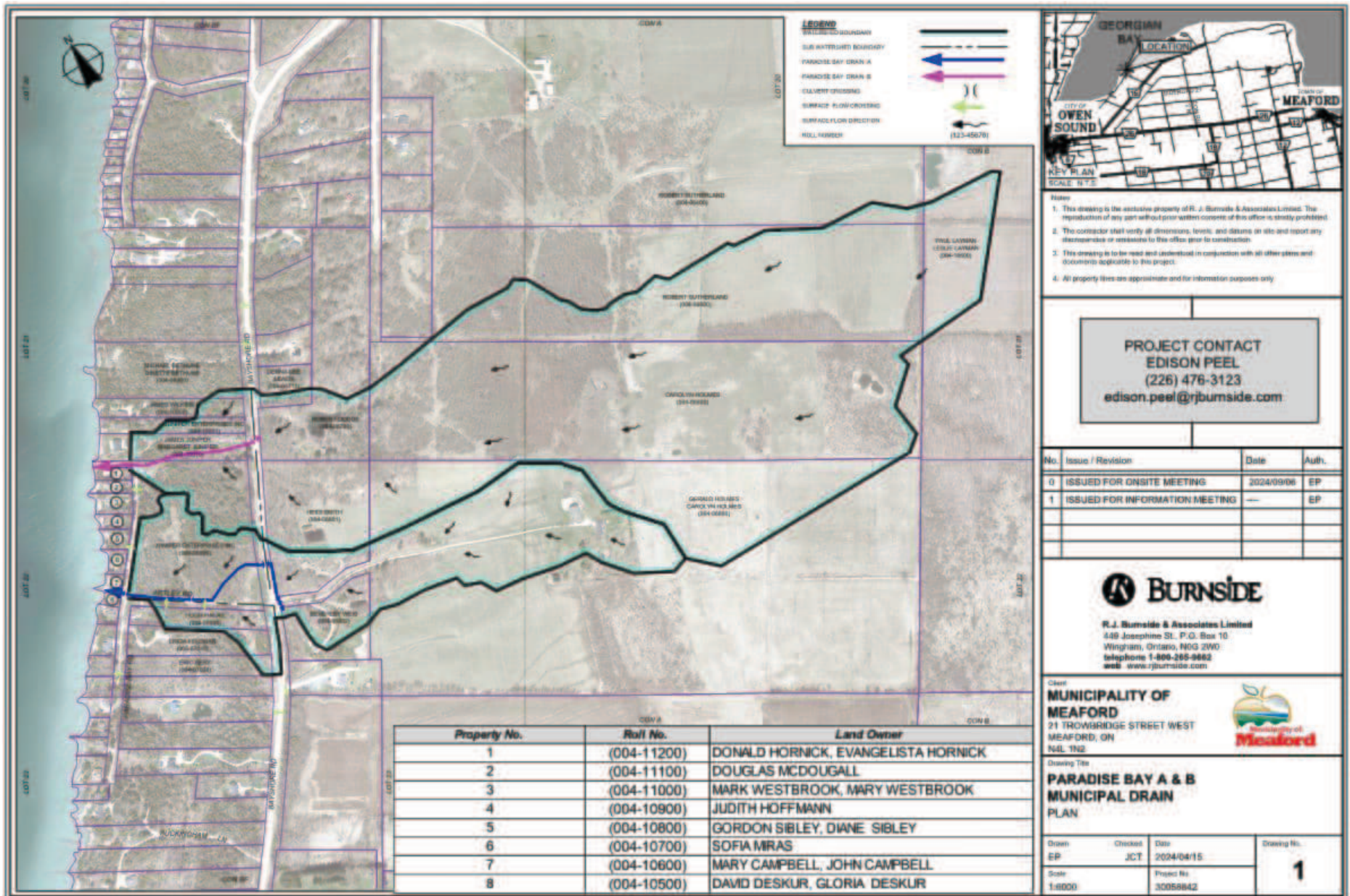


Looking North - Juniper Laneway from Bayshore Road
September 2024



Looking South - Escarpment from Bayshore Road
September 2024

Watershed



Proposed Improvements

Investigated Options

South Watershed Improvements

A1. Paradise Bay to Georgian Bay ONLY

- Address Flooding and Erosion at the Beach Front
- Least Costly

A2. Bayshore Road to Georgian Bay

- Address Flooding and Erosion at the Beach Front and Bayshore Road
- More Costly

North Watershed Improvements

B. Bayshore Road to Georgian Bay

- Reduce Flooding on Bayshore Road
- Legal Right of Way to Maintain
- Additional Costs

Option A1 – Paradise Bay Road Improvement



Stone Placement



Ditch Inlet Catch Basin



Campbell and Deskur Property:

1. Tree Clearing (Green)
2. Ditch Inlet Catch Basin c/w Storm Water Pipe (Pink)
3. Channel Improvement (Blue)
4. Erosion Protection (White)
5. Larger Dia. Culvert (Purple)
6. Restore Working Space (Orange)

Option A1 - Considerations in this area



Considerations	Concern
Installation of stone without the catch basin and pipe system	Steep side slopes between the two residents.
Leave in existing culvert	More frequent road overtopping

Option A2 – Artley Road Improvement



Juniper Property:

1. Tree Clearing (Green)
2. Channel Improvement and Relocation (Blue)
3. Larger Dia. Culvert (Purple)



Clearing Working Space and Removing Obstructions



Channel Deepening and Spoil Leveling

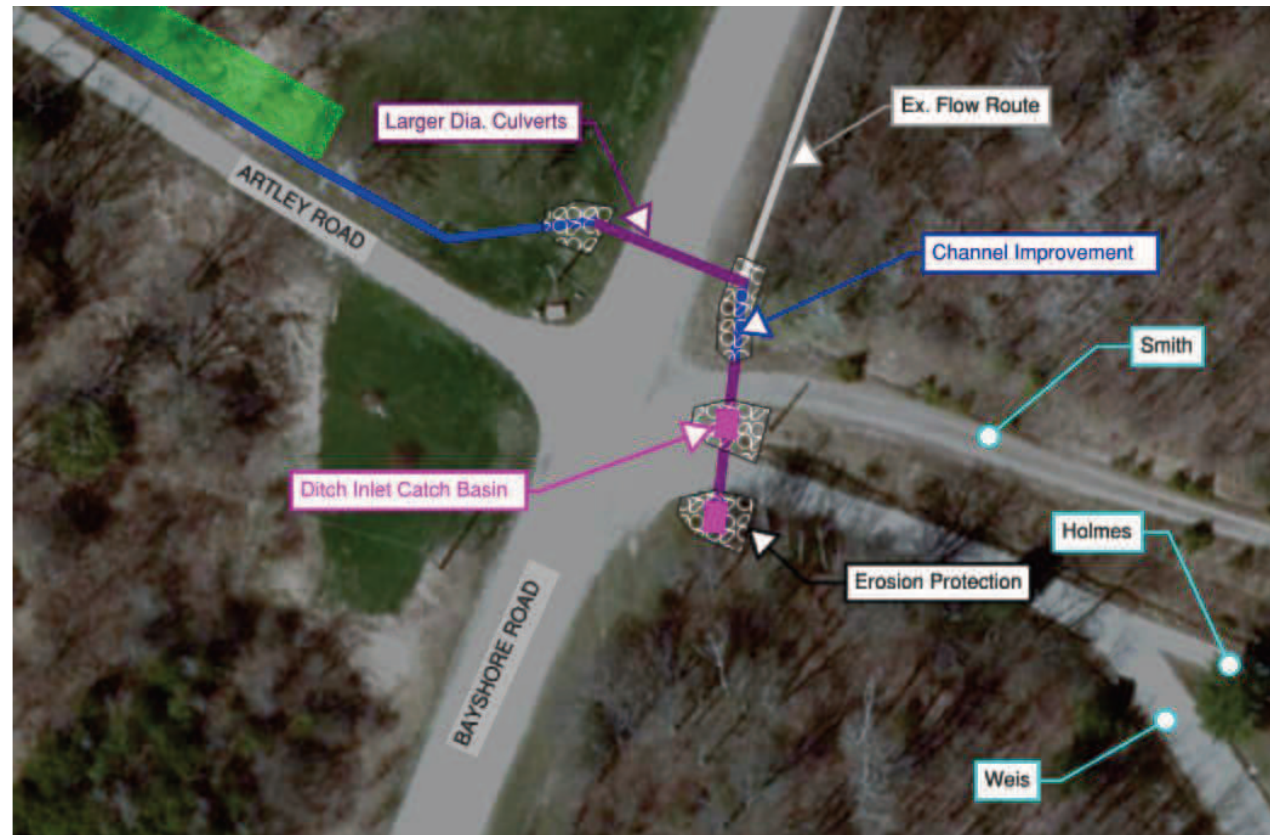
Option A2 – Bayshore Road Improvement



Culvert Installation



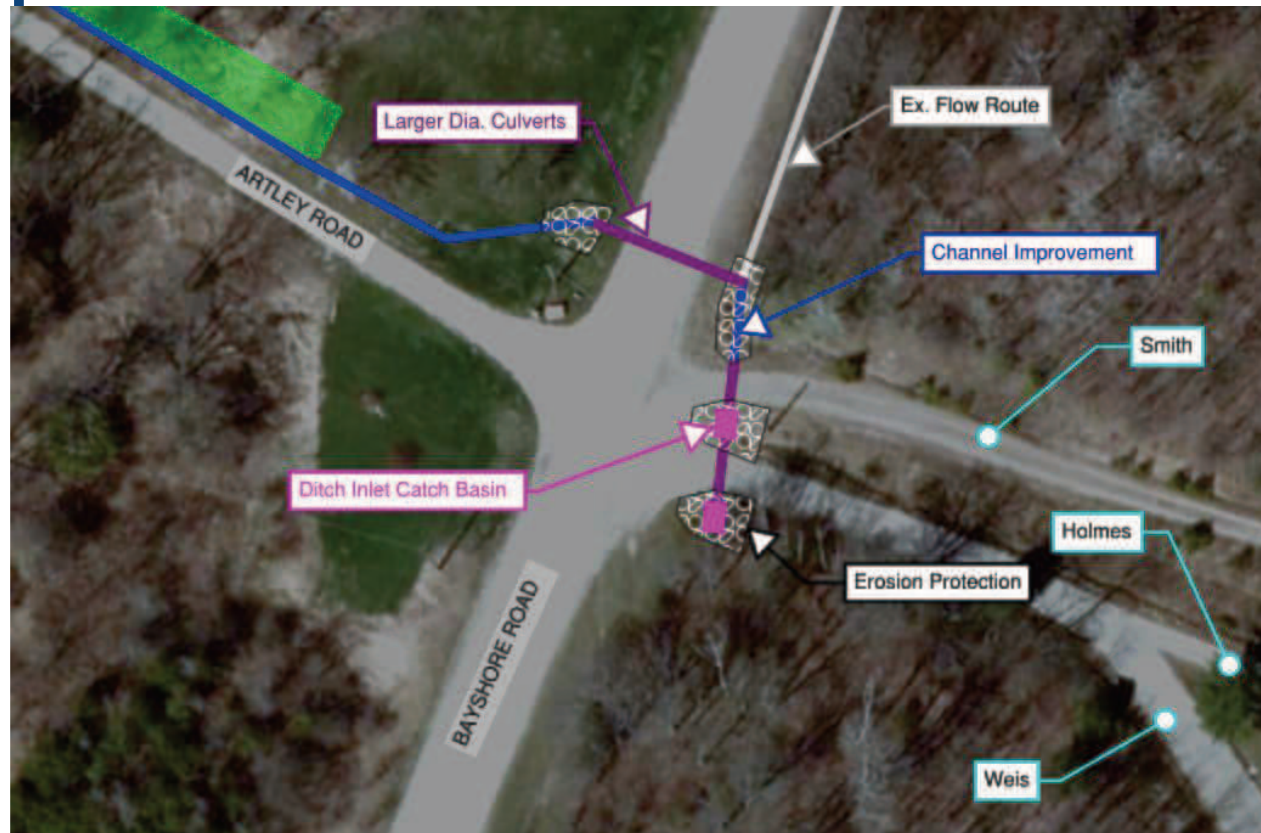
Ditch Inlet Catch Basin



Bayshore Road Property:

1. Channel Improvement (Blue)
2. Erosion Protection (White)
3. Larger Dia. Culvert (Purple)
4. Ditch Inlet Catch Basin (Pink)

Option A2 - Considerations in this area



Considerations	Concern
Divert the water out from in between the two laneways	No obvious alternate flow path
Install a culvert large enough to allow debris to pass through	Challenge getting sufficient cover and depth without significant regrading

Option B – Juniper Improvement



Juniper Property:

1. Tree Clearing (Green)
2. Minor Channel Improvement (Blue)
3. Larger Dia. Culvert (Purple)



Clearing Working Space and Removing Obstructions



Channel Cleanout and Spoil Leveling

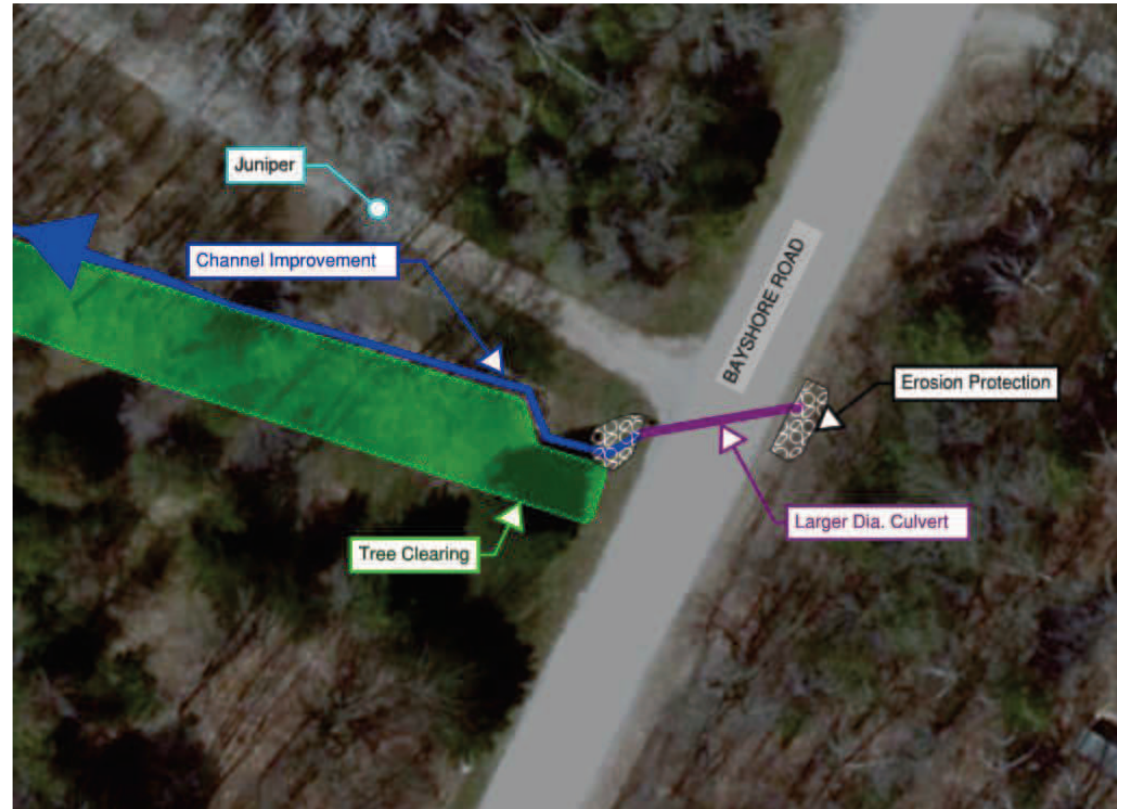
Option B – Bayshore Road Improvement



Culvert Installation



Clearing Working Space and Removing Obstructions



Bayshore Road Property:

1. Channel Improvement (Blue)
2. Tree Clearing (Green)
3. Erosion Protection (White)
4. Larger Dia. Culvert (Purple)

Project Costs - Construction

Construction Costs:

- Typically represent the greatest costs of the project.
- Some examples include:
 - Channel excavation
 - Outlet stilling basin
 - Catchbasins
 - Road and private crossings
 - Tile installation
 - Berms/Ponds
 - Clearing/Grubbing/Brushing
 - Etc.



Example of a Culvert Installation with Erosion Protection

Allowances

1) For the Use of Land (Section 29 ROW)

Examples:

- Land periodically used along/over the drain (working space)
- Land used to access the work site.



2) For Damages (Section 30):

Examples:

- To lands and crops
- To trees, lawns, fences and other features

Project Costs - Engineering

Engineering

Preparation of Engineer's Report

- Survey and Field Investigation
- Drain Design and Drawings
- Creating Assessment Schedules
- Coordination with project Stakeholders
- Obtain Agency Approvals
- Report Preparation and Processing
- Presentations to Stakeholders and Council

Construction Services

- Preparation of Tender and Construction Contract
- Periodic Construction Review
- Contract Administration



Field Survey

Project Costs – Sundry and Other

Other Costs

- Conservation Authority Review Fees
- Soils Investigations

Sundry Costs

- Overall Project Contingency
- Net HST
- Interest



Cost Estimate

Project Cost Comparison

Option	Project Cost
A - South Drain	
Option A1 – Paradise Bay to Georgian Bay	~ 150,000 - \$200,000
Option A2 – Bayshore to Georgian Bay	~ \$ 350,000 – \$400,000
B - North Drain	
Option B – Bayshore to Georgian Bay	~ \$ 200,000 - \$250,000

The Next Question... How are these Costs Assessed?

Benefit Assessment

Properties are typically assessed for benefit if the drain construction:

- Provides or Improves a direct **Connection** (for tile or surface flows);
- **Protects** a property from potentially harmful flows;
- **Increases** property value or crop production (i.e. reduced flooding).



Direct connection of a Private Tile



Channel Improvements

Outlet Liability Assessment

- Pay for the Length of drain that you use
- Outlet Assessment is determined **based upon the volume and rate of flow** off a particular property

Affected Hectares
Actual Area in the Watershed

Agricultural
10 Ha

Woodlot
10 Ha

Paved
10 Ha

Factor = 1.0

Factor ~ 0.5

Factor ~ 4.0

Equivalent Hectares
Used in Outlet Assessment Calculations

10 Ha

5 Ha

40 Ha

Special Assessments

Roads and Utilities

Section 26 of the Act states:

*“...a public utility or road authority...**shall pay all the increase of cost of such drainage works caused by the existence of the works of the public utility or road authority.**”*

Example of a Road Crossing

Road Authority Pays as a Special Assessment:

20 m Road Crossing (Culvert, Gravel, Erosion Protection)	\$20,000
LESS 20 m Equivalent Drain (Channel Excavation)	(\$1,000)
	\$19,000

Upstream Landowners Pay:

\$1,000



Provincial Grants

- 1/3 of the property assessment paid by OMAFRA as a grant
- Key eligibility criteria: Farm Property Class Tax



Questions?

If you have any questions or concerns, you can always email or call us
Please grab a business card before you go!