MUNICIPALITY OF MORRIS-TURNBERRY

COUNCIL AGENDA

Tuesday, November 19th, 2024, 7:30 pm

The Council of the Municipality of Morris-Turnberry will meet in Council Chambers in regular session on the 19th day of November 2024, at 7:30 pm.

1.0 CALL TO ORDER

Disclosure of recording equipment.

2.0 ADOPTION OF AGENDA

Moved by ~
Seconded by ~

THAT the Council of the Municipality of Morris-Turnberry hereby adopts the agenda for the meeting of November 19th, 2024, as circulated.

~

3.0 DISCLOSURE OF PECUNIARY INTEREST / POTENTIAL CONFLICT OF INTEREST

4.0 MINUTES

Moved by ~
Seconded by ~

THAT the Council of the Municipality of Morris-Turnberry hereby adopts the November 5th, 2024, Council Meeting Minutes as written.

~

5.0 ACCOUNTS

Moved by ~
Seconded by ~

THAT the Council of the Municipality of Morris-Turnberry hereby approves for payment the November 19th accounts in the amount of $ 208,936.08.

~

6.0 PUBLIC MEETINGS AND DEPUTATIONS

6.1 MEETING TO CONSIDER ENGINEER'S REPORT – MASSON MUNICIPAL DRAIN

6.1.1 Engineer's Report

A Notice of Request for Drain Construction was received August 24, 2023, for improved outlet to the Masson Municipal Drain at South Part Lot 26, Concession 3, former Morris Ward.

Notice of the meeting to consider the engineer's report was issued to landowners on November 5th, 2024.

Project Coordinator Michel Terzian will attend to present the Engineer's report to Council and those in attendance.

6.1.2 Questions and Comments

- Council
- Landowners in attendance

6.1.3 Consideration of Provisional By-Law

Moved by ~
Seconded by ~

THAT leave be given to introduce By-Law # 54-2024, being a by-law to provisionally adopt the engineer's report for the Masson Municipal Drain 2024, and that it now be read a first and second time this 19th day of November 2024.

~

6.1.4 Date of Court of Revision and instruction to Tender.

Moved by ~
Seconded by ~

THAT the Court of Revision for the Masson Municipal Drain 2024 be set for December 17th, 2024 at 7:30 pm and the project be tendered with results to be presented on February 4th, 2025, pending no appeals.

~

6.1.5 Appointment of Members to the Court of Revision

Moved by ~
Seconded by ~

THAT the members of the Court of Revision for the Masson Municipal Drain 2024 shall be:
1 –
2 –
3 –

~

7.0 STAFF REPORTS

7.1 BY- LAW ENFORCEMENT

7.1.1 By-Law Enforcement Activities – September and October 2024

A report has been prepared by CBO/By-Law Enforcement Officer Kirk Livingston regarding by-law enforcement activities for September and October.

7.2 BUILDING

7.2.1 Building Department Activities – September and October 2024

A report has been prepared by CBO/By-Law Enforcement Officer Kirk Livingston regarding building department activities for September and October.

8.0 BUSINESS

8.1 COUNCIL MEETING DATES 2025

A report has been prepared by CAO/Clerk Trevor Hallam in this regard.

Moved by ~
Seconded by ~

THAT the Council of the Municipality of Morris-Turnberry hereby approves the proposed meeting date schedule for 2025 as presented.

~

8.2 CONFERENCES 2025

A report has been prepared by CAO/Clerk Trevor Hallam in this regard.

Moved by ~
Seconded by ~

THAT the Council of the Municipality of Morris-Turnberry hereby approves the attendance of the following members of Council at the Conferences and events indicated:
(Councillor) – (Conference Name)

~

8.3 FEES AND CHARGES 2025

A report has been prepared by CAO/Clerk Trevor Hallam in this regard.

Moved by ~
Seconded by ~

THAT the Council of the Municipality of Morris-Turnberry hereby directs staff to return a by-law to the next meeting of Council to adopt the fee schedule as presented.

~

8.4 BELGRAVE SIDEWALKS

Councillor Zinn has requested a discussion regarding sidewalks in Belgrave.

9.0 COUNCIL REPORTS

Kevin Freiburger

Jamie McCallum

Sharen Zinn

Jodi Snell

Jamie Heffer

10.0 CORRESPONDENCE, MINUTES, ITEMS FOR INFORMATION

10.1 Project Update – Headway Engineering
10.2 Monthly Report – Belgrave Water October 2024
10.3 Outstanding Action Items

11.0 ITEMS FOR A FUTURE AGENDA

12.0 BY-LAWS AND AGREEMENTS

None.

13.0 CLOSED SESSION

13.1 Enter closed session.

Moved by ~
Seconded by ~

THAT the Council of the Municipality of Morris-Turnberry enter a closed session at ___ p.m., with the CAO/Clerk remaining in attendance, for the purpose of discussing confidential matters pursuant to the following sections of the Municipal Act:

a) *Section 239 (2) (b) regarding personal matters about an identifiable individual.*
b) *Section 239 (2) (k) regarding negotiations to be carried on by the municipality.*

~

13.2 Return to open session.

Moved by ~
Seconded by ~

THAT the Council of the Municipality of Morris-Turnberry rise from a closed session at ___ p.m.

~

13.3 Report and Action from Closed Session.

14.0 CONFIRMING BY-LAW

Moved by ~
Seconded by ~

THAT leave be given to introduce By-Law 55-2024, being a by-law to confirm the proceedings of the Municipality of Morris-Turnberry meeting of Council held on November 19th, 2024, and that it now be read severally a first, second, and third time, and finally passed this 19th day of November 2024.

~

15.0 ADJOURNMENT

Moved by ~
Seconded by ~

THAT the Council of the Municipality of Morris-Turnberry does now adjourn at ____ pm.

~

NEXT MEETINGS:

Regular Meeting of Council – Tuesday, December 3rd, 2024, 7:30 pm
Regular Meeting of Council – Tuesday, December 17th, 2024, 7:30 pm

MUNICIPALITY OF MORRIS-TURNBERRY

COUNCIL MINUTES

Tuesday, November 5th, 2024, 7:30 pm

The Council of the Municipality of Morris-Turnberry met in Council Chambers in regular session on the 5th day of November 2024, at 7:30 pm.

Council in Attendance

Mayor Jamie Heffer
Deputy Mayor Kevin Freiburger
Councillor Jamie McCallum
Councillor Jodi Snell
Councillor Sharen Zinn

Staff in Attendance

Trevor Hallam	CAO/Clerk
Mike Alcock	Director of Public Works

Others in Attendance

Jordan Errington	Applicant, MV03-2024
Cheryl Errington	Applicant, MV03-2024
Scott Stephenson	The Citizen
Rachel Hammermueller	Wingham Advance Times

1.0 CALL TO ORDER

Mayor Heffer called the meeting to order at 7:30 pm.

Mayor Heffer noted that Scott Stephenson and Rachel Hammermueller would be recording the meeting for the purpose of writing articles.

2.0 ADOPTION OF AGENDA

Motion 242-2024

Moved by Kevin Freiburger
Seconded by Sharen Zinn

THAT the Council of the Municipality of Morris-Turnberry hereby adopts the agenda for the meeting of November 5th, 2024, as circulated.

Carried.

3.0 DISCLOSURE OF PECUNIARY INTEREST / POTENTIAL CONFLICT OF INTEREST

Councillor McCallum declared a conflict of interest with regard to item 6.1, as he is employed by the applicant.

4.0 MINUTES

Motion 243-2024

Moved by Jamie McCallum
Seconded by Jodi Snell

THAT the Council of the Municipality of Morris-Turnberry hereby adopts the October 15th, and October 21st, 2024, Council Meeting Minutes as written.

Carried.

5.0 ACCOUNTS

Motion 244-2024

Moved by Kevin Freiburger
Seconded by Jamie McCallum

THAT the Council of the Municipality of Morris-Turnberry hereby approves for payment the November 5th accounts in the amount of $ 1,296,963.19.

Carried.

6.0 PUBLIC MEETINGS AND DEPUTATIONS

6.1 COMMITTEE OF ADJUSTMENT

Councillor McCallum left the Council table due to a conflict of interest.

Application MV03-2024 - Errington
Concession 7, Pt Lots 19 & 20 as RP 22R3595 Part 1 (90044 Bok Line)

Motion 245-2024

Moved by Sharen Zinn
Seconded by Jodi Snell

THAT The Council of the Municipality of Morris-Turnberry hereby adjourns their Council Meeting and the Committee of Adjustment hereby opens a meeting to review application for Minor Variance MV03-2024, submitted by Jordan and Cheryl Errington.

Carried.

COMMITTEE OF ADJUSTMENT MEETING

6.1.1 Call to Order

Mayor Heffer called the Committee of Adjustment to order at 7:32 pm.

6.1.2 Declaration of Pecuniary Interest

None

6.1.3 Purpose

The purpose of this application is to allow for an addition to the rear portion of an existing residential dwelling in the NE2 (Natural Environment Limited Protection) Zone.

The maximum footprint of the renovated dwelling will be 225 sq m.

6.1.4 Comments

1. Planner's Report

Mr. Hallam presented a report prepared by Huron County Planner Jenn Burns.

2. Council's Questions and/or Comments

No comments or questions.

3. Applicant and/or Agent

No comments to add.

4. Others

None.

6.1.5 Recommendation

It is recommended that application MV03-2024 be approved with the following conditions:

1. The structure be located within the footprint contained on the sketch that accompanied the application.
2. The variance approval is valid for a period of 18 months from the date of Council's decision.

6.1.6 Committee of Adjustment Decision

Motion 246-2024

Moved by Sharen Zinn
Seconded by Kevin Freiburger

THAT The Committee of Adjustment of the Municipality of Morris-Turnberry, considering the variance to be minor, to maintain the appropriate development of the lands, and to maintain the general intent of the Morris-Turnberry Zoning By-law 45-2014 and the Morris-Turnberry Official Plan, hereby approves application for minor variance MV03-2024, submitted by Jordan and Cheryl Errington, subject to the following conditions:

1. The structure be located within the footprint contained on the sketch that *accompanied the application.*
2. *The variance approval is valid for a period of 18 months from the date of Council's decision.*

Carried.

6.1.7 Close Committee of Adjustment

Motion 247-2024

Moved by Jodi Snell
Seconded by Sharen Zinn

THAT The Committee of Adjustment hereby adjourns their meeting.

Carried.

Councillor McCallum returned to the Council table.

7.0 STAFF REPORTS

7.1 CLERK

7.1.1 End of WGCC Fiscal Partnership

A report was presented by Mr. Trevor Hallam in this regard for the information of Council.

8.0 BUSINESS

8.1 TENDER RESULTS – THOMPSON LAMONT DEYELLE MUNICIPAL DRAIN CULVERT REPLACEMENT 2024

Mr. Hallam presented a report prepared by Streamline Engineering Project Engineer Trevor Kuepfer in this regard.

Motion 248-2024

Moved by Jamie McCallum
Seconded by Jodi Snell

THAT the Council of the Municipality of Morris-Turnberry hereby accepts the tender of JC Millwrights Inc. for the total amount of $17,197.00 excluding HST for the construction of the Thompson Lamont Deyell Municipal Drain Culvert Replacement 2024.

Carried.

8.2 FLEET REPLACEMENT TENDER SCHEDULING

A report was presented by Director of Public Works Mike Alcock in this regard.

Motion 249-2024

Moved by Jamie McCallum
Seconded by Kevin Freiburger

THAT the Council of the Municipality of Morris-Turnberry authorizes the Director of Public Works to Proceeding to tender for:

- *New Tandem Combination Plow in December 2024 for expected delivery in 2026.*
- *New Motor Grader with attachments in September 2025 for expected delivery in 2026.*
- *New Tractor Backhoe in December 2024 for expected delivery in 2025.*
- *New Pickup Truck in January 2025 for expected delivery in spring 2025.*

Carried.

9.0 COUNCIL REPORTS

Kevin Freiburger

No report.

Jamie McCallum

October 24th Attended a meeting of the Belmore Arena Board.

Sharen Zinn

October 16th to 18th, attended the Rural talks to Rural Conference in Blyth hosted by the Canadian Centre for Rural Creativity
Attended a meeting of the Maitland Valley Conservation Authority Board

Jodi Snell

No report.

Jamie Heffer

October 22nd, attended the annual meeting of the District 8 Agricultural Society
October 23rd, attended an open house for Sepoy Trade Solutions' new shop
October 24th, attended a meeting of the Belmore Arena Board
November 1st, Attended the Huron County Federation of Agriculture annual meeting

10.0 CORRESPONDENCE, MINUTES, ITEMS FOR INFORMATION

10.1 Correspondence – OMPF Allocation Notice 2025
10.2 Media Release – Kinsmen Donation – Huron County
10.3 Media Release – Report on Homelessness – Huron County
10.4 Minutes – SCVA Board Meeting – September 19
10.5 Minutes – MVCA Board Meeting – September 18
10.6 Board Meeting Highlights – AMDSB – October 22
10.7 Resolution – Heritage Preservation – South Huron Heritage Advisory Committee
10.8 Outstanding Action Items

11.0 ITEMS FOR A FUTURE AGENDA

Councillor Zinn requested a discussion regarding sidewalks in Belgrave on the next Council agenda.

12.0 BY-LAWS AND AGREEMENTS

12.1 MCARTHUR MUNICIPAL DRAIN FINAL BY-LAW

Work has been completed on the McArthur Municipal Drain, and all associated costs have been accounted for. By-Law 52-2024 provides for the levying of assessments as provided by the engineer.

Motion 250-2024

Moved by Sharen Zinn
Seconded by Kevin Freiburger

THAT leave be given to introduce By-Law 52-2024, being a by-law to amend by-law 17-2024 of the Municipality of Morris-Turnberry based on actual costs incurred for constructing the McArthur Municipal Drain 2024, and that it now be read severally a first, second, and third time, and finally passed this 5th day of November 2024.

Carried.

13.0 CLOSED SESSION

13.1 Enter closed session.

Motion 251-2024

Moved by Jodi Snell
Seconded by Jamie McCallum

THAT the Council of the Municipality of Morris-Turnberry enter a closed session at 7:54 p.m., with the CAO/Clerk remaining in attendance, for the purpose of discussing confidential matters pursuant to the following sections of the Municipal Act:

a) Section 239 (2) (e) regarding potential litigation affecting the Municipality.

Carried.

13.2 Return to open session.

Motion 252-2024

Moved by Jamie McCallum
Seconded by Sharen Zinn

THAT the Council of the Municipality of Morris-Turnberry rise from a closed session at 8:32 p.m.

Carried.

13.3 Report and Action from Closed Session.

Council reviewed correspondence regarding potential litigation related to a transfer of land.

14.0 CONFIRMING BY-LAW

Motion 253-2024

Moved by Jamie McCallum
Seconded by Kevin Freiburger

THAT leave be given to introduce By-Law 53-2024, being a by-law to confirm the proceedings of the Municipality of Morris-Turnberry meeting of Council held on November 5th, 2024, and that it now be read severally a first, second, and third time, and finally passed this 5th day of November 2024.

Carried.

15.0 ADJOURNMENT

Motion 254-2024

Moved by Kevin Freiburger
Seconded by Jamie McCallum

THAT the Council of the Municipality of Morris-Turnberry does now adjourn at 8:32 pm.

Carried.

NEXT MEETINGS:

Regular Meeting of Council – Tuesday, November 19th, 2024, 7:30 pm
Regular Meeting of Council – Tuesday, December 3rd, 2024, 7:30 pm

_____
Mayor, Jamie Heffer

_____
Clerk, Trevor Hallam

Municipality of Morris-Turnberry
Account List for November 19 2024

General				
Bell Canada	Emergency Lines		121.90	
Hydro One	Streetlights		1,165.44	
Hydro One	Morris Office		334.59	
Enbridge	Morris Office		29.54	
Tuckersmith Communications	Office Internet & Security Charges		180.80	
Telizon	Long Distance Phone		2.20	
MicroAge Basics	Office Supplies & IT Support		3,585.66	
Pitney Bowes Leasing	Postage Machine Lease		191.20	
North Huron Publishing Company Inc.	Advertisement		67.80	
Minister of Finance	September Policing		39,706.00	
D&I Wattam Const Ltd.	Belgrave Development		8,870.14	
Technical Standards and Safety	Bluevale Hall Chairlift Licence Renewal		262.50	
Infrastructure Ontario	Belgrave Water Loan Payment		29,721.46	
Payroll				
November 6 2024	Payroll		24,962.32	
	Expenses		288.40	
		General Total		**109,489.95**
Building Department				
Foxton Fuels	Fuel for Vehicle		387.71	
Payroll				
November 6 2024	Payroll		5,511.44	
	Expenses		86.99	
		Building Total		**5,986.14**
Property Standards				
		Property Standards Total		**-**
Drainage				
Maitland Valley Conservation Authority	Masson Municipal Drain		395.00	
Streamline Engineering Inc.	Thompson Lamont Deyell Municipal Drain		6,928.71	
GEI Consultants	Nichol Municipal Drain		6,260.20	
Municipality of Morris-Turnberry	Robertson-Mathers Municipal Drain		122.00	
		Drainage Total		**13,705.91**
Parks & Cemeteries				
Hydro One	Kinsmen Park		31.34	
		Parks & Cemeteries Total		**31.34**
Belgrave Water				
Hydro One	Belgrave Water		1,184.85	
Hydro One	Humphrey Well		38.92	
Bell Canada	Belgrave Water		165.89	
Hay Communications	Belgrave Water		22.60	
Rogers	Belgrave Water		90.39	
Veolia Water	October Operations		7,885.93	
		Water Total		**9,388.58**
Landfill				
Hydro One	Morris Landfill		72.31	
PE Inglis Holdings Inc.	Portable Unit		327.70	
Municipality of Morris-Turnberry	Property Taxes - Gravel Pit		4,185.00	
Bluewater Recycling Association	November Curbside Pickup		8,026.89	
		Landfill Total		**12,611.90**

Roads

Hydro One	Morris Shop	167.29	
Hydro One	Turnberry Shop	242.20	
Enbridge	Morris Shop	59.09	
Bell Canada	Turnberry Shop	121.91	
Totally One	Cell Phone Upgrade	782.50	
MicroAge Basics	Roads Office Supplies	350.26	
Hodgins BC Wingham	Shop Supplies, Sign Posts	166.51	
Stainton Hardware	Shop Supplies	37.26	
McDonald Home Hardware	Shop Supplies	494.66	
Steffens Auto Supply	Shop Supplies	79.89	
Foxton Fuels	Fuel	2,055.46	
Joe Kerr Ltd.	Gravel & Safety for 19-06 Tandem	9,453.15	
Neils Repair Service	Maintenance for 19-08 Pickup	100.46	
Leslie Motors	Safety for 19-07 F550	398.89	
Nors Construction Equipment Canada	Parts for 10-25 Grader	282.23	
Elvaan Equipment Sales	Parts for 10-25 Grader	508.50	
Stumps Be Gone	Stump Grinding	2,034.00	
BM Ross & Associates	Bridge Inspection Report	939.71	
Municipality of Morris-Turnberry	Chainsaw Operator Course	1,706.60	
Municipality of Morris-Turnberry	Hardtop Patching Materials	7,518.20	
Municipality of Morris-Turnberry	McArthur Municipal Drain	360.00	
Payroll			
November 6 2024	Payroll	29,863.49	
	Expenses	-	
		Roads Total	***57,722.26***
		Account Total	***208,936.08***

Approved By Council: November 19 2024

Mayor - Jamie Heffer

Treasurer- Sean Brophy

Headway Engineering

MORRIS · TURNBERRY 2001

Masson Municipal Drain

Consideration of Report

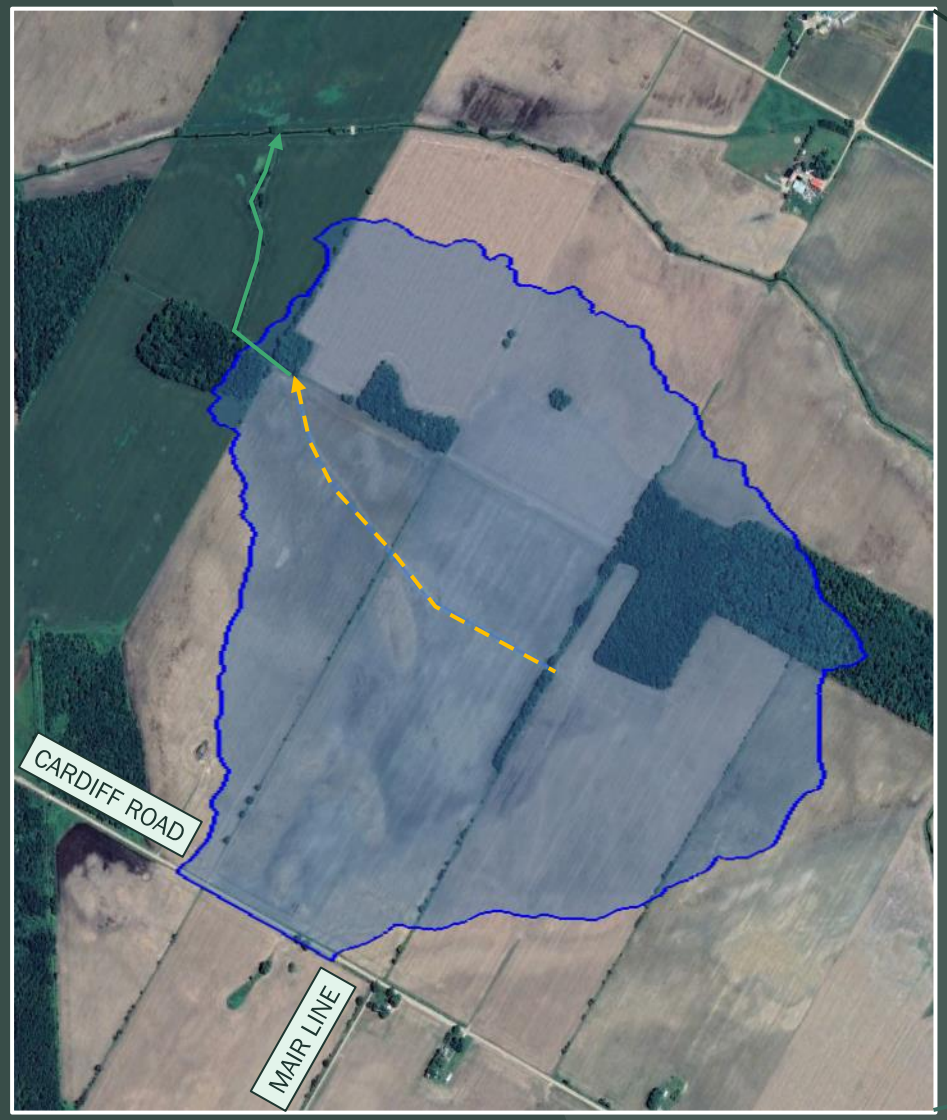
November 19, 2024

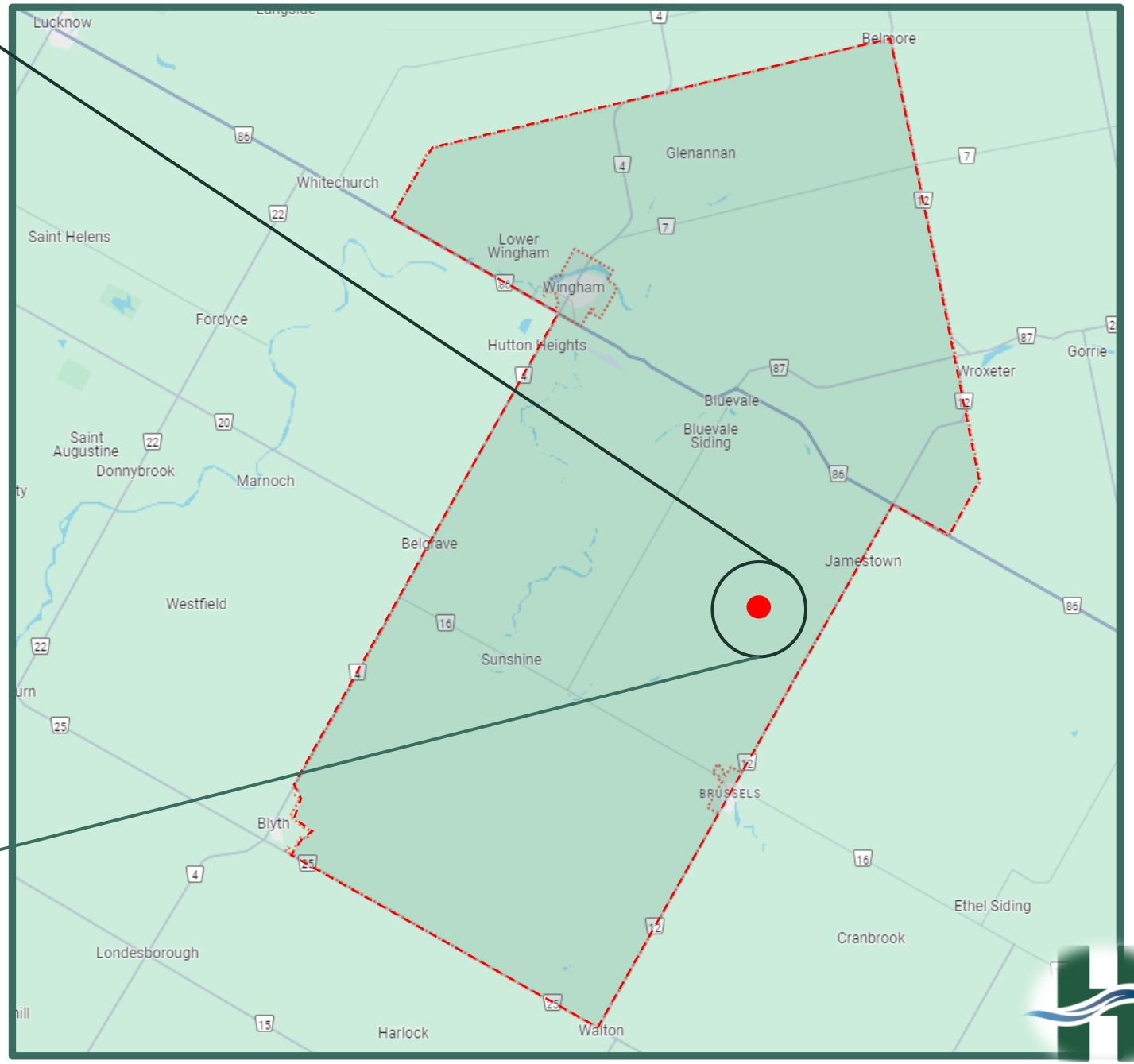
Authority

- Headway Engineering was appointed under Section 78 of the Drainage Act at the October 3, 2023, Council Meeting, for improvements to the Masson Drain.

- The request for improvements include:

"To provide proper depth for an outlet that will service a field drainage project."





Project Location

Public Engagements

Onsite Meeting
November 30, 2023

Information Meeting
August 28, 2024

Findings

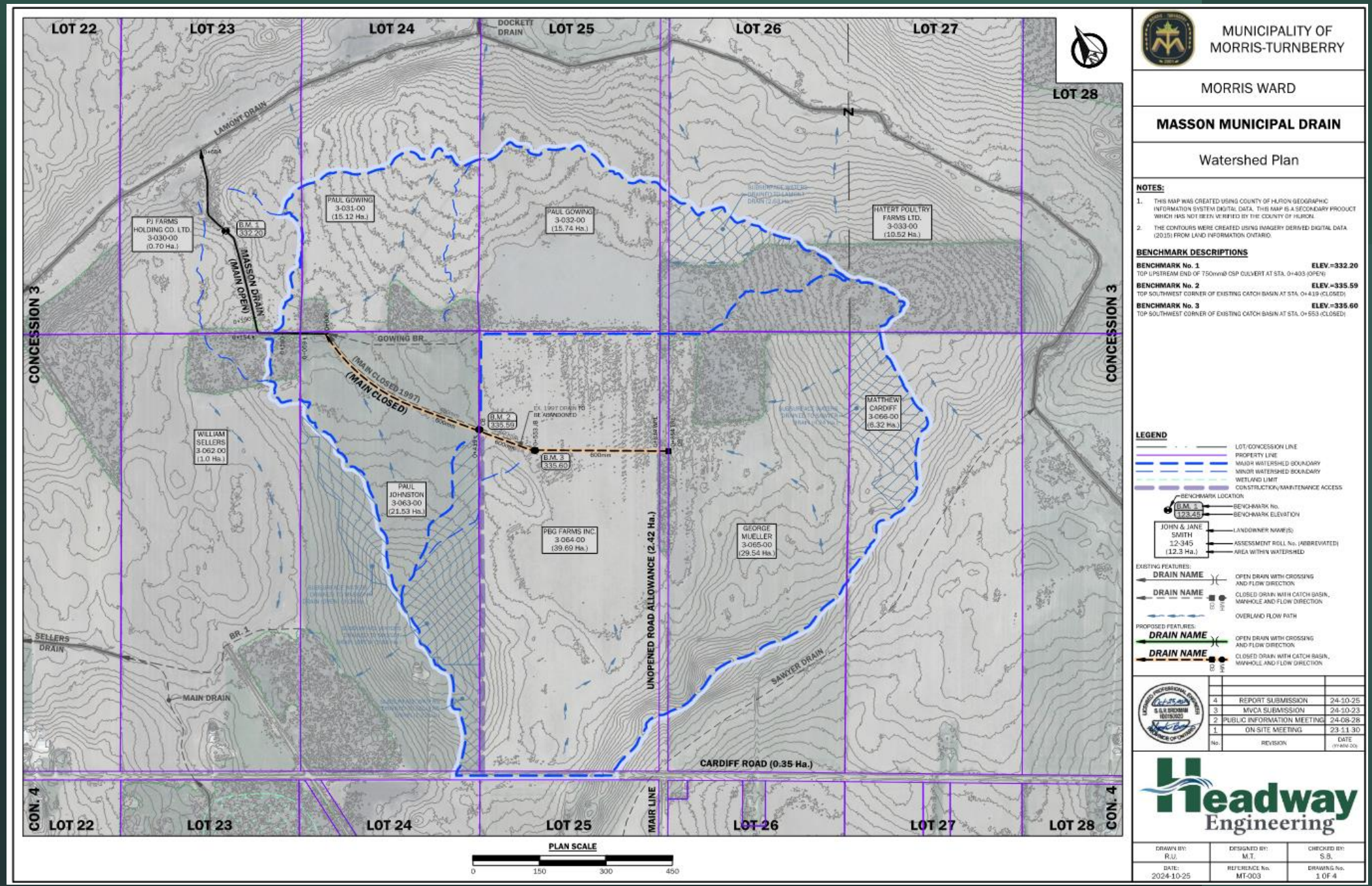
Findings:

- The watershed area for Main Drain (Open) is approximately 143 ha (353 ac), and is approximately 89 ha (220 ac) for Main Drain (Closed)
    - Consists of Agricultural lands primarily, woodlots, roads
- The existing tile drainage system for the Main Closed consists of a twin pipe system for approximately 553 metres, while the remaining 301 metres consists of a single pipe system.
- Of the twin pipe system, the northern tile drain is over 25 years old, installed under the authority of the 1997 report, while the southern tile drain is believed to be about 50 years old, although no records were found to confirm the date or authority under which the drain was constructed.
- The combined capacity of the existing system is within the range of a 19mm to 25.4mm (3/4 to 1 inch) Drainage Coefficient design standard.
- The outlet for the proposed tile drainage system is into the Masson Municipal Drain (Main Open).
- The upper reach of the Main Open is not of adequate depth to provide sufficient outlet for the Main Closed.
- The owner of the south half of Lot 26, Concession 3, plans to systematically tile the property. The existing drain is not of adequate depth to provide a sufficient outlet for their tile drainage system.
- Several design options were considered, that would increase the design standard of the existing dual-tile drainage system to today's standards of drainage.
- The Maitland Valley Conservation Authority (MVCA) has indicated that a permit to alter a watercourse is required.
- The Department of Fisheries and Oceans (DFO) has provided a Letter of Advice, dated September 12, 2024, authorizing the proposed cleanout of the existing open ditch.

Recommendations

Recommendations:

1. A new municipal tile drainage system be installed beginning at its outlet into the upstream end of the open portion of the Masson Drain and extending upstream approximately 854 metres, to the east side of the Unopened Road Allowance, between the south halves of Lot 25 and 26, Concession 3.
2. The new tile drainage system consists of approximately 854m of 600mm diameter concrete tile and HDPE pipe.
3. Approximately 190 metres of the open portion of the Masson Drain, be cleaned out, to provide a sufficient outlet for the new tile drain and other existing tile outlets.
4. The proposed tile drainage system be installed along the southern run of the existing twin-pipe system, and the existing southern tile drain be destroyed.
5. The proposed tile drainage system shall be designed to convey flows from the watershed using a design standard of 38mm per 24-hour period Drainage Coefficient.
6. After the construction of the new tile drainage system, the existing closed portion of the Masson Drain, excluding the Gowing Branch drain, shall be abandoned under Section 19 of the Drainage Act.
7. This new tile drainage system shall be known as part of the Masson Municipal Drain.
8. Watersheds of the surrounding municipal drains be updated when those drainage systems are revisited in the future.



MUNICIPALITY OF MORRIS-TURNBERRY

MORRIS WARD

MASSON MUNICIPAL DRAIN

Watershed Plan

NOTES:

1. THIS MAP WAS CREATED USING COUNTY OF HURON GEOGRAPHIC INFORMATION SYSTEM DIGITAL DATA. THIS MAP IS A SECONDARY PRODUCT WHICH HAS NOT BEEN VERIFIED BY THE COUNTY OF HURON.
2. THE CONTOURS WERE CREATED USING IMAGERY DERIVED DIGITAL DATA (2015) FROM LAND INFORMATION ONTARIO.

BENCHMARK DESCRIPTIONS

BENCHMARK No. 1 **ELEV.=332.20**
TOP UPSTREAM END OF 750mmØ CSP CULVERT AT STA. 0+403 (OPEN)

BENCHMARK No. 2 **ELEV.=335.59**
TOP SOUTHWEST CORNER OF EXISTING CATCH BASIN AT STA. 0+419 (CLOSED)

BENCHMARK No. 3 **ELEV.=335.60**
TOP SOUTHWEST CORNER OF EXISTING CATCH BASIN AT STA. 0+553 (CLOSED)

LEGEND

LOT/CONCESSION LINE
PROPERTY LINE
MAJOR WATERSHED BOUNDARY
MINOR WATERSHED BOUNDARY
WETLAND LIMIT
CONSTRUCTION/MAINTENANCE ACCESS
BENCHMARK LOCATION
B.M. 2 123.45 — BENCHMARK No. / BENCHMARK ELEVATION
JOHN & JANE SMITH 12-345 (12.3 Ha.) — LANDOWNER NAME(S) / ASSESSMENT ROLL No. (ABBREVIATED) / AREA WITHIN WATERSHED

EXISTING FEATURES:
DRAIN NAME — OPEN DRAIN WITH CROSSING AND FLOW DIRECTION
DRAIN NAME — CLOSED DRAIN WITH CATCH BASIN, MANHOLE AND FLOW DIRECTION
OVERLAND FLOW PATH

PROPOSED FEATURES:
DRAIN NAME — OPEN DRAIN WITH CROSSING AND FLOW DIRECTION
DRAIN NAME — CLOSED DRAIN WITH CATCH BASIN, MANHOLE AND FLOW DIRECTION

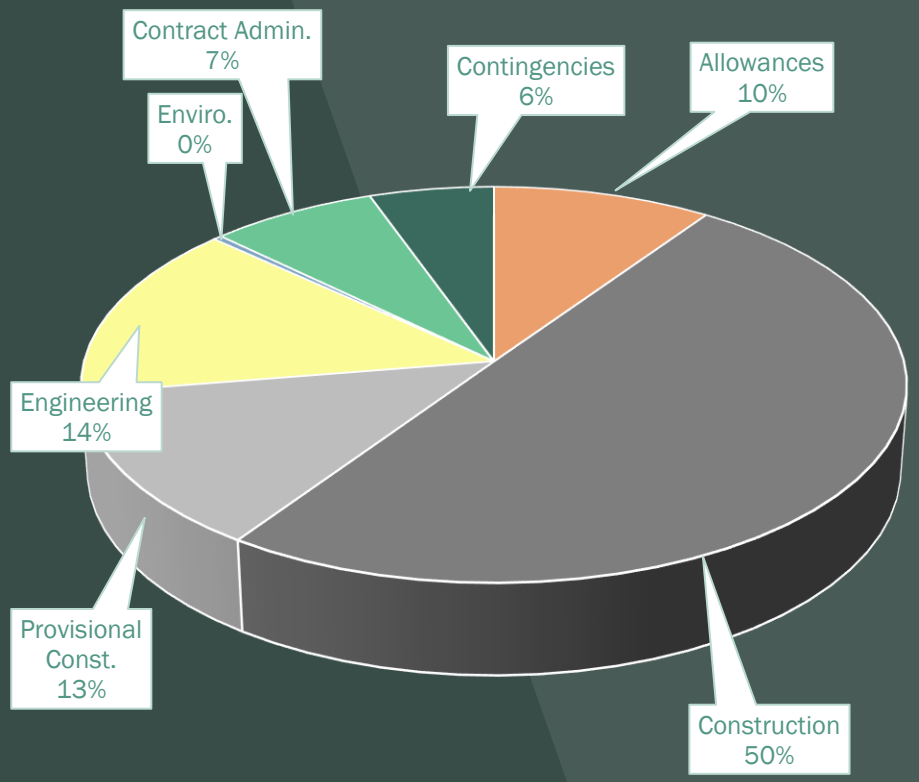
No.	REVISION	DATE (YY-MM-DD)
4	REPORT SUBMISSION	24-10-25
3	MVCA SUBMISSION	24-10-23
2	PUBLIC INFORMATION MEETING	24-08-28
1	ON-SITE MEETING	23-11-30

Headway Engineering

DRAWN BY:	DESIGNED BY:	CHECKED BY:
R.U.	M.T.	S.B.
DATE:	REFERENCE No.	DRAWING No.
2024-10-25	MT-003	1 OF 4

Design

Estimated Project Costs



- Allowances
- Construction Costs (including Provisional items)
- Meetings/Correspondence, Survey, Design, Cost Estimates, Reporting, etc.
- Environmental Consultations/Approvals
- Contract Documents, Administration, Supervision & Inspection
- Contingencies, Interest & NET HST

Total Estimated Costs: $265,400

Photos

Tile Installation by means of Wheel Machine

Photos

Catch Basin Installation

Photos

Working Corridor After Completion

Questions

Masson Municipal Drain

October 25, 2024

Prepared for:

Headway Engineering
23-500 Fairway Road South
Suite 308
Kitchener, Ontario N2C 1X3
226 243 6614
www.headwayeng.ca

23-500 Fairway Road South
Suite 308
Kitchener, Ontario N2C 1X3
226 243 6614
www.headwayeng.ca

Kitchener, Ontario

October 25, 2024

To the Mayor and Members of Council:

Re: Masson Municipal Drain
Municipality of Morris-Turnberry
Our Reference No. MT-003

Headway Engineering is pleased to provide its report for the **Masson Municipal Drain** in the Municipality of Morris-Turnberry (Morris Ward).

The preparation of this report was authorized by a resolution of the Council of the Municipality of Morris-Turnberry on October 3, 2023, per Section 78 of the Drainage Act.

The primary objective of this report is to provide an improved, deeper outlet for the south part of Lot 26, Concession 3, by upgrading the existing tile drainage system to today's standards of drainage. This improvement, while focused on Lot 26, Concession 3, is designed to offer broader benefits across the area, supporting drainage for additional properties.

A summary of the assessments for this project are as follows:

Municipal Lands	$4,671
Privately Owned Agricultural	$260,729
Total Estimated Assessments	**$265,400**

Yours truly,

Stephen Brickman, P.Eng.
Project Engineer and Manager

Michel Terzian
Project Coordinator
HEADWAY ENGINEERING

SB/

CONTENTS

SCHEDULES

SPECIFICATIONS FOR THE CONSTRUCTION OF MUNICIPAL DRAINAGE WORKS

23-500 Fairway Road South
Suite 308
Kitchener, Ontario N2C 1X3
226 243 6614
www.headwayeng.ca

1.0 INTRODUCTION AND LOCATION

The Council of the Municipality of Morris-Turnberry has appointed Headway Engineering to investigate a request for drainage improvements. The project services parts of Lots 23 to 27, Concession 3, in the Municipality of Morris-Turnberry, Morris Ward.

The drainage area comprises of approximately 143 hectares for the Main Open, and approximately 89 hectares for the Main Closed. Land uses within the watershed include primarily agricultural, with part woodlots and roads, including an unopened road allowance between Lots 25 and 26, Concession 3.

The Lamont Municipal Drain serves as the eventual outlet for the Masson Municipal Drain, in the north half of Lot 23, Concession 3.

The attached Plans, Profiles and Details; Drawing Numbers 1 to 4, show and describe in detail the location and extent of the work to be completed and the lands which are affected.

2.0 PROJECT AUTHORIZATION

Authority to prepare this report was obtained by a resolution of the Council of the Municipality of Morris-Turnberry at its October 3, 2023, meeting to appoint Headway Engineering to prepare an Engineer's Report under Section 78 of the Drainage Act.

3.0 DRAINAGE HISTORY

3.1 Masson Municipal Drain (1889)

A later report (1981) indicated the Masson Drain was originally constructed in 1889, as an open ditch, however no copies of a report, or plans or profiles were found to certify the original date of construction nor the configuration of the drainage system.

3.2 Masson Municipal Drain (1908)

The actual date the Masson Municipal Drain was originally constructed under the Drainage Act is believed to be through a report prepared by John Roger, O.L.S., dated February 22, 1908.

The report authorized the construction of a Main Drain, consisting of approx. 1,447 metres of open ditch excavation, cleanout and/or deepening of the existing ditch, commencing at an outlet into the Lamont Drain and extending upstream to the east side of the unopened road allowance between Lots 25 and 26, Concession 3. The report also authorized the installation of a new Branch Drain, consisting of approximately 350m of 200mm diameter tile. The Branch Drain commenced at an outlet into the Main Drain (open ditch) between the North and South parts of Lots 23 and 24, Concession 3, to the property line between the north parts of Lot 24 and 25, Concession 3. The report also notes that seven feet of a Highway culvert was installed at the upstream end of the drain.

3.3 Masson Municipal Drain and the Gowing Branch (1981)

A report prepared by David G. Johnson, P.Eng., dated July 31, 1981, authorized the construction of a new Branch Drain called the Gowing Branch, which was routed along the south side of the

woodlot on the north side of the south half of Lot 24, Concession 3, to its upstream end at the corner of where the north and south halves of Lot 24 and Lot 25, Concession 3, intersect. The new Branch consisted of approximately 364 metres of 250mm diam. tile and was designed using a 12mm (½ inch) per 24 hrs Drainage Coefficient. The Branch Drain installed under the 1908 report, was abandoned.

The report also authorized the cleanout and deepening of approximately 412 metres of open ditch from a point approximately 196 metres upstream of where the Main Open enters the Lamont Drain, upstream to where the Gowing Branch outlets into the Main Open.

3.4 Masson Municipal Drain Improvement (1997)

A report prepared by Jeff Dickson, P.Eng., and J. A. McBride, P.Eng., authorized the installation of a new tile drainage system along the north side of the existing 350mm diameter tile drainage system. The new, north section of drain, commenced at an outlet into the Main Open, upstream approximately 550 metres, to a point approximately 136 metres into Lot 25. No work was carried out on the remaining 296 metres of the existing 300mm diameter tile drain.

However, the 136 metre section of the existing drain in Lot 25, which consisted of 350mm diameter tile, was also replaced with new 400mm diameter field tile.

The upgraded tile drainage system was a twin system from the outlet into the Main Open, upstream approximately 550 metres, part way into Lot 25, while the remaining 296 meres of drain, consisted of the 300mm diameter single pipe drain.

The new combined drainage coefficient of the existing drain and the 1997 drain is reported to be approximately 25.4mm per 24 hrs.

No work was carried out in the open portion of the Masson Drain.

4.0 PUBLIC MEETINGS AND ENGAGEMENTS

4.1 On-Site Meeting

In accordance with Section 9(1) of the Drainage Act, an on-site meeting was held on November 30, 2023, at the Council Chambers of the Municipality of Morris-Turnberry Municipal Office (41342 Morris Road, Brussels). Persons in attendance were:

Stephen Brickman, P.Eng.	Headway Engineering
Michel Terzian	Headway Engineering
Kirk Livingston	Municipality of Morris-Turnberry, Drainage Superintendent
Trevor Hallam	Municipality of Morris-Turnberry, Clerk

<u>Landowners included:</u>

Ben Gowing	George Mueller
Matt Cardiff	Paul Johnston

4.2 Public Information Meeting

A Public Information Meeting was held on August 28, 2024, at the Council Chambers of the Municipality of Morris-Turnberry Municipal Office (41342 Morris Road, Brussels). Persons in attendance were:

Stephen Brickman, P.Eng.	Headway Engineering
Michel Terzian	Headway Engineering
Kirk Livingston	Municipality of Morris-Turnberry, Drainage Superintendent
Trevor Hallam	Municipality of Morris-Turnberry, Clerk

Landowners included:

George Mueller	Paul Johnston
Matt Cardiff	

At this meeting, the design of the proposed drainage system, the estimated costs of the project, as well as the proposed assessments, were reviewed and discussed.

All meeting materials were posted to the Headway Engineering website following the meeting, and all parties invited to attend the meeting were provided with access instructions to the meeting materials.

5.0 FINDINGS

The following summarizes Headway Engineering's findings based on the information collected during field investigations, surveys, public engagements, and review of documentation:

5.1 Watershed Condition (Hydrology):

- The watershed was established through the analysis of tile drainage maps, previous engineers' reports for surrounding systems, field investigations, surveys, and data analysis of the Southwestern Ontario Orthophotographic Project (SWOOP). The drainage area comprises of approximately 143 hectares for the Main Open and 89 hectares for the Main Closed.
- Land uses within the watershed are as follows:
    - Agricultural: 130 hectares (91%)
    - Woodlot: 10.1 hectares (7%)
    - Roads: 2.8 hectares (2%)
- The Ontario Ministry of Agriculture, Food and Rural Affairs' Agricultural Information Atlas describes the soil types within the watershed and along the route of the drain as predominantly loam, with a small pocket of silt loam.
- Generally, the watershed slopes from east to west, however, lands upstream of Sta. 0+419 are effectively flat with no distinguishable overland slope. Lands downstream of Sta. 0+419 have an approximate slope from east to west of 0.40%.

5.2 Existing Drainage System:

- The existing tile drainage system for the Main Closed consists of a twin pipe system from its outlet into the Main Open in the north part of Johnston property (Roll No. 3-063). The drain extends upstream approximately 553 metres, part way into Lot 25 (Roll No. 3-064). The remaining 301 metres on Lot 25, and through the unopened road allowance consist of a single pipe system.
- Of the twin pipe system, the northern tile drain is over 25 years old, installed under the authority of the 1997 report, while the southern tile drain is believed to be about 50 years old, although no records were found to confirm the date or authority under which the drain was constructed.
- The northern pipe consists of 400mm diameter field tile, while the southern pipe consists of 350mm diameter tile through Lot 24, and 400mm diameter tile on Lot 25.
- The section of existing drain at the upper end of the Main Closed from part way into Lot 25, and extending to the east side of the unopened road allowance, consists of 300mm diameter tile. This section of drain was not upgraded as part of the 1997 improvements.
- Analysis of the existing drainage systems indicated the combined capacity of both drains (north and south), are within the range of a 19mm to 25.4mm (3/4 to 1 inch) Drainage Coefficient design standard, without accounting for condition.
- The 1997 report states that “No particular design criteria was used for this proposed improvement.”, because the landowners, at the time, thought the existing drain, when repaired, would provide “adequate capacity for underdrainage,” and the proposed 400mm diameter pipe was proposed because it was the affordable size.
- The 1997 report indicates the proposed 400mm diameter tile has a “surface water drainage coefficient of 11mm (0.42 inches) in 24 hours” drainage coefficient design.
- The current depth of the existing 300mm diameter drain at the property line between the unopened road allowance and Lot 26, is approximately 1 metre to the invert.
- The northern drain in the existing catch basin part way into Lot 25, is 0.11m (~4 inches) higher than the south drain.
- The northern drain (1997) in the existing catch basin at the property line between Lot 24 and Lot 25, is 0.32m (12-13 inches) higher than the southern (older) drain.
- It is understood that the Gowing Branch is functioning adequately.

5.3 Outlet:

- The outlet for the proposed tile drainage system is into the Masson Municipal Drain (Main Open), on the northwest side of the south half of Lot 24, Concession 3.
- The eventual outlet for the Masson Municipal Drain (Main Open) is into the Lamont Municipal Drain, which is an open ditch system, in the north half of Lot 23, Concession 3.
- There is minimal freeboard between the outlet pipes for the existing tile drains and the streambed of the Main Open.

- There is a slight accumulation of sediment in the Main Open within 200 metres of the tile drain outlets.
- The upper reach of the Main Open is not of adequate depth to provide sufficient outlet for the Main Closed.

5.4 Other noted findings:

- The owner of the south half of Lot 26, Concession 3, plans to systematically tile the property. The existing drain is not of adequate depth to provide a sufficient outlet.
    - A tile contractor estimated that a new drain at least 1.4 metres deep at the property line is required to tile drain the lowest parts of the farm that are within the watershed.
    - The tile contractor believed the entire existing tile drainage system would likely need upgrading and deepening. Headway Engineering has come to similar conclusions.
- Based on input from Landowners during public engagements, wet soils should be expected during construction, the degree of which, will depend on the time of year the drain is constructed.
- The representative of the PBG Farms Inc. property (Roll No. 3-064), would prefer the existing catch basin at Sta. 0+553 be removed.
- Tile maps were provided by the property owners for the south half of Lot 24, the south half of Lot 26, and the south half of Lot 27, Concession 3.
    - Approximately 4.24 hectares of the area within the watershed for the south half of Lot 27, Concession 3, is drained out of the watershed for the Masson Drain, to the Lamont Municipal Drain.
    - Approximately 2.63 hectares of the area within the watershed for the north half of Lot 26, Concession 3, is drained out of the watershed for the Masson Drain, to the Sawyer Municipal Drain.
    - Approximately 1.22 hectares of the area within the watershed for the south half of Lot 24, Concession 3, is drained out of the watershed for the Masson Drain, to the Sellers Municipal Drain.
    - Approximately 5.66 hectares of the area within the watershed for the south half of Lot 24, Concession 3, is drained directly to the Masson Drain (Main Open).
    - Approximately 3.08 hectares of land outside of the watershed for the south half of Lot 24, Concession 3, is drained into the watershed and directly to the Masson Drain (Main Open).
    - The affected area of the South half of Lot 24, Concession 3, are systematically tiled directly to the Masson Drain (Main Open), and do not connect into either of the existing closed drains of the Masson Drain.

5.5 Environmental Requirements:

- The Maitland Valley Conservation Authority (MVCA) has indicated that a permit to alter a watercourse is required.
- The Department of Fisheries and Oceans (DFO) has provided a Letter of Advice, dated September 12, 2024, authorizing the proposed cleanout of the existing open ditch.

6.0 DESIGN CONSIDERATIONS

The proposed drainage system is sized using the Drainage Coefficient method contained in the OMAFRA Publication 29 - 'Drainage Guide for Ontario'. The Drainage Coefficient describes a depth of water to be conveyed by the drainage works per a 24-hour period and is expressed in millimeters per 24 hours. The drainage coefficient design standard used for the works proposed in this report is 38mm per 24-hour period.

The current estimated Drainage Coefficient design standard for the existing combined tile drainage system, has been determined to be within the range of 19mm to 25.4mm (3/4" to 1").

Several design options were considered, that would increase the design standard of the existing dual-tile drainage system to today's standards of drainage.

- **Option 1:** This option proposed adding a third tile drain while keeping the two existing municipal tile drains in place.
- **Option 2:** This option involved replacing the southern (older) drain with a new drain, twinned with the 1997 tile, to achieve today's standards of drainage.
- **Option 3 (Preferred):** The final option considered involves replacing the older, southern drain with a new drain that meets current drainage standards. The northern drain would remain in place but would become a private drain, as its function is superseded by the proposed drainage system. This approach relieves landowners in the watershed from the future liability and maintenance costs associated with the northern pipe. This option is the preferred option.

Option 1 was dismissed due to the inefficiencies associated with managing three municipal tile drains on the same alignment. While this option offered some initial cost savings, owing to the smaller diameter tile required to meet the 38mm per 24-hour standard, the ongoing costs of maintaining the older southern run—as well as the likely need to replace either the older southern run or the 1997 drain within the expected lifespan of a new system—would negate any short-term financial savings.

Option 2 was set aside primarily due to minimal cost savings. Twinning the 1997 drain to meet the 38mm per 24-hour standard would require a 525mm diameter tile, only one tile size smaller than the 600mm tile necessary for a full replacement. With estimated savings below 5%, this approach did not provide a compelling alternative to a single-drain design.

Furthermore, survey data indicated that the 1997 tile drain is approximately 350mm higher at the boundary between the southern halves of Lots 24 and 25 than the proposed drainage system. As a result, the 1997 drain would only function during surcharge conditions, where water levels in catch basins would need to rise to reach the invert of the 1997 drain. In principle, an effective dual drainage design requires both pipes to function at similar elevations rather than relying on a partially stacked configuration, which limits efficiency and performance in this case.

Option 3 was ultimately chosen for its single-drain configuration, which meets current standards and relieves landowners of ongoing maintenance obligations and potential liabilities associated with the northern pipe, which no longer plays an essential role in the municipal drainage system.

Pipe materials were selected based on location and intended land uses adjacent to the drainage system.

Surface water inlets have been placed purposefully to receive surface flow and allow for subsurface tile connections. Likewise, the elevation of the pipe system is designed to provide for subsurface tile connections at, and between surface water inlets.

7.0 ENVIRONMENTAL CONSIDERATIONS AND PERMITTING

7.1 Department of Fisheries and Oceans (DFO)

The open portion of the Masson Municipal Drain is classified as 'Not Rated' according to their Drain Classification System. The outlet for the Masson Drain open ditch is into the Lamont Municipal Drain, which is classified as a Class 'D' drain.

A Request for Review was submitted to the DFO on April 10, 2024, outlining the possible works on the open ditch of the Masson Drain, including approximately 200 metres of open ditch cleanout at the upstream end of the ditch.

A virtual meeting was held with the DFO, a representative from Headway Engineering and the Municipality of Morris-Turnberry, to discuss the proposed works, and the concerns of the DFO.

Upon DFO's completion of their review, they provided correspondence in the form of a Letter of Advice, dated September 12, 2024, indicating that authorization under the Fisheries Act was not required, provided that the project incorporates the mitigation measures noted in DFO correspondence. Some of the measures include a bottom cleanout only for up to 200 metres, brush the working side of the drain, construction of a plunge pool at the outlet of the new tile, construction of a pool-riffle sequence, and construction of a rock check damn at the downstream end of the proposed open ditch work. Furthermore, no in-water works will be permitted between October 1 to July 15.

7.2 Ministry of Natural Resources and Forestry (MNRF)

Headway Engineering completed a review of the Natural Heritage Information Centre mapping for Species At Risk in Ontario. Provincial Species at Risk requiring special consideration were not identified in the working area.

7.3 Maitland Valley Conservation Authority (MVCA)

The MVCA has been included on the circulation list for this report and has been invited to all public engagements. Upon review of the design drawings, the MVCA indicated in an email on August 12, 2024, that permit to alter a watercourse would be required for the proposed open ditch works.

A completed permit application was submitted on October 23, 2024.

8.0 RECOMMENDATIONS

Headway Engineering recommends the following:

1. A new municipal tile drainage system be installed beginning at its outlet into the upstream end of the open portion of the Masson Drain and extending upstream approximately 854 metres, to the east side of the Unopened Road Allowance, between the south halves of Lot 25 and 26, Concession 3.
2. The new tile drainage system consists of approximately 854m of 600mm diameter concrete tile and HDPE pipe.
3. Approximately 190 metres of the open portion of the Masson Drain, be cleaned out, to provide a sufficient outlet for the new tile drain and other existing tile outlets.
4. The proposed tile drainage system be installed along the southern run of the existing twin-pipe system, and the existing southern tile drain be destroyed.
5. The proposed tile drainage system shall be designed to convey flows from the watershed using a design standard of 38mm per 24-hour period Drainage Coefficient.
6. After the construction of the new tile drainage system, the existing closed portion of the Masson Drain, excluding the Gowing Branch drain, shall be abandoned under Section 19 of the Drainage Act.
7. This new tile drainage system shall be known as part of the Masson Municipal Drain.
8. Watersheds of the surrounding municipal drains be updated when those drainage systems are revisited in the future.

9.0 SUMMARY OF PROPOSED WORKS

The proposed work consists of:

1. The cleanout of approximately 190m of the Masson Drain (Main Open).
2. The installation of approximately 854m of 600mm diameter concrete field tile and HDPE pipe.
3. The installation of one 900mm x 1800mm concrete catch basin.
4. The installation of one 900mm x 1800mm concrete junction box.
5. The cross-connection the existing tile drain installed under the authority of a report in 1997, into the new junction box and catch basin.

10.0 WORKING AREA AND ACCESS

Access to the working area shall be from Cardiff Road, along the west side of the south half of Lot 25, Concession 3, as shown on the attached set of plans.

The working area for the installation of the tile drainage system shall be an average width of 25m for construction purposes and an average width of 10m for maintenance purposes along the alignment of the proposed closed drain.

The working area for the open ditch work shall be an average width of 12m on the primary working side of the existing ditch (the south and west sides), for construction purposes, and 10m on the working side for maintenance purposes.

11.0 SCHEDULES

Four schedules are attached and form part of this report.

11.1 Schedule A – Schedule of Allowances

In accordance with Sections 29 and 30 of the Drainage Act, allowances are provided to Landowners for Right-of-Way and Damages to Lands and Crops. Schedule A contains a table of the applicable allowances to Landowners.

11.2 Schedule B – Schedule of Estimated Construction Costs

An itemized cost estimate of the proposed construction work is included in detail in Schedule B.

11.3 Schedule C – Schedule of Assessment for Construction

Schedule C provides details of the distribution of the total estimated costs of the construction of the municipal drain.

11.4 Schedule D – Schedule of Assessment for Maintenance

Schedule D provides details of the distribution of future maintenance costs for the municipal drain. Maintenance assessments are expressed as a percentage of the total maintenance. Lands located upstream of the maintenance shall be determined by the Drainage Superintendent and assessed according to this schedule.

12.0 ALLOWANCES

In accordance with Sections 29 and 30 of the Drainage Act, Allowances payable to Landowners are described below.

12.1 Allowances for Right-of-Way (Section 29)

The Right-of-Way allowance compensates the lands for the right to enter onto the land at various times for the purpose of inspecting the drainage system and conducting maintenance activities. The land value used for the Right-of-Way calculation is adjusted to account for the continued use of the land after construction.

Right-of-way allowances were not provided to Landowners for a future maintenance corridor alongside the open ditch in the previous reports.

Typically, lands affected by drainage works receive Right-of-Way compensation only once. However, in this case, additional compensation is warranted. Although Right-of-Way compensation was provided in 1997 along the route of the tile drainage system, it did not fully account for the long-term impact on adjacent landowners. For this project, an additional allowance of 50% of the standard Right-of-Way amount is therefore included, acknowledging the prior payment while addressing the under-compensation from 1997. This calculation ensures fair treatment by factoring in the past payment without overlooking future activities.

Delbert O'Brien, former Drainage Referee, notes in his paper 'Easements in Drainage' dated October 22, 2010:

"The owner of the land that is subject to the easement is entitled to have fair compensation for the land taken for the construction and for the land used in the maintenance" (pp. 7–8).

This approach aligns with O'Brien's emphasis on providing equitable compensation, accounting for both the initial impact and the continued maintenance obligations associated with drainage works.

The values used for calculating allowances for Right-of-Way are as follows:

Land Use	Land Value	Adjustment Factor for Drainage Act Right-of-Way	Adjusted Land Value for Drainage Act Right-of-Way Allowance
Agricultural (Open Drain working side)	$60,000/Ha	25%	$15,000/Ha
Agricultural (Closed Drains)	$30,000/Ha	25%	$7,500/Ha
Woodlots	$15,000/Ha	25%	$3,750/Ha

12.2 Allowances for Damages to Lands and Crops (Section 30)

Allowances for Damages to Lands and Crops under Section 30 of the Drainage Act, were primarily calculated to compensate landowners for crop losses, and land damages due to the construction of the drain and cleanout of the open ditch, including access to the working area.

It is anticipated that the working area will experience a complete crop loss in the year of construction, and a reduction in crop productivity for the following two years.

Area values used for calculating allowances for Damages to agricultural lands are $6,000/Ha, and $3,000/Ha for damages to woodlots.

Allowances for damages were provided to affected properties for the installation of the new tile drainage system as well as for the cleanout of the existing open ditch.

Allowances payable to Landowners are shown in Schedule A.

Total Allowances, under Sections 29 and 30 of the Drainage Act are $25,520.

Allowances will be deducted from the total assessments in accordance with Section 62(3) of the Drainage Act.

13.0 ESTIMATED CONSTRUCTION COSTS

Headway Engineering has made an estimate of the cost of the proposed construction work. A detailed description of the construction costs can be found in Schedule B of this report.

Part A – Main Open	$	17,050
Part B – Main Closed	$	115,420
Part C - Provisional Items	$	34,300
Total Estimated Construction Costs	**$**	**166,770**

14.0 SUMMARY OF ESTIMATED PROJECT COSTS

The total estimated project costs are as follows:

Allowances under Sections 29 and 30 of the Drainage Act (Refer to Schedule A)	$	25,520
Total Estimated Construction Costs (Refer to Schedule B)	$	166,770
Public engagements, survey, design and drafting, preparation of preliminary cost estimates and assessments, preparation of final drainage report, consideration of report	$	38,100
Environmental Agency Consultations and Approvals, including permit fees	$	1,000
Preparation of contract documents, contract administration, supervision and inspection of construction	$	19,500
Contingencies, Interest and net H.S.T.	$	14,510
TOTAL ESTIMATED PROJECT COSTS MASSON MUNICIPAL DRAIN	**$**	**265,400**

The estimated cost of the work in the Municipality of Morris-Turnberry is $265,400.

The above costs are estimates only. The final costs of construction, engineering and administration cannot be determined until the project is completed.

The above cost estimate does not include costs associated with defending the drainage report should appeals be filed with the Court of Revision, Drainage Tribunal and/or Drainage Referee. Should additional costs be incurred, unless otherwise directed, the additional costs would be distributed in a pro-rata fashion over the assessments contained in Schedule C and as may be varied under the Drainage Act.

15.0 ASSESSMENT

Headway Engineering assesses the cost of this work against the Lands and Roads as shown in Schedule C - Assessment for Construction.

Assessments were determined using the principles included in the 'Drainage Assessment Revisited' paper prepared by E.P. Dries and H.H. Todgham. These principles of assessment are recognized to be fair and equitable for determining cost distributions among those affected.

15.1 Benefit (Section 22)

Benefit assessment is applied to those properties receiving a benefit as defined in Section 1 of the Drainage Act which is extracted below:

> ***Benefit*** *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.*

Typically, properties which have direct, or near direct access to the proposed drain receive Benefit as defined above.

15.2 Outlet Liability (Section 23)

Outlet Liability is distributed to all properties within the watershed area on an adjusted area basis. The areas are adjusted to accurately reflect equivalent run-off rates relative to other lands and roads within the watershed. Due to development, roads have been assessed higher Outlet Liability rates relative to agricultural lands.

The calculations of outlet liability took into consideration areas of affected properties that were either tiled into the watershed for the Masson Drain, or if lands inside the natural topographical watershed were tiled out of it, to adjacent drainage systems. The size of these areas were determined from tile maps provided by landowners.

16.0 GRANT ELIGIBILITY

The Province of Ontario provides grants towards assessments to eligible properties for drainage improvements which meet specified criteria. The provision of these grants for activities under the Drainage Act is called the Agriculture Drainage Infrastructure Program (ADIP).

A grant may be available for assessments to privately owned parcels of land which are used for agricultural purposes and eligible for Farm Property Class Tax rate. Section 88 of the Drainage Act directs the Municipality to make application for this grant upon certification of completion. The Municipality will then deduct the grant from the assessments.

Grant values provided by the Province of Ontario are for one-third (1/3) of the total assessment for eligible properties.

17.0 ABANDONMENT OF EXISTING MUNICIPAL DRAINS

In accordance with Section 19 of the Drainage Act, the section of the existing municipal tile drainage system, including the twin-pipe (north and south run) drainage system, from the outlet into the Masson Drain open ditch, to the east side of the Unopened Road Allowance in Lot 26, Concession 3, shall be abandoned after the new closed drain is constructed.

The Gowing Branch tile drain shall remain a municipal drain, part of the Masson Municipal Drain.

18.0 MAINTENANCE

After completion, the Masson Municipal Drain (both open and closed portions) shall be maintained by the Municipality of Morris-Turnberry at the expense of all lands and roads assessed in accordance with the attached Schedule D – Assessment for Maintenance, and in the same relative proportions until such time as the assessment is changed under the Drainage Act.

Schedule A

Allowances

Schedule of Allowances
Masson Municipal Drain

Main Open

Property Details				Drainage Act Allowances		
Part Lot	Con.	Landowner	Roll Number	Right of Way (Sec. 29)	Damages (Sec. 30)	Total Allowances
23	3	PJ Farms Holding Co. Ltd.	3-030-00	$ 540.00	$ 260.00	$ 800.00
23	3	William Sellers	3-062-00	$ 360.00	$ 340.00	$ 700.00
24	3	Paul Johnston	3-063-00	$ 890.00	$ 420.00	$ 1,310.00
Total Allowances Main Open				**$ 2,680.00**	**$ 1,230.00**	**$ 3,910.00**

Main Closed

Property Details				Drainage Act Allowances		
Part Lot	Con.	Landowner	Roll Number	Right of Way (Sec. 29)	Damages (Sec. 30)	Total Allowances
24	3	Paul Johnston	3-063-00	$ 3,140.00	$ 6,290.00	$ 9,430.00
25	3	PBG Farms Inc.	3-064-00	$ 3,110.00	$ 8,570.00	$ 11,680.00
26	3	George Mueller	3-065-00	$ -	$ 500.00	$ 500.00
Total Allowances Main Closed				**$ 6,250.00**	**$ 15,360.00**	**$ 21,610.00**

	Drainage Act Allowances		
	Right of Way (Sec. 29)	Damages (Sec. 30)	Total Allowances
Total Allowances	**$ 8,930.00**	**$ 16,590.00**	**$ 25,520.00**

Schedule B

Estimated Construction Costs

Schedule of Estimated Construction Costs

An estimate of the cost of the proposed work has been completed, which is outlined in detail as follows:

Part A - Main Open

	Description	Estimated Quantity		$/Unit	Total
1)	Clearing, brushing and mulching	l.s.			$ 2,500.00
2)	Open ditch excavation (Sta. 0+000 to Sta. 0+190)	190	m	$ 15.00	$ 2,850.00
3)	Levelling of excavated material (approx. 60m^3)	190	m	$ 10.00	$ 1,900.00
4)	Seeding of disturbed side slopes	l.s.			$ 300.00
5)	Construction of quarry stone rip-rap lined plunge pool on geotextile filter material at the outlet of the Main Closed, Sta. 0+000	l.s.			$ 3,500.00
6)	Construction of riffle-pool sequence using 300-500mm dia. quarry stone (anchor stone) and 150-300mm dia. field stone on geotextile filter material at Sta. 0+100	l.s.			$ 3,500.00
7)	Construction of rock check dam using 150-300mm dia. quarry stone rip rap on geotextile filter material at Sta. 0+190, to be converted to a riffle at the end of construction	l.s.			$ 2,500.00

Total Estimated Construction Costs
Part A - Main Open

$ 17,050.00

Part B - Main Closed

	Description	Estimated Quantity	$/Unit	Total
1)	Supply 600mm diameter HDPE outlet pipe (CSA B182.6) complete with rodent grate	6 m	$ 150.00	$ 900.00
	Installation of 600mm diameter HDPE outlet pipe complete with quarry stone rip rap protection and geotextile filter material ($15m^2$) at the outlet (Sta. 0+000 to Sta. 0+006)	l.s.		$ 2,000.00
2)	Supply 600mm diameter concrete field tile	828 m	$ 65.00	$ 53,820.00
	Installation (Sta. 0+006 to Sta. 0+834)	828 m	$ 45.00	$ 37,260.00
3)	Supply and install 900mm X 1800mm concrete catch basin at Sta. 0+419 (inline type)	1 ea.	$ 6,000.00	$ 6,000.00
4)	Supply and install 900mm X 1800mm concrete junction box at Sta. 0+553	1 ea.	$ 5,000.00	$ 5,000.00
5)	Destroy existing drain (south run)	848 m	$ 5.00	$ 4,240.00
Sub-Total - Work on Lands				$ 109,220.00
6)	Work to be done on the Municipality of Morris-Turnberry Road Allowance, Unopened Road Allowance (Sta. 0+834 to Sta. 0+854)			
a)	Supply 600mm diameter concrete field tile	20 m	$ 65.00	$ 1,300.00
	Installation (Sta. 0+834 to Sta. 0+854)	20 m	$ 45.00	$ 900.00
b)	Supply and install 900mm X 1200mm concrete catch basin at Sta. 0+854 (inline type)	1 ea.	$ 4,000.00	$ 4,000.00
Sub-Total - Work on Unopened Road Allowance				$ 6,200.00

Total Estimated Construction Costs
Part B - Main Closed $ 115,420.00

Part C - Provisional Items

A Provisional Item is an item that may or may not be required as a part of the Contract. The decision as to whether a Provisional Item will form part of the Contract will be at the discretion of the engineer at time of construction. Payment for Provisional Items will only be made for work authorized in writing (text or email) by the Engineer. Payment for work performed under a Provisional Item shall be based on the Unit Price bid in the Scope of Work below.

1) Additional costs associated with installation of tile drain on 19mm diameter crushed clear stone bedding. This includes the supply and placement of all stone, and additional labour and equipment required for installation in accordance with the Typical Pipe Installation on wrapped Stone Bedding

Description	Estimated Quantity		$/Unit		Total
600mm diameter pipe	250 m	$	75.00	$	18,750.00

2) Additional costs associated with installation of tile drain on 19mm diameter crushed clear stone bedding. This includes the supply and placement of all stone, and additional labour and equipment required for installation in accordance with the Typical Pipe Installation on Stone Bedding Detail (un-wrapped bedding).

Description	Estimated Quantity		$/Unit		Total
600mm diameter pipe	200 m	$	60.00	$	12,000.00

3) Wheel machine lift outs due to stony 5 ea. $ 300.00 $ 1,500.00

4) Tile connections:

Description	Estimated Quantity*		$/Unit		Total
100mm diameter	10 ea.	$	90.00	$	900.00
150mm diameter	5 ea.	$	100.00	$	500.00
200mm diameter	5 ea.	$	130.00	$	650.00

*The Contractor shall be paid for the actual quantity of tile connections at the above fixed unit prices.

Total Estimated Construction Costs

Part C - Provisional Items	$	34,300.00

Summary of Estimated Construction Costs

Part A - Main Open	$	17,050.00
Part B - Main Closed	$	115,420.00
Part C - Provisional Items	$	34,300.00
Total Estimated Construction Costs	**$**	**166,770.00**
Total Estimated Materials	$	56,020.00
Total Estimated Labour and Equipment	$	110,750.00
Total Estimated Construction Costs Masson Municipal Drain	**$**	**166,770.00**

Schedule C

Assessment for Construction

Schedule of Assessment for Construction
Masson Municipal Drain

Main Open

Property Details					Drainage Act Instruments of Assessment			For Information		
Part Lot	Concession	Landowner	Roll Number	Approx. Ha. Affected	Benefit (Sec. 22)	Outlet Liability (Sec. 23)	Total Assessment	Less Gov't Grant	Less Allowances	Net Estimated Expense
23	3	PJ Farms Holding Co. Ltd.	3-030-00	0.70	$ 878.00	$ 39.00	$ 917.00	$ 306.00	$ 800.00	-$ 189.00
23	3	William Sellers	3-062-00	1.00	$ 400.00	$ 25.00	$ 425.00	$ 142.00	$ 700.00	-$ 417.00
24	3	Paul Gowing	3-031-00	15.12	$ 3,965.00	$ 1,571.00	$ 5,536.00	$ 1,845.00	$ 1,100.00	$ 2,591.00
24	3	Paul Johnston	3-063-00	21.53	$ 5,207.00	$ 2,623.00	$ 7,830.00	$ 2,610.00	$ 1,310.00	$ 3,910.00
25	3	Paul Gowing	3-032-00	15.74	$ -	$ 1,839.00	$ 1,839.00	$ 613.00	$ -	$ 1,226.00
25	3	PBG Farms Inc.	3-064-00	39.69	$ -	$ 4,637.00	$ 4,637.00	$ 1,546.00	$ -	$ 3,091.00
26 & 27	3	Hatert Poultry Farms Ltd.	3-033-00	10.52	$ -	$ 246.00	$ 246.00	$ 82.00	$ -	$ 164.00
26	3	George Mueller	3-065-00	29.54	$ -	$ 3,118.00	$ 3,118.00	$ 1,039.00	$ -	$ 2,079.00
27	3	Matthew Cardiff	3-066-00	6.32	$ -	$ 491.00	$ 491.00	$ 164.00	$ -	$ 327.00
Total Assessments on Lands					**$ 10,450.00**	**$ 14,589.00**	**$ 25,039.00**	**$ 8,347.00**	**$ 3,910.00**	**$ 12,782.00**
Cardiff Road		Municipality of Morris-Turnberry		0.35	$ -	$ 164.00	$ 164.00			$ 164.00
Unopened Road Allowance		Municipality of Morris-Turnberry		2.42	$ -	$ 197.00	$ 197.00			$ 197.00
Total Assessments on Roads					**$ -**	**$ 361.00**	**$ 361.00**			**$ 361.00**
Total Assessments Main Open					**$ 10,450.00**	**$ 14,950.00**	**$ 25,400.00**	**$ 8,347.00**	**$ 3,910.00**	**$ 13,143.00**

Main Closed

Property Details					Drainage Act Instruments of Assessment			For Information		
Part Lot	Concession	Landowner	Roll Number	Approx. Ha. Affected	Benefit (Sec. 22)	Outlet Liability (Sec. 23)	Total Assessment	Less Gov't Grant	Less Allowances	Net Estimated Expense
24	3	Paul Johnston	3-063-00	6.88	$ 15,369.00	$ 2,939.00	$ 18,308.00	$ 6,103.00	$ 9,430.00	$ 2,775.00
25	3	PBG Farms Inc.	3-064-00	39.69	$ 77,079.00	$ 29,082.00	$ 106,161.00	$ 35,387.00	$ 11,680.00	$ 59,094.00
26 & 27	3	Hatert Poultry Farms Ltd.	3-033-00	3.89	$ -	$ 677.00	$ 677.00	$ 226.00	$ -	$ 451.00
26	3	George Mueller	3-065-00	29.54	$ 56,756.00	$ 46,474.00	$ 103,230.00	$ 34,410.00	$ 500.00	$ 68,320.00
27	3	Matthew Cardiff	3-066-00	6.32	$ -	$ 7,314.00	$ 7,314.00	$ 2,438.00	$ -	$ 4,876.00
Total Assessments on Lands					**$ 149,204.00**	**$ 86,486.00**	**$ 235,690.00**	**$ 78,564.00**	**$ 21,610.00**	**$ 135,516.00**
Cardiff Road		Municipality of Morris-Turnberry		0.35	$ -	$ 1,579.00	$ 1,579.00			$ 1,579.00
Unopened Road Allowance		Municipality of Morris-Turnberry		1.77	$ 526.00	$ 2,205.00	$ 2,731.00			$ 2,731.00
Total Assessments on Roads					**$ 526.00**	**$ 3,784.00**	**$ 4,310.00**			**$ 4,310.00**
Total Assessments Main Closed					**$ 149,730.00**	**$ 90,270.00**	**$ 240,000.00**	**$ 78,564.00**	**$ 21,610.00**	**$ 139,826.00**

Notes:

1 All Lands may be eligible for ADIP Grants.

2 The Net Estimated Expense is the Total Assessment less gov't grants and allowances (if applicable).

Schedule of Assessment for Construction
Masson Municipal Drain

Masson Municipal Drain

Property Details					Summary of Assessment			For Information		
Part Lot	Concession	Landowner	Roll Number	Approx. Ha. Affected	Main Open	Main Closed	Total Assessment	Less Gov't Grant	Less Allowances	Net Estimated Expense
23	3	PJ Farms Holding Co. Ltd.	3-030-00	0.70	$ 917.00	$ -	$ 917.00	$ 306.00	$ 800.00	$ (189.00)
23	3	William Sellers	3-062-00	1.00	$ 425.00	$ -	$ 425.00	$ 142.00	$ 700.00	$ (417.00)
24	3	Paul Gowing	3-031-00	15.12	$ 5,536.00	$ -	$ 5,536.00	$ 1,845.00	$ 1,100.00	$ 2,591.00
24	3	Paul Johnston	3-063-00	21.53	$ 7,830.00	$ 18,308.00	$ 26,138.00	$ 8,713.00	$ 10,740.00	$ 6,685.00
25	3	Paul Gowing	3-032-00	15.74	$ 1,839.00	$ -	$ 1,839.00	$ 613.00	$ -	$ 1,226.00
25	3	PBG Farms Inc.	3-064-00	39.69	$ 4,637.00	$ 106,161.00	$ 110,798.00	$ 36,933.00	$ 11,680.00	$ 62,185.00
26 & 27	3	Hatert Poultry Farms Ltd.	3-033-00	10.52	$ 246.00	$ 677.00	$ 923.00	$ 308.00	$ -	$ 615.00
26	3	George Mueller	3-065-00	29.54	$ 3,118.00	$ 103,230.00	$ 106,348.00	$ 35,449.00	$ 500.00	$ 70,399.00
27	3	Matthew Cardiff	3-066-00	6.32	$ 491.00	$ 7,314.00	$ 7,805.00	$ 2,602.00	$ -	$ 5,203.00
Total Assessments on Lands					**$ 25,039.00**	**$ 235,690.00**	**$ 260,729.00**	**$ 86,911.00**	**$ 25,520.00**	**$ 148,298.00**
Cardiff Road		Municipality of Morris-Turnberry		0.35	$ 164.00	$ 1,579.00	$ 1,743.00			$ 1,743.00
Unopened Road Allowance		Municipality of Morris-Turnberry		2.42	$ 197.00	$ 2,731.00	$ 2,928.00			$ 2,928.00
Total Assessments on Roads					**$ 361.00**	**$ 4,310.00**	**$ 4,671.00**	**$ -**	**$ -**	**$ 4,671.00**
Total Assessments Masson Municipal Drain					**$ 25,400.00**	**$ 240,000.00**	**$ 265,400.00**	**$ 86,911.00**	**$ 25,520.00**	**$ 152,969.00**

Notes:

1 All Lands may be eligible for ADIP Grants.

2 The Net Estimated Expense is the Total Assessment less gov't grants and allowances (if applicable).

Schedule D

Assessment for Future Maintenance

Schedule of Assessment for Future Maintenance
Masson Municipal Drain

Masson Municipal Drain	Property Details				Portion of Maintenance Assessment	
	Part Lot	Con.	Landowner	Roll Number	Main Open	Main Closed
	23	3	PJ Farms Holding Co. Ltd.	3-030-00	2.00%	
	23	3	William Sellers	3-062-00	0.35%	
	24	3	Paul Gowing	3-031-00	10.31%	
	24	3	Paul Johnston	3-063-00	17.21%	5.45%
	25	3	Paul Gowing	3-032-00	12.06%	
	25	3	PBG Farms Inc.	3-064-00	30.42%	40.82%
	26 & 27	3	Hatert Poultry Farms Ltd.	3-033-00	1.61%	0.62%
	26	3	George Mueller	3-065-00	20.46%	42.24%
	27	3	Matthew Cardiff	3-066-00	3.22%	6.65%
	Total Assessments on Lands				97.64%	95.78%
	Cardiff Road		Municipality of Morris-Turnberry		1.07%	2.22%
	Unopened Road Allowance		Municipality of Morris-Turnberry		1.29%	2.00%
	Total Assessments on Roads				2.36%	4.22%
	Total Assessments Masson Municipal Drain				100.00%	100.00%

Notes:

1 Lands located upstream of the maintenance shall be determined by the Drainage Superintendent.

Specifications for the Construction of Municipal Drainage Works

DIVISION A – General Conditions
DIVISION B – Specification for Open Drains
DIVISION C – Specifications for Tile Drains
DIVISION H – Special Provisions

DIVISION A

General Conditions

CONTENTS

DIVISION A – GENERAL CONDITIONS

A.1. Scope

The work to be done under this contract consists of supplying all labour, equipment and materials to construct the drainage work as outlined in the Scope of Work, Drawings, General Conditions and other Specifications.

A.2. Tenders

Tenders are to be submitted on a lump sum basis for the complete works or a portion thereof, as instructed by the Municipality. The Scope of Work must be completed and submitted with the Form of Tender and Agreement. A certified cheque is required as Tender Security, payable to the Treasurer of the Municipality.

All certified cheques, except that of the bidder to whom the work is awarded will be returned within ten (10) days after the tender closing. The certified cheque of the bidder to whom the work is awarded will be retained as Contract Security and returned when the Municipality receives a Completion Certificate for the work.

A certified cheque is not required if the Contractor provides an alternate form of Contract Security such as a Performance Bond for 100% of the amount of the Tender or other satisfactory security, if required/permitted by the Municipality. A Performance Bond may also be required to insure maintenance of the work for a period of one (1) year after the date of the Completion Certificate.

A.3. Examinations of Site, Drawings, and Specifications

The Tenderer must examine the premises and site to compare them with the Drawings and Specifications in order to satisfy himself of the existing conditions and extent of the work to be done before submission of his Tender. No allowance shall subsequently be made on behalf of the Contractor by reason of any error on his part. Any estimates of quantities shown or indicated on the Drawings, or elsewhere are provided for the convenience of the Tenderer. Any use made of these quantities by the Tenderer in calculating his Tender shall be done at his own risk. The Tenderer for his own protection should check these quantities for accuracy.

The standard specifications (Divisions B through G) shall be considered complementary and where a project is controlled under one of the Divisions, the remaining Divisions will apply for miscellaneous works.

In case of any inconsistency or conflict between the Drawings and Specifications, the following order of precedence shall apply:

- Direction of the Engineer
- Special Provisions (Division H)
- Scope of Work
- Contract Drawings
- Standard Specifications (Divisions B through G)
- General Conditions (Division A)

A.4. Payment

Progress payments equal to 87±% of the value of work completed and materials incorporated in the work will be made to the Contractor monthly. An additional ten per cent (10±%) will be paid 60 days after the final acceptance by the Engineer, and three per cent (3±%) of the Contract price may be reserved by the Municipality as a maintenance holdback for a one (1) year period from the date of the Completion Certificate. A greater percentage of the Contract price may be reserved by the Municipality for the same one (1) year period if in the opinion of the Engineer, particular conditions of the Contract requires such greater holdback.

After the completion of the work, any part of this reserve may be used to correct defects developed within that time from faulty workmanship and materials, provided that notice shall first be given to the Contractor and that he may promptly make good such defects.

A.5. Contractor's Liability Insurance

Prior to commencement of any work, the Contractor shall file with the Municipality evidence of compliance with all Municipality insurance requirements (Liability Insurance, WSIB, etc.) for no less than the minimum amounts as stated in the Purchasing Procedures of the Municipality. All insurance coverage shall remain in force for the entire contract period including the warranty period which expires one year after the date of the Completion Certificate.

The following are to be named as co-insured:

- Successful Contractor
- Sub-Contractor
- Municipality
- Headway Engineering

A.6. Losses Due to Acts of Nature, Etc.

All damage, loss, expense and delay incurred or experienced by the Contractor in the performance of the work, by reason of unanticipated difficulties, bad weather, strikes, acts of nature, or other mischances shall be borne by the Contractor and shall not be the subject of a claim for additional compensation.

A.7. Commencement and Completion of Work

The work must commence as specified in the Form of Tender and Agreement. If conditions are unsuitable due to poor weather, the Contractor may be required, at the discretion of the Engineer to postpone or halt work until conditions become acceptable and shall not be subject of a claim for additional compensation.

The Contractor shall give the Engineer a minimum of 48 hours notice before commencement of work. The Contractor shall then arrange a meeting to be held on the site with Contractor, Engineer, and affected Landowners to review in detail the construction scheduling and other details of the work.

If the Contractor leaves the job site for a period of time after initiation of work, he shall give the Engineer and the Municipality a minimum of 24 hours notice prior to returning to the project. If any work is commenced without notice to the Engineer, the Contractor shall be fully responsible for all such work undertaken prior to such notification.

The work must proceed in such a manner as to ensure its completion at the earliest possible date and within the time limit set out in the Form of Tender and Agreement.

A.8. Working Area and Access

Where any part of the drain is on a road allowance, the road allowance shall be the working area. For all other areas, the working area available to the Contractor to construct the drain is specified in the Special Provisions (Division H).

Should the specified widths become inadequate due to unusual conditions, the Contractor shall notify the Engineer immediately. Where the Contractor exceeds the specified working widths without authorization, he shall be held responsible for the costs of all additional damages.

If access off an adjacent road allowance is not possible, each Landowner on whose property the drainage works is to be constructed, shall designate access to and from the working area. The Contractor shall not enter any other lands without permission of the Landowner and he shall compensate the Landowner for damage caused by such entry.

A.9. Sub-Contractors

The Contractor shall not sublet the whole or part of this Contract without the approval of the Engineer.

A.10. Permits, Notices, Laws and Rules

The Contractor shall obtain and pay for all necessary permits or licenses required for the execution of the work (but this shall not include MTO encroachment permits, County Road permits permanent easement or rights of servitude). The Contractor shall give all necessary notices and pay for all fees required by law and comply with all laws, ordinances, rules and regulations relating to the work and to the preservation of the public's health and safety.

A.11. Railways, Highways, and Utilities

A minimum of 72 hours' notice to the Railway or Highways, exclusive of Saturdays, Sundays, and Statutory Holidays, is required by the Contractor prior to any work activities on or affecting the applicable property. In the case of affected Utilities, a minimum of 48 hours' notice to the utility owner is required.

A.12. Errors and Unusual Conditions

The Contractor shall notify the Engineer immediately of any error or unusual conditions which may be found. Any attempt by the Contractor to correct the error on his own shall be done at his own risk. Any additional cost incurred by the Contractor to remedy the wrong decision on his part shall be borne by the Contractor. The Engineer shall make the alterations necessary to correct errors or to adjust for unusual conditions during which time it will be the Contractor's responsibility to keep his men and equipment gainfully employed elsewhere on the project.

The Contract amount shall be adjusted in accordance with a fair evaluation of the work added or deleted.

A.13. Alterations and Additions

The Engineer shall have the power to make alterations in the work shown or described in the Drawings and Specifications and the Contractor shall proceed to make such changes without causing delay. In

every such case, the price agreed to be paid for the work under the Contract shall be increased or decreased as the case may require according to a fair and reasonable evaluation of the work added or deleted. The valuation shall be determined as a result of negotiations between the Contractor and the Engineer, but in all cases the Engineer shall maintain the final responsibility for the decision. Such alterations and variations shall in no way render the Contract void. No claims for a variation or alteration in the increased or decreased price shall be valid unless done in pursuance of an order from the Engineer and notice of such claims made in writing before commencement of such work. In no such case shall the Contractor commence work which he considers to be extra before receiving the Engineer's approval.

A.14. Supervision

The Contractor shall give the work his constant supervision and shall keep a competent foreman in charge at the site.

A.15. Field Meetings

At the discretion of the Engineer, a field meeting with the Contractor or his representative, the Engineer and with those others that the Engineer deems to be affected, shall be held at the location and time specified by the Engineer.

A.16. Periodic and Final Inspections

Periodic inspections by the Engineer will be made during the performance of the work. If ordered by the Engineer, the Contractor shall expose the drain as needed to facilitate inspection by the Engineer.

Final inspection by the Engineer will be made within twenty (20) days after he has received notice from the Contractor that the work is complete.

A.17. Acceptance By the Municipality

Before any work shall be accepted by the Municipality, the Contractor shall correct all deficiencies identified by the Engineer and the Contractor shall leave the site neat and presentable.

A.18. Warranty

The Contractor shall repair and make good any damages or faults in the drain that may appear within one (1) year after its completion (as dated on the Completion Certificate) as the result of the imperfect or defective work done or materials furnished if certified by the Engineer as being due to one or both of these causes; but nothing herein contained shall be construed as in any way restricting or limiting the liability of the Contractor under the laws of the Country, Province or Locality in which the work is being done. Neither the Completion Certificate nor any payment there under, nor any provision in the Contract Documents shall relieve the Contractor from his responsibility.

A.19. Termination of Contract By The Municipality

If the Contractor should be adjudged bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should refuse or fail to supply enough properly skilled workmen or proper materials after having received seven (7) days notice in writing from the Engineer to supply additional workmen or materials to commence or complete the works, or if he should fail to make prompt payment to Sub-Contractors, or for material, or labour, or persistently disregards laws, ordinances, or the instruction of the Engineer,

or otherwise be guilty of a substantial violation of the provisions of the Contract, then the Municipality, upon the certificate of the Engineer that sufficient cause exists to justify such action, may without prejudice to any other right or remedy, by giving the Contractor written notice, terminate the employment of the Contractor and take possession of the premises, and of all materials, tools and appliances thereon, and may finish the work by whatever method the Engineer may deem expedient but without delay or expense. In such a case, the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the Contract price will exceed the expense of finishing the work including compensation to the Engineer for his additional services and including the other damages of every name and nature, such excess shall be paid by the Contractor. If such expense will exceed such unpaid balance, the Contractor shall pay the difference to the Municipality. The expense incurred by the Municipality, as herein provided, shall be certified by the Engineer.

If the Contract is terminated by the Municipality due to the Contractor's failure to properly commence the works, the Contractor shall forfeit the certified cheque bid deposit and furthermore shall pay to the Municipality an amount to cover the increased costs, if any, associated with a new Tender for the Contract being terminated.

If any unpaid balance and the certified cheque do not match the monies owed by the Contractor upon termination of the Contract, the Municipality may also charge such expense against any money which may thereafter be due to the Contractor from the Municipality.

A.20. Tests

The cost for the testing of materials supplied to the job by the Contractor shall be borne by the Contractor. The Engineer reserves the right to subject any lengths of any tile or pipe to a competent testing laboratory to ensure the adequacy of the tile or pipe. If any tile supplied by the Contractor is determined to be inadequate to meet the applicable A.S.T.M. standards, the Contractor shall bear full responsibility to remove and/or replace all such inadequate tile in the Contract with tile capable of meeting the A.S.T.M. Standards.

A.21. Pollution

The Contractor shall keep their equipment in good repair. The Contractor shall refuel or repair equipment away from open water.

If polluted material from construction materials or equipment is caused to flow into the drain, the Contractor shall immediately notify the Ministry of the Environment, and proceed with the Ministry's protocols in place to address the situation.

A.22. Species and Risk

If a Contractor encounters a known Species at Risk as designated by the MNR or DFO, the Contractor shall notify the Engineer immediately and follow the Ministry's guidelines to deal with the species.

A.23. Road Crossings

This specification applies to all road crossings (Municipality, County, Regional, or Highway) where no specific detail is provided on the drawings or in the standard specifications. This specification in no way limits the Road Authority's regulations governing the construction of drains on their Road Allowance.

A.23.1. Road Occupancy Permit

Where applicable, the Contractor must submit an application for a road occupancy permit to the Road Authority and allow a minimum of five (5) working days for its review and issuance.

A.23.2. Road Closure Request and Construction Notification

The Contractor shall submit written notification of construction and request for road closure (if applicable) to the Road Authority and the Engineer for review and approval a minimum of five (5) working days prior to proceeding with any work on the road allowance. The Contractor shall be responsible for notifying all applicable emergency services, schools, etc. of the road closure or construction taking place.

A.23.3. Traffic Control

The Contractor shall supply flagmen, and warning signs and ensure that detour routes are adequately signed in accordance with no less than the minimum standards as set out in the Ontario Traffic Manual's Book 7.

A.23.4. Weather

No construction shall take place during inclement weather or periods of poor visibility.

A.23.5. Equipment

No construction material and/or equipment is to be left within three (3) metres of the travelled portion of the road overnight or during periods of inclement weather.

If not stated on the drawings, the road crossing shall be constructed by open cut method. Backfill from the top of the cover material over the subsurface pipe or culvert to the under side of the road base shall be Granular "B". The backfill shall be placed in lifts not exceeding 300mm in thickness and each lift shall be thoroughly compacted to 98% Standard Proctor. Granular "B" road base for County Roads and Highways shall be placed to a 450mm thickness and Granular "A" shall be placed to a thickness of 200mm. Granular road base materials shall be thoroughly compacted to 100% Standard Proctor.

Where the road surface is paved, the Contractor shall be responsible for placing HL-8 Hot Mix Asphalt patch at a thickness of 50mm or of the same thickness as the existing pavement structure. The asphalt patch shall be flush with the existing roadway on each side and without overlap.

Excavated material from the trench beyond 1.25 metres from the travelled portion or beyond the outside edge of the gravel shoulder may be used as backfill in the trench in the case of covered drains. The material shall be compacted in lifts not exceeding 300mm.

A.24. Laneways

All pipes crossing laneways shall be backfilled with material that is clean, free of foreign material or frozen particles and readily tamped or compacted in place unless otherwise specified. Laneway culverts on open ditch projects shall be backfilled with material that is not easily erodible. All backfill material shall be thoroughly compacted as directed by the Engineer.

Culverts shall be bedded with a minimum of 300mm of granular material. Granular material shall be placed simultaneously on each side of the culvert in lifts not exceeding 150mm in thickness and compacted to 95% Standard Proctor Density. Culverts shall be installed a minimum of 10% of the

culvert diameter below design grade with a minimum of 450mm of cover over the pipe unless otherwise noted on the Drawings.

The backfill over culverts and subsurface pipes at all existing laneways that have granular surfaces on open ditch and closed drainage projects shall be surfaced with a minimum of 300mm of Granular "B" material and 150mm of Granular "A" material. All backfill shall be thoroughly compacted as directed by the Engineer. All granular material shall be placed to the full width of the travelled portion.

Any settling of backfilled material shall be repaired by or at the expense of the Contractor during the warranty period of the project and as soon as required.

A.25. Fences

No earth is to be placed against fences and all fences removed by the Contractor shall be replaced by him in as good a condition as found. Where practical the Contractor shall take down existing fences in good condition at the nearest anchor post and roll it back rather than cutting the fence and attempting to patch it. The replacement of the fences shall be done to the satisfaction of the Engineer. Any fences found in such poor condition where the fence is not salvageable, shall be noted and verified with the Engineer prior to commencement of work.

Fences damaged beyond repair by the Contractor's negligence shall be replaced with new materials, similar to those materials of the existing fence, at the Contractor's expense. The replacement of the fences shall be done to the satisfaction of the Landowner and the Engineer.

Any fences paralleling an open ditch that are not line fences that hinder the proper working of the excavating machinery, shall be removed and rebuilt by the Landowner at his own expense.

The Contractor shall not leave fences open when he is not at work in the immediate vicinity.

A.26. Livestock

The Contractor shall provide each landowner with 48 hours notice prior to removing any fences along fields which could possibly contain livestock. Thereafter, the Landowner shall be responsible to keep all livestock clear of the construction areas until further notified. The Contractor shall be held responsible for loss or injury to livestock or damage caused by livestock where the Contractor failed to notify the Landowner, or through negligence or carelessness on the part of the Contractor.

A.27. Standing Crops

The Contractor shall be responsible for damages to standing crops which are ready to be harvested or salvaged along the course of the drain and access routes if the Contractor has failed to notify the Landowners 48 hours prior to commencement of the work on that portion of the drain.

A.28. Surplus Gravel

If as a result of any work, gravel or crushed stone is required and not all the gravel or crushed stone is used, the Contractor shall haul away such surplus material.

A.29. Iron Bars

The Contractor is responsible for the cost of an Ontario Land Surveyor to replace any iron bars that are altered or destroyed during the course of the construction.

A.30. Rip-Rap

Rip-rap shall be quarry stone rip-rap material and shall be the sizes specified in the Special Provisions. Broken concrete shall not be used as rip-rap unless otherwise specified.

A.31. Clearing, Grubbing and Brushing

This specification applies to all brushing where no specific detail is provided on the drawings or in the Special Provisions.

The Contractor shall clear, brush and stump trees from within the working area that interfere with the installation of the drainage system.

All trees, limbs and brush less than 150mm in diameter shall be mulched. Trees greater than 150mm in diameter shall be cut and neatly stacked in piles designated by the Landowners.

A.32. Restoration of Lawns

This specification applies to all lawn restoration where no specific detail is provided on the drawings or in the Special Provisions and no allowance for damages has been provided under Section 30 of the Drainage Act RSO 1990 to the affected property.

The Contractor shall supply “high quality grass seed” and the seed shall be broadcast by means of an approved mechanical spreader. All areas on which seed is to be placed shall be loose at the time of broadcast to a depth of 25mm. Seed and fertilizer shall be spread in accordance with the supplier’s recommendations unless otherwise directed by the Engineer. Thereafter it will be the responsibility of the Landowner to maintain the area in a manner so as to promote growth

END OF DIVISION

DIVISION B

Specifications for Open Drains

CONTENTS

DIVISION B – SPECIFICATIONS FOR OPEN DRAINS

B.1. Alignment

The drain shall be constructed in a straight line and shall follow the course of the present drain or water run unless noted on the drawings. Where there are unnecessary bends or irregularities on the existing course of the drain, the Contractor shall contact the Engineer before commencing work to verify the manner in which such irregularities or bends may be removed from the drain. All curves shall be made with a minimum radius of fifteen (15) metres from the centre line of the drain.

B.2. Profile

The Profile Drawing shows the depth of cuts from the top of the bank to the final invert of the ditch in metres and decimals of a metre, and also the approximate depth of excavated material from the bottom of the existing ditch to the final invert of the ditch. These cuts are established for the convenience of the Contractor; however, bench marks (established along the course of the drain) will govern the final elevation of the drain. The location and elevation of the bench marks are given on the Profile Drawing. Accurate grade control must be maintained by the Contractor during ditch excavation.

B.3. Excavation

The bottom width and the side slopes of the ditch shall be those shown on the drawings. If the channel cross-section is not specified it shall be a one metre bottom width with 1.5(h):1(v) side slopes. At locations along the drain where the cross section dimensions change, there shall be a transitional length of not less than 10:1 (five metre length to 0.5 metre width differential). Where the width of the bottom of the existing ditch is sufficient to construct the design width, then construction shall proceed without disturbing the existing banks.

Where existing side slopes become unstable, the Contractor shall immediately notify the Engineer. Alternative methods of construction and/or methods of protection will then be determined prior to continuing work.

Where an existing drain is being relocated or where a new drain is being constructed, the Contractor shall strip the topsoil for the full width of the drain, including the location of the spoil pile. Upon completion of levelling, the topsoil shall be spread to an even depth across the full width of the spoil.

An approved hydraulic excavator shall be used to carry out the excavation of the open ditch unless otherwise directed by the Engineer.

B.4. Excavated Material

Excavated material shall be placed on the low side of the drain or opposite trees and fences. The Contractor shall contact all Landowners before proceeding with the work to verify the location to place and level the excavated material.

No excavated material shall be placed in tributary drains, depressions, or low areas which direct water behind the spoil bank. The excavated material shall be placed and levelled to a maximum depth of 200 mm, unless instructed otherwise and commence a minimum of one (1) metre from the top of the bank. The edge of the spoil bank away from the ditch shall be feathered down to the existing ground; the edge of the spoil bank nearest the ditch shall have a maximum slope of 2(h):1(v). The material shall be levelled such that it may be cultivated with ordinary farm equipment without causing undue

hardship to the farm machinery and farm personnel. No excavated material shall cover any logs, brush, etc. of any kind.

Any stones or boulders which exceed 300mm in diameter shall be removed and disposed of in a location specified by the Landowner.

Where it is necessary to straighten any unnecessary bends or irregularities in the alignment of the ditch or to relocate any portion or all of an existing ditch, the excavated material from the new cut shall be used for backfilling the original ditch. Regardless of the distance between the new ditch and the old ditch, no extra compensation will be allowed for this work and must be included in the Contractor's lump sum price for the open work.

B.5. Excavation at Existing Bridge and Culvert Sites

The Contractor shall excavate the drain to the full specified depth under all bridges and to the full width of the structure. Temporary bridges may be carefully removed and left on the bank of the drain but shall be replaced by the Contractor when the excavation is complete. Permanent bridges must, if at all possible, be left intact. All necessary care and precautions shall be taken to protect the structure. The Contractor shall notify the Landowner if excavation will expose the footings or otherwise compromise the structural integrity of the structure.

The Contractor shall clean through all pipe culverts to the grade and width specified on the profile.

B.6. Pipe Culverts

All pipe culverts shall be installed in accordance with the standard detail drawings. If couplers are required, five corrugation couplers shall be used for up to and including 1200mm diameter pipes and 10 corrugation couplers for greater than 1200mm diameter pipes.

When an existing crossing is being replaced, the Contractor may backfill the new culvert with the existing native material that is free of large rocks and stones. The Contractor is responsible for any damage to a culvert pipe that is a result of rocks or stones in the backfill.

B.7. Rip-Rap Protection For Culverts

Quarry stone rip-rap shall be used as end treatment for new culverts and placed on geotextile filter material (Mirafi 160N or approved equal). The rip-rap shall be adequately keyed in along the bottom of the slope, and shall extend to the top of the pipe or as directed on the drawings. The maximum slope for rip-rap shall be 1(h):1(v) or as directed by the Engineer.

The Contractor shall be responsible for any defects or damages that may develop in the rip-rap or the earth behind the rip-rap that the Engineer deems to have been fully or partially caused by faulty workmanship or materials.

B.8. Clearing, Grubbing and Mulching

Prior to excavation, all trees, scrub, fallen timber and debris shall be removed from the side slopes of the ditch and for such a distance on the working side so as to eliminate any interference with the construction of the drain or the spreading of the spoil. The side slopes shall be neatly cut and cleared flush with the slope whether or not they are affected directly by the excavation. With the exception of large stumps causing damage to the drain, the side slopes shall not be grubbed. All other cleared areas shall be grubbed and the stumps put into piles for disposal by the Landowner.

All trees or limbs 150mm or larger, that is necessary to remove, shall be cut, trimmed and neatly stacked in the working width for the use or disposal by the Landowner. Brush and limbs less than 150mm in diameter shall be mulched. Clearing, grubbing and mulching shall be carried out as a separate operation from the excavation of the ditch, and shall not be completed simultaneously at the same location.

B.9. Tributary Tile Outlets

All tile outlets in existing ditches shall be marked by the Landowner prior to excavation. The Contractor shall guard against damaging the outlets of tributary drains. Any tile drain outlets that were marked or noted on the drawings and are subsequently damaged by the Contractor shall be repaired by the Contractor at his expense. The Landowner shall be responsible for repairs to damaged tile outlets that were not marked.

B.10. Seeding

The side slopes where disturbed shall be seeded using an approved grass seed mixture. The grass seed shall be applied the same day as the excavation of the open ditch.

Grass seed shall be fresh, clean and new crop seed, meeting the requirements of the MTO and composed of the following varieties mixed in the proportion by weight as follows:

- 55% Creeping Red Fescue
- 40% Perennial Rye Grass
- 5% White Clover

Grass seed shall be applied at the rate of 100 kg/ha.

B.11. Hydro Seeding

The areas specified in the contract document shall be hydro seeded and mulched upon completion of construction in accordance with O.P.S.S. 572.

B.12. Hand Seeding

Placement of the seed shall be of means of an approved mechanical spreader.

B.13. Completion

At the time of completion and final inspection, all work in the Contract shall have the full dimensions and cross-sections specified without any allowance for caving of banks or sediment in the ditch bottom.

END OF DIVISION

Headway Engineering

DIVISION C

Specifications for Tile Drains

CONTENTS

DIVISION C – SPECIFICATIONS FOR TILE DRAINS

C.1. Pipe Materials

Concrete Tile

Concrete drain tile shall conform to the requirements of the most recent A.S.T.M. specification for Heavy-Duty Extra Quality drain tile. All tile with diameters less than 600mm shall have a pipe strength of 1500D. All tile with diameters 600mm or larger shall have a pipe strength of 2000D.

All tile furnished shall be subject to the approval of the Engineer. All rejected tile are to be immediately removed from the site.

High Density Polyethylene (HDPE) Pipe

All HDPE pipe shall be dual-wall corrugated drainage pipe with a smooth inner wall. HDPE pipe shall have a minimum stiffness of 320 kPa at 5% deflection.

Unless otherwise noted, all sealed HDPE pipe shall have a water tight gasketed bell and spigot joining system meeting the minimum requirements of CSA B182.8. Perforated HDPE pipe shall have a soil tight joining system, and shall be enveloped in non-woven geotextile filter sock.

C.2. Alignment

The Contractor shall contact the Engineer to establish the course of the drain. Where an existing drain is to be removed and replaced by the new drain, or where the new drain is to be installed parallel to an existing drain, the Contractor shall locate the existing drain (including repairing damaged tile caused by locating) at intervals along the course of the drain. The costs of locating shall be included in the tender price.

The drain shall run in as straight a line as possible throughout its length, except that at intersections of other watercourses or at sharp corners, it shall run on a curve of at least 15 metres radius. The new tile drain shall be constructed at an offset from and parallel with any ditch or defined watercourse in order that fresh backfill in the trench will not be eroded by the flow of surface water.

The Contractor shall exercise care not to disturb any existing tile drain or drains which parallel the course of the new drain, particularly where the new and existing tile act together to provide the necessary capacity. Where any such existing drain is disturbed or damaged, the Contractor shall perform the necessary repair at his expense.

C.3. Profile

Benchmarks have been established along the course of the drain which are to govern the elevations of the drain. The location and elevations of the benchmarks are shown on the drawings. Tile is to be installed to the elevation and grade shown on the profiles. Accurate grade control must be maintained by the Contractor at all times.

When installing a drain towards a fixed point such as a bore pipe, the Contractor shall uncover the pipe and confirm the elevation a sufficient distance away from the pipe in order to allow for any necessary minor grade adjustments to be made.

C.4. Excavation

Wheel machine

Unless otherwise specified, all trenching shall be carried out with a wheel machine approved by the Engineer. The wheel machine shall shape the bottom of the trench to conform to the outside diameter of the pipe. The minimum trench width shall be equal to the outside diameter of the pipe plus 100mm on each side of the pipe, unless otherwise specified. The maximum trench width shall be equal to the outside diameter of the pipe plus 300mm on each side of the pipe, unless otherwise specified.

Scalping

Where the depths of cuts in isolated areas along the course of the drain as shown on the profile exceed the capability of the Contractor's wheel machine, he shall lower the surface grade in order that the wheel machine may trench to the correct depth. Topsoil is to be stripped over a sufficient width that no subsoil will be deposited on top of the topsoil. Subsoil will then be removed to the required depth and piled separately. Upon completion, the topsoil will then be replaced to an even depth over the disturbed area. The cost for this work shall be included in his tender price.

Excavator

Where the use of an excavator is used in-lieu of a wheel machine, the topsoil shall be stripped and replaced in accordance with Item C.4.2. All tile shall be installed on 19mm clear crushed stone bedding placed to a minimum depth of 150mm which has been shaped to conform to the bottom of the pipe. The Contractor shall include the costs of this work in his tender price.

C.5. Installation

Concrete Tile

The tile is to be laid with close joints and in regular grade and alignment in accordance with the drawings. The tiles are to be bevelled, if necessary to ensure close joints. The inside of the tile is to be kept clear when laid. The sides of the tile are to be supported by partial filling of the trench (blinding) prior to inspection by the Engineer. No tile shall be backfilled until inspected by the Engineer unless otherwise permitted by the Engineer. The tile shall be backfilled such that a sufficient mound of backfill is placed over the trench to ensure that no depression remains after settling occurs in the backfill.

Where a tile connects to a catch basin or similar structure, the Contractor shall include in his tender price for the supply and placement of compacted Granular 'A' bedding or 19mm clear crushed stone under areas backfilled from the underside of the pipe to undisturbed soil. Where a tile drain passes through a bore pit, the Contractor shall include in his tender price for the supply and placement of compacted Granular 'A' bedding or 19mm clear crushed stone from the underside of the pipe down to undisturbed soil with the limits of the bore pit.

The Contractor shall supply and wrap all concrete tile joints with Mirafi 160N geotextile filter material as part of this contract. The width of the filter material should be:

- 300mm wide for tile sizes 150mm diameter to 350mm diameter.
- 400mm wide for tile sizes 400mm diameter to 750mm diameter.
- 500mm wide for tile sizes larger than 750mm diameter.

The filter material shall completely cover the tile joint and shall have a minimum overlap of 300mm. The type of filter material shall be.

HDPE Pipe

HDPE pipe shall be installed using compacted Granular 'A' bedding or 19mm clear crushed stone bedding from 150mm below the pipe to 300mm above the pipe. All granular material shall be compacted using a suitable mechanical vibratory compactor. Granular bedding and backfill shall be placed in lifts not exceeding 300mm and compacted to at least 95% Standard Proctor Maximum Dry Density (SPMDD).

Where a pipe connects to a catch basin or similar structure, the Contractor shall include in his tender price for the supply and placement of compacted Granular 'A' bedding or 19mm clear crushed stone under areas backfilled from the underside of the pipe to undisturbed soil. Where a pipe passes through a bore pit, the Contractor shall include in his tender price for the supply and placement of compacted Granular 'A' bedding or 19mm clear crushed stone from the underside of the pipe down to undisturbed soil with the limits of the bore pit.

As determined by the Engineer, unsuitable backfill material must be hauled off-site by the Contractor and Granular "B" shall be used as replacement backfill material.

C.6. Trench Crossings

The Contractor shall not cross the backfilled trench with any construction equipment or vehicles, except by one designated crossing location on each property. The Contractor shall ensure that the bedding and backfill material at this designated crossing location is properly placed and compacted so as to adequately support the equipment and vehicles that may cross the trench. The Contractor may undertake any other approved work to ensure the integrity of the tile at the crossing location. The Contractor shall ensure that no equipment or vehicles travel along the length of the trench. The Contractor shall be responsible for any damage to the new tile caused by the construction of the drain.

C.7. Outlet Protection

A tile drain outlet into a ditch shall be either HDPE pipe or corrugated steel pipe and shall include a hinged grate for rodent protection. The maximum spacing between bars on the rodent grate shall be 40mm. All corrugated steel outlet pipes shall be bevelled at the end to generally conform to the slope of the ditch bank.

Quarry stone rock rip-rap protection and geotextile filter material (Mirafi 160N), shall be installed around the outlet pipe and extended downstream a minimum distance of three metres, unless otherwise specified. The protection shall extend to the top of the backfilled trench and below the pipe to 300 mm under the streambed. The protection shall also extend 600mm into undisturbed soil on either side of the backfilled trench. In some locations, rip-rap may be required on the bank opposite the outlet.

Where the outlet occurs at the upper end of an open ditch, the rip-rap protection will extend all around the end of the ditch and to a point 800mm downstream on either side. Where heavy overflow is likely to occur, sufficient additional rip-rap and filter material shall be placed as directed by the Engineer to prevent the water cutting around the protection.

C.8. Catch Basins and Junction Boxes

Unless otherwise noted, catch basins shall be in accordance with OPSD 705.010 and 705.030. The catch basin grate shall be a "Birdcage" type substantial steel grate, removable for cleaning and shall be inset into a recess provided around the top of the structure. The grate shall be fastened to the catch basin with bolts into the concrete. Spacing of bars on grates for use on 600mmX600mm

structures shall be 65mm centre to centre. Spacing of bars on grates for use on structures larger than 600mmX600mm shall be 90mm.

All catch basins shall be backfilled with compacted Granular 'A' or 19mm clear crushed stone placed to a minimum width of 300mm on all sides. If settling occurs after construction, the Contractor shall supply and place sufficient granular material to maintain the backfill level flush with adjacent ground. The riser sections of the catch basin shall be wrapped with filter cloth.

Quarry stone rip-rap protection shall be placed around all catch basins and shall extend a minimum distance of one (1) metre away from the outer edge of each side of the catch basin, and shall be placed so that the finished surface of the rip-rap is flush with the existing ground.

If there are no existing drains to be connected to the catch basin at the top end of the drain, a plugged tile shall be placed in the upstream wall with the same elevations as the outlet tile.

Junction boxes shall have a minimum cover over the lid of 450mm.

The Contractor shall include in his tender price for the construction of a berm behind all ditch inlet structures. The berm shall be constructed of compacted clay keyed 300mm into undisturbed soil. The top of the spill way of the earth berm shall be the same elevation as the high wall of the ditch inlet catch basin. The earth berm shall be covered with 100mm depth of topsoil and seeded with an approved green seed mixture. The Contractor shall also include for regrading, shaping and seeding of road ditches for a maximum of 15 metres each way from all catch basins.

The Contractor shall clean all catch basin sumps after completion of the drain installation. Catch basin markers shall be placed beside each catch basin.

C.9. Tributary Drains

Any tributary tile encountered in the course of the drain is to be carefully taken up by the Contractor and placed clear of the excavated earth. If the tributary drains encountered are clean or reasonably clean, they shall be connected into the new drain in accordance with the typical tile drain connection detail. Tributary tile drain connections into the new drain shall be made using high density polyethylene agricultural drain tubing installed on and backfilled with 19mm clear crushed stone. All tile drain connections into the new drain shall be either a cored hole with an insert coupler or a manufactured tee.

Where the existing drains are full of sediment, the decision to connect the tributary drain to the new drain shall be left to the Engineer. The Contractor shall be paid for each tributary drain connection as outlined in the Form of Tender and Agreement.

The Contractor shall be responsible for all tributary tile connections for a period of one year from the date of the Completion Certificate. After construction, any missed tile connections required to be made into the new drain shall be paid at the same rate as defined in the Form of Tender and Agreement. The Contractor will have the option to make any subsequent tile connections or have the Municipality make the required connections and have the cost of which deducted from the holdback.

Where an open ditch is being replaced by a new tile drain, existing tile outlets entering the ditch from the side opposite the new drain shall be extended to the new drain.

Where the Contractor is required to connect an existing tile which is not encountered in the course of the drain, the cost of such work shall constitute an extra to the contract.

C.10. Clearing, Grubbing and Mulching

The Contractor shall clear, brush and stump trees from within the working area.

All trees or limbs 150mm or larger, that is necessary to remove, shall be cut, trimmed and neatly stacked in the working width for the use or disposal by the Landowner. Brush and limbs less than 150mm in diameter shall be mulched.

Clearing, grubbing and mulching shall be carried out as a separate operation from installing the drain, and shall not be completed simultaneously at the same location.

C.11. Roads and Laneway Sub-Surface Crossings

All roads and laneway crossings may be made with an open cut. The Contractor may use original ground as backfill to within 600mm of finished grade only if adequate compaction and if the use of the original ground backfill has been approved beforehand by the Engineer.

C.12. Filling In Existing Ditches

The Contractor shall backfill the ditch sufficiently for traversing by farm equipment. If sufficient material is available on-site to fill in the existing ditch, the topsoil shall be stripped and the subsoil shall be bulldozed into the ditch and the topsoil shall then be spread over the backfilled waterway. The Contractor shall ensure sufficient compaction of the backfill and if required, repair excess settlement up to the end of the warranty period.

C.13. Construction of Grassed Waterways

Where the Contractor is required to construct a grassed waterway, the existing waterway shall be filled in, regraded, shaped and a seed bed prepared prior to applying the grass seed. The grass seed shall be fresh, clean and new crop seed, meeting the requirements of the MTO.

- 55% Creeping Red Fescue
- 15% Perennial Rye Grass
- 27% Kentucky Bluegrass
- 3% White Clover

Grass seed shall be applied at the rate of 100 kg/ha.

C.14. Unstable Soil

The Contractor shall immediately contact the Engineer if unstable soil is encountered. The Engineer shall, after consultation with the Contractor, determine the action necessary and a price for additions or deletions shall be agreed upon prior to further drain installation.

C.15. Rocks

The Contractor shall immediately contact the Engineer if boulders of sufficient size and number are encountered such that the Contractor cannot continue trenching with a wheel machine. The Engineer shall determine the action necessary and a price for additions or deletions shall be agreed upon prior to further drain installation.

If only scattered large stone or boulders are removed on any project, the Contractor shall either excavate a hole to bury same adjacent to the drain, or he shall haul the stones or boulders to a location designated by the Landowner.

C.16. Broken or Damaged Tile

The Contractor shall remove and dispose of all broken (existing or new), damaged or excess tile off site.

C.17. Recommended Practice For Construction of Sub-Surface Drainage Systems

Drainage Guide for Ontario, Ministry of Agriculture, Food and Rural Affairs, Publication 29 and its amendments, dealing with the construction of Subsurface Drainage Systems, shall be the guide to all methods and materials to be used in the construction of tile drains except where superseded by other Specifications of the Contract.

END OF DIVISION

SPECIAL PROVISIONS

Masson Municipal Drain

CONTENTS

Special Provisions means special directions containing requirements particular to the work not adequately provided for by the standard or supplemental specifications. Special provisions shall take precedence and govern over any standard or supplemental specification.

1.0 GENERAL

The Contractor shall notify the Landowner, the Drainage Superintendent, and the Engineer 48 hours prior to construction.

The Contractor shall arrange a pre-construction meeting and shall invite the Engineer, Drainage Superintendent, and the Landowners on whose property work will take place.

The Contractor shall verify the location of the new drainage system with the Engineer and Landowners prior to construction.

The Contractor shall check and verify all dimensions and elevations and report any discrepancies to the Engineer prior to proceeding with the work.

The Contractor must maintain access to all driveways along the route of the drain as well as always maintain access for all emergency vehicles during the construction.

The Contractor shall be responsible for settlement within the warranty period.

2.0 UTILITIES

All utilities shall be located and uncovered in the affected areas by the Contractor prior to construction.

The locations and elevations of all utilities shown on the drawings are approximate locations. Actual locations and elevations of all utilities must be verified by the Contractor prior to construction.

The Contractor shall arrange to have a representative of the utility owner on site during construction if it is a requirement by the utility owner.

3.0 WORKING AREA AND ACCESS

Access to the working area shall be from Cardiff Road, along the west side of the south half of Lot 25, Concession 3, as shown on the attached set of plans.

The working area for the installation of the tile drainage system shall be an average width of 25m for construction purposes and an average width of 10m for maintenance purposes along the alignment of the proposed closed drain.

The working area for the open ditch work shall be an average width of 12m on the primary working side of the existing ditch (the south and west sides), for construction purposes, and 10m on the working side for maintenance purposes.

4.0 CLEARING, BRUSHING AND MULCHING

The Contractor shall clear, brush and mulch trees from within the working area that interfere with the construction of the drainage system. The Contractor shall not clear all trees within the working area unless the full working width in a specific section is required for the installation of the drain and unless the Engineer has authorized the full clearing of the trees.

All trees, limbs, and brush less than 150mm in diameter shall be mulched/chipped. Clearing and brushing shall be done prior to the construction of the drain. Trees and branches greater than 150mm in diameter shall be cut into lengths no greater than four metres and placed in nearby stacks designated by the Landowner.

5.0 OPEN DITCH EXCAVATION

An approved hydraulic excavator shall be used to carry out the excavation of the open ditch. The open ditch shall have a 900mm bottom width and shall be parabolic in shape. The side slopes shall be a 1.5H:1V or flatter.

6.0 EXCAVATED MATERIAL

The excavated material from the ditch cleanout shall be spread on the working side of the ditch to a maximum depth of 200mm.

7.0 PIPE AND INSTALLATION

7.1 Concrete Field Tile

An approved wheel trencher shall be used to install the concrete field tile whenever possible.

All concrete tile shall be Heavy-Duty Extra Quality Concrete Drain Tile 2000D.

Where the drain is to be installed by means of an approved wheel trencher, the Contractor shall strip the topsoil for the specified width centred on the proposed drain. Where there is no specified width for stripping topsoil, the Contractor shall strip the topsoil for a minimum of four metres, centred on the trench.

Where the drain is to be installed by means of an approved hydraulic excavator (due to poor soil conditions), the Contractor shall strip the topsoil for a width equal to the top width of the trench, or the specified width, whichever is greater. The Contractor shall stockpile the topsoil and later spread it over the backfilled trench. The Contractor shall ensure that the top soiled trench is left in a condition such that the landowner can perform final restoration using nothing more than farm equipment. The Contractor will not attempt to place frozen topsoil over the backfilled trench.

Concrete field tile installed by means of a wheel machine shall be backfilled using suitable native material. The backfill shall not be compacted but a sufficient mound shall be left over the trench by the Contractor to allow for settlement flush with adjacent lands.

Concrete field tile installed by means of an approved hydraulic excavator shall be installed using 19mm crushed stone bedding from a minimum of 150mm below the pipe to the springline of the pipe. Suitable native material shall be used as backfill from the springline to the underside of the topsoil.

The Contractor shall supply and wrap all concrete joints with geotextile filter material. The width of the filter material shall be:

- 400mm wide with 400mm overlap for tile sizes 400mm diameter and larger.
- 300mm wide with 300mm overlap for tile sizes 350mm diameter and smaller.

The filter material shall completely cover the tile joint.

The Contractor shall be responsible for all trench settlement within the warranty period.

7.2 High Density Polyethylene Pipe (HDPE)

All HDPE pipe shall be CSA B182.6 with water tight jointing systems unless otherwise specified.

All HDPE pipe shall be installed using 19mm crushed stone bedding (or approved equivalent) from a minimum of 150mm below the pipe to 150mm above the pipe. Suitable native material shall be used as backfill from 150mm above the pipe to the underside of the topsoil.

The Contractor shall be responsible for all trench settlement within the warranty period.

7.3 Poor Soil Conditions

The Contractor shall submit a unit price for installation of the pipe per the detail on wrapped crushed stone bedding as a provisional item. The provisional amount for installation on wrapped crushed stone bedding shall include the supply and installation of all additional labour, equipment and materials required for the installation of the pipe by this method.

If poor soil conditions are encountered, the Contractor shall install the pipe in accordance with the detail for wrapped crushed stone bedding and shall be entitled to the provisional tender amount, in addition to the tendered standard installation price. The Contractor shall be paid for the actual lengths installed in this condition.

8.0 SEEDING

The Contractor shall supply and spread an approved handseed mixture (OPS 804 – Standard Roadside Mix) over the disturbed areas of the open ditch.

All seed shall be applied using the manufacturer's application recommendations.

9.0 OUTLET

The Contractor shall place quarry stone rip-rap protection 150mm to 300mm dia. and placed 450mm deep in the streambed and up the side slope of the open ditch in accordance with the outlet detail included in the drawing set.

Rip-rap is to be placed from the outlet of the new tile drain, upstream to the top end of the ditch and around the existing outlet pipes.

Rip-rap to be placed on an approved geotextile filter material.

10.0 EXISTING DRAINS/TILE CONNECTIONS, NEW DRAIN ALIGNMENT

The Contractor shall locate the existing drains prior to the installation of the new drainage systems.

The Contractor shall make all tributary tile drain connections.

The Contractor shall be responsible for all tile connections for a period of one year after the issuance of the completion certificate. Tile connections required to be made within this warranty period shall be made at the expense of the Contractor. After construction, the Contractor will be given the option to make any subsequent tile connections or have the Township make said connections and have the costs of which deducted from the holdback.

The Contractor shall supply all necessary materials to compete the connections of the existing drains to the new drain. The type of materials used to make the tributary drain connections shall be verified with the engineer.

All existing drains cut off during the installation of the new drainage system that will be connected to the new drainage system shall be flagged or marked by the Contractor prior to the connection being made.

The new tile drainage system shall be installed along the alignment of the southern existing tile from Sta. 0+000 to Sta. 0+553, and along the existing tile from Sta, 0+553 to Sta. 0+854.

The existing southern tile drain shall be destroyed in place by the Contractor.

11.0 CATCH BASINS AND JUNCTION BOXES

All catch basins shall be precast concrete catch basins and shall have a 300mm sump.

Knockouts shall be provided in all catch basins.

All catch basin grates shall be fastened to the new catch basin and shall be hot dipped galvanized bird cage grates. Catch basin marker signs shall be erected at all catch basins.

All existing catch basins that are to be removed shall be disposed of off-site by the Contractor.

The catch basin grate elevations shall be set to the satisfaction of the Engineer. Lifts shall be placed by the Contractor on all catch basins if necessary to achieve the desired elevation when field setting the structures.

All catch basins shall be installed using 19mm crushed stone bedding from 150mm below the structure to 150mm above the top of the highest pipe entering or exiting the structure. Structures within the road allowances shall have 300mm minimum of Granular 'B' (or equivalent) backfill around all sides up to the underside of the topsoil layer. Structures on private property shall be backfilled using approved native material up to the underside of the topsoil layer. All backfill material shall be placed and thoroughly compacted evenly around each structure in lifts not exceeding 300mm to minimize settlement around the structures.

The Contractor shall be responsible for all settlement around catch basins. Should the area around the catch basin settle after construction, the Contractor shall be responsible for providing additional rip-rap required so that the top of the rip-rap is flush with the surrounding ground.

The Contractor shall place quarry stone rip-rap material for a width of 1 metre around all sides of the catch basins and shall be placed on geotextile filter material.

All holes for catch basin pipe connections to be cored by the manufacturer. All pipes entering or exiting a catch basin shall be installed such that the face of the pipe is flush with the inside wall of the structure.

The Contractor shall be responsible to repair or reapply mortar for all mortared connections into any catch basin for a period of one year after the completion certificate has been issued.

12.0 RIP-RAP

All stone rip-rap material shall be quarry stone 150mm to 300mm diameter and placed to a depth of 450mm, unless otherwise noted. All rip-rap material shall be placed on geotextile filter material.

The Contractor shall not use broken concrete tile as rip-rap protection.

13.0 RIFFLE-POOL SEQUENCES, PLUNGE POOL & ROCK CHECK DAM

Riffles, the rock check dam and plunge pool shall be constructed in accordance with the details included in the attached set of drawings.

For the riffles, anchor stones shall be 300mm to 500mm diameter angular stone. Rounded field stone shall be used to fill the voids of the anchor stone and shape the remaining portions of the riffle structure. The Contractor may check with the landowner to see if suitable field stone is available, otherwise approved rounded stone shall be imported and placed by the Contractor.

The Contractor shall place quarry stone rip-rap protection 150mm to 300mm dia. and placed 450mm deep in accordance with the Plunge Pool Detail in the attached set of plans.

The Contractor shall construct a rock check dam at Main Drain (Open) Sta. 0+190 in accordance with the "Typical Rock Check Dam Detail" found in the attached set of plans. The Contractor shall monitor and maintain the rock check dam regularly during the duration of construction, and specifically before predicted rainfall events, and after rainfall events.

After construction of the drainage systems are complete, the Contractor shall spread the rock rip-rap from the rock check dam along the ditch and side slopes, as per the engineer's instructions.

If dewatering of the ditch is required, the outlet for the dewatering system shall either be into a well vegetated area adjacent to the ditch within the working corridor, or downstream of the isolated area to be worked on.

Fish screens shall be placed over any pump inlets at all times during use.

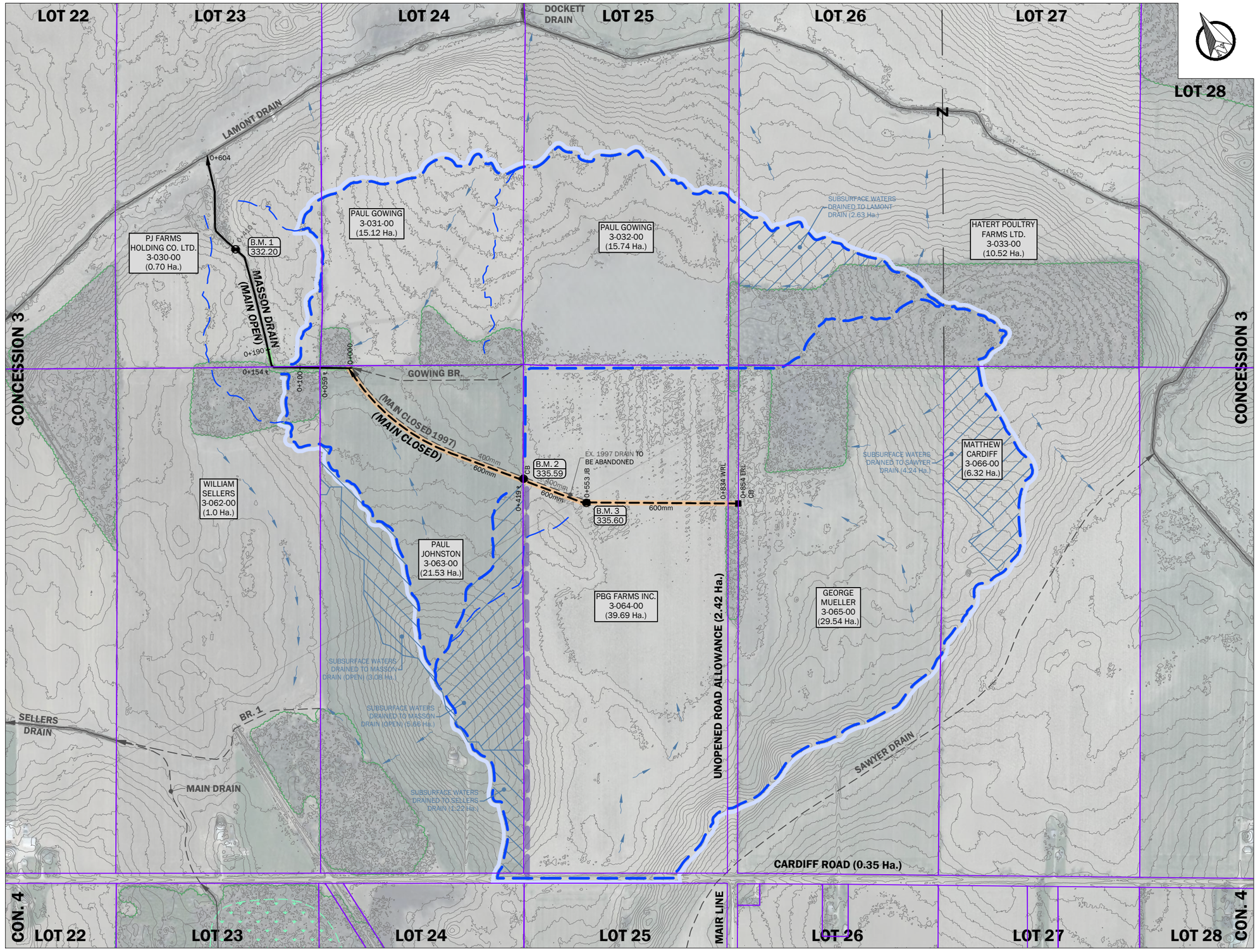
All rip-rap to be placed on an approved geotextile filter material.

14.0 EROSION AND SEDIMENT CONTROL

The Contractor shall provide adequate erosion and sediment control for the duration of the construction including monitoring and maintenance of the control measures put in place.

The Contractor shall inspect the erosion and sediment control measures regularly, especially before predicted rainfall events, and after rainfall events. The Contractor shall ensure all erosion and sediment control measures are secure prior to any anticipated rainfall events, and shall once again be inspected after the event. The Contractor shall reconstruct any erosion and sediment control measures, that were harmed during any rainfall events.

All erosion and sediment control measures shall be placed prior to construction, and be inspected daily, and shall remain in place until all construction activities are completed.



PLAN SCALE

0 150 300 450

MUNICIPALITY OF MORRIS-TURNBERRY

MORRIS WARD

MASSON MUNICIPAL DRAIN

Watershed Plan

NOTES:

1. THIS MAP WAS CREATED USING COUNTY OF HURON GEOGRAPHIC INFORMATION SYSTEM DIGITAL DATA. THIS MAP IS A SECONDARY PRODUCT WHICH HAS NOT BEEN VERIFIED BY THE COUNTY OF HURON.
2. THE CONTOURS WERE CREATED USING IMAGERY DERIVED DIGITAL DATA (2015) FROM LAND INFORMATION ONTARIO.

BENCHMARK DESCRIPTIONS

BENCHMARK No. 1 **ELEV.=332.20**
TOP UPSTREAM END OF 750mmØ CSP CULVERT AT STA. 0+403 (OPEN)

BENCHMARK No. 2 **ELEV.=335.59**
TOP SOUTHWEST CORNER OF EXISTING CATCH BASIN AT STA. 0+419 (CLOSED)

BENCHMARK No. 3 **ELEV.=335.60**
TOP SOUTHWEST CORNER OF EXISTING CATCH BASIN AT STA. 0+553 (CLOSED)

LEGEND

- LOT/CONCESSION LINE
- PROPERTY LINE
- MAJOR WATERSHED BOUNDARY
- MINOR WATERSHED BOUNDARY
- WETLAND LIMIT
- CONSTRUCTION/MAINTENANCE ACCESS
- BENCHMARK LOCATION
- B.M. 1 / 123.45 — BENCHMARK No. / BENCHMARK ELEVATION
- JOHN & JANE SMITH / 12-345 / (12.3 Ha.) — LANDOWNER NAME(S) / ASSESSMENT ROLL No. (ABBREVIATED) / AREA WITHIN WATERSHED

EXISTING FEATURES:
- DRAIN NAME — OPEN DRAIN WITH CROSSING AND FLOW DIRECTION
- DRAIN NAME (CB, MH) — CLOSED DRAIN WITH CATCH BASIN, MANHOLE AND FLOW DIRECTION
- OVERLAND FLOW PATH

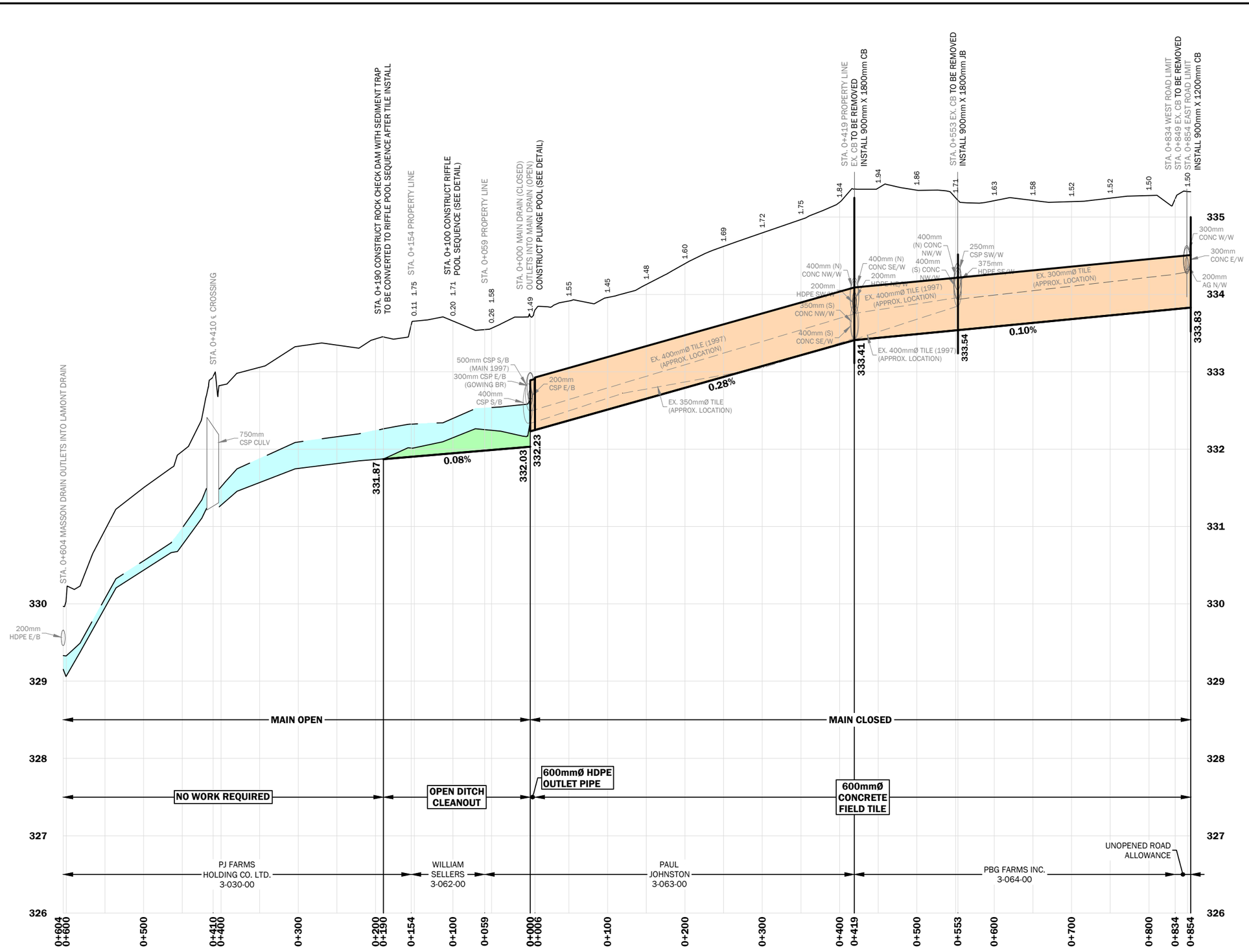
PROPOSED FEATURES:
- DRAIN NAME — OPEN DRAIN WITH CROSSING AND FLOW DIRECTION
- DRAIN NAME (CB, MH) — CLOSED DRAIN WITH CATCH BASIN, MANHOLE AND FLOW DIRECTION

LICENSED PROFESSIONAL ENGINEER S.G.R. BRICKMAN 100150920 PROVINCE OF ONTARIO

No.	REVISION	DATE (YY-MM-DD)
4	REPORT SUBMISSION	24-10-25
3	MVCA SUBMISSION	24-10-23
2	PUBLIC INFORMATION MEETING	24-08-28
1	ON-SITE MEETING	23-11-30

Headway Engineering

DRAWN BY:	DESIGNED BY:	CHECKED BY:
R.U.	M.T.	S.B.
DATE:	REFERENCE No.	DRAWING No.
2024-10-25	MT-003	1 OF 4



PROFILE SCALES

HORZ. 0 100 200 300

VERT. 0 1 2 3

SCHEDULE OF PIPE MATERIALS

	MATERIAL	DIAMETER (mm)	STATION RANGE	LENGTH (m)
1.	HIGH DENSITY POLYETHYLENE OUTLET PIPE	600	0+000 - 0+006	6
2.	CONCRETE FIELD TILE	600	0+006 - 0+849	843

MUNICIPALITY OF MORRIS-TURNBERRY

MORRIS WARD

MASSON MUNICIPAL DRAIN

Profile

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LICENSED PROFESSIONAL ENGINEER S.G.R. BRICKMAN 100150920 PROVINCE OF ONTARIO Oct.25.2024

No.	REVISION	DATE (YY-MM-DD)
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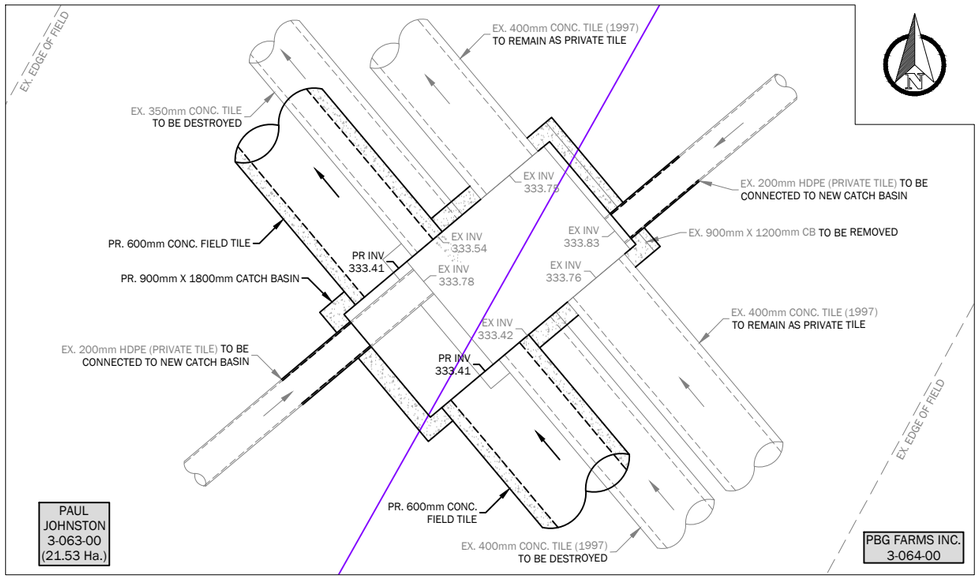
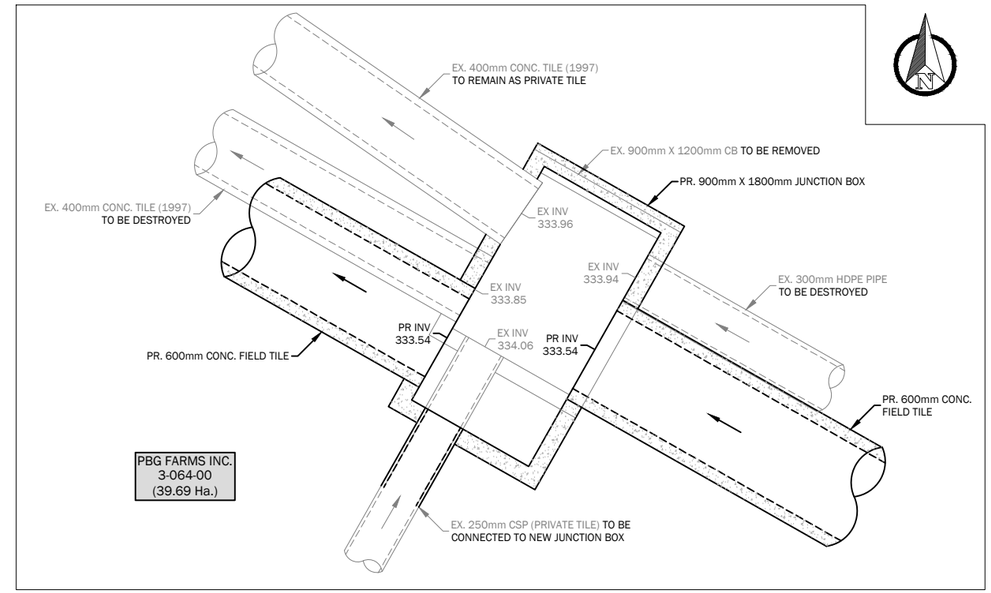
2024-10-25	MT-003	2 OF 4



CATCH BASIN AT STA. 0+419 DETAIL

N.T.S.



JUNCTION BOX AT STA. 0+553 DETAIL

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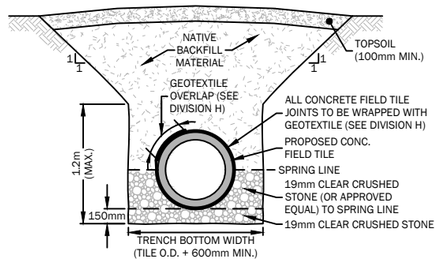

TYPICAL CONCRETE TILE INSTALLATION ON STONE BEDDING DETAIL

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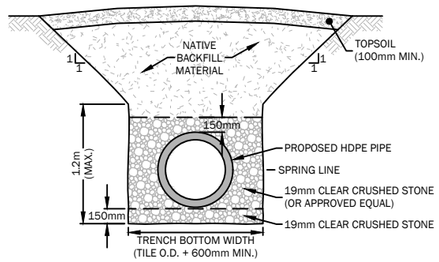

TYPICAL HDPE PIPE INSTALLATION ON STONE BEDDING DETAIL

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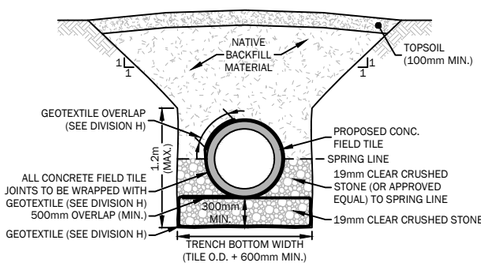

TYPICAL CONC. TILE INSTALLATION ON WRAPPED STONE BEDDING DETAIL (PROVISIONAL ITEM)

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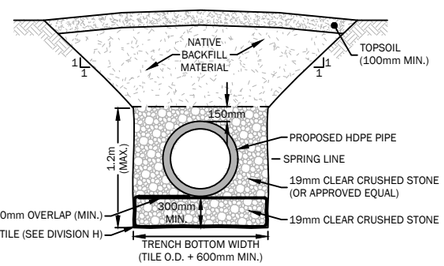
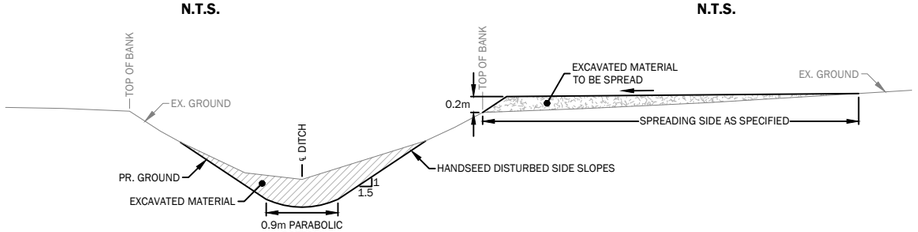


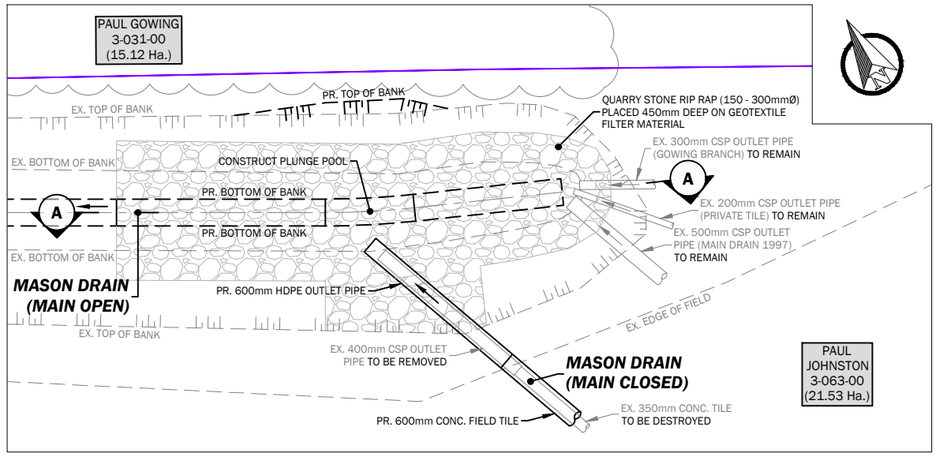
TYPICAL HDPE PIPE INSTALLATION ON WRAPPED STONE BEDDING DETAIL (PROVISIONAL ITEM)

N.T.S.



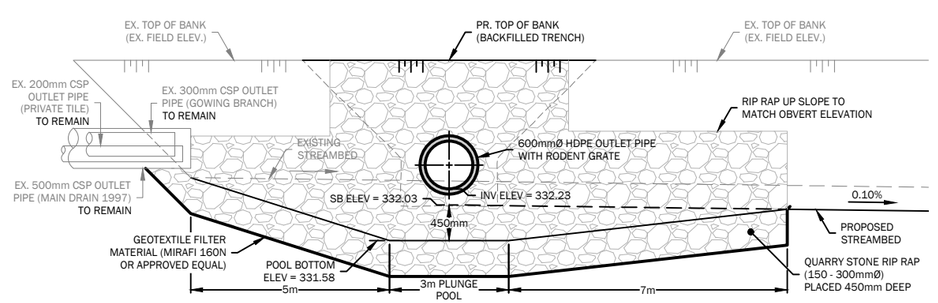
TYPICAL CLEANOUT/DITCH EXCAVATION DETAIL

N.T.S.



OUTLET DETAIL

N.T.S.



OUTLET DETAIL SECTION A-A

N.T.S.

MUNICIPALITY OF MORRIS-TURNBERRY

MORRIS WARD

MASSON MUNICIPAL DRAIN

Details
(Dwg 1 of 2)

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LEGEND

PROPERTY LINE

JOHN & JANE SMITH 12-345 (12.3 Ha.)
- LANDOWNER NAME(S)
- ASSESSMENT ROLL No. (ABBREVIATED)
- AREA WITHIN WATERSHED

S.G.R. BRICKMAN 100150920 — LICENSED PROFESSIONAL ENGINEER — Oct. 25, 2024 — PROVINCE OF ONTARIO

No.	REVISION	DATE (YY-MM-DD)
4	REPORT SUBMISSION	24-10-25
3	MVCA SUBMISSION	24-10-23
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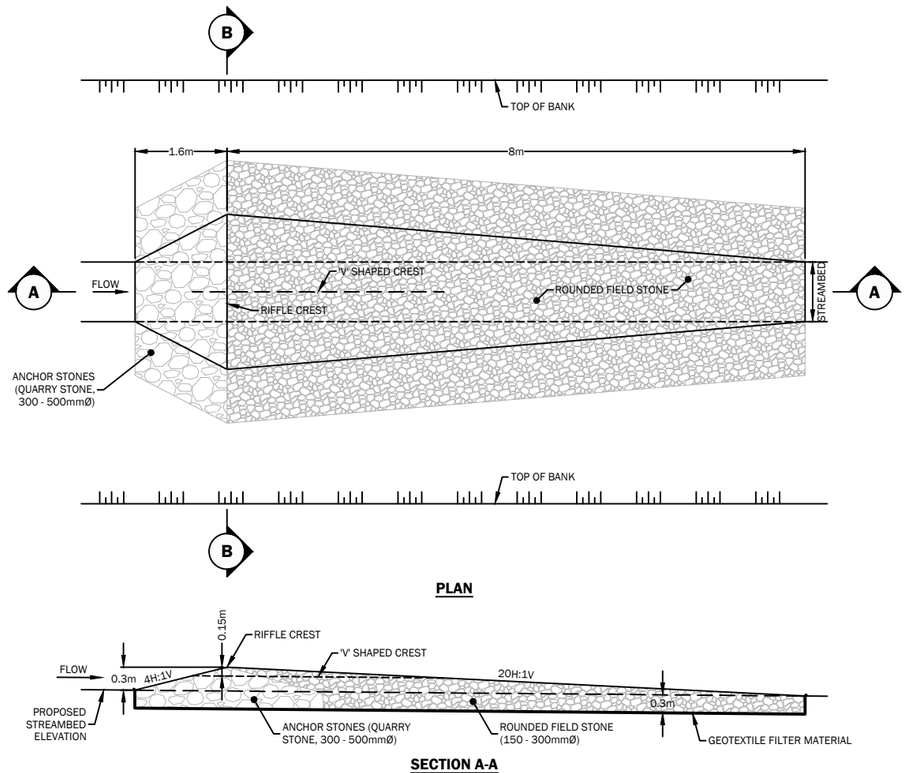
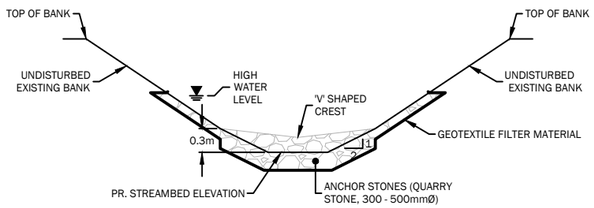
Headway Engineering

DRAWN BY:	DESIGNED BY:	CHECKED BY:
R.U.	M.T.	S.B.
DATE:	REFERENCE No.	DRAWING No.
2024-10-25	MT-003	3 OF 4



PLAN

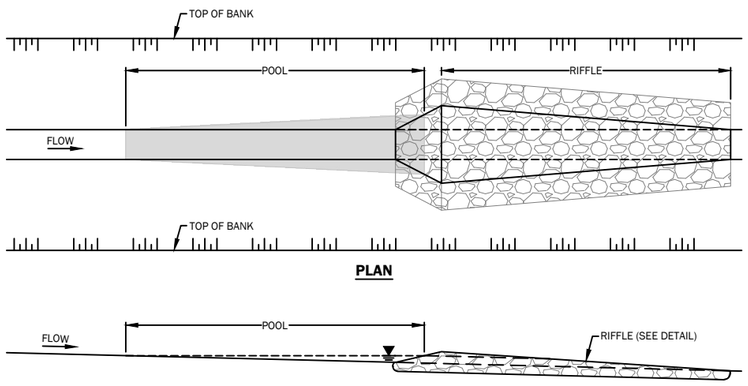
SECTION A-A



SECTION B-B

TYPICAL RIFFLE DETAIL

N.T.S.

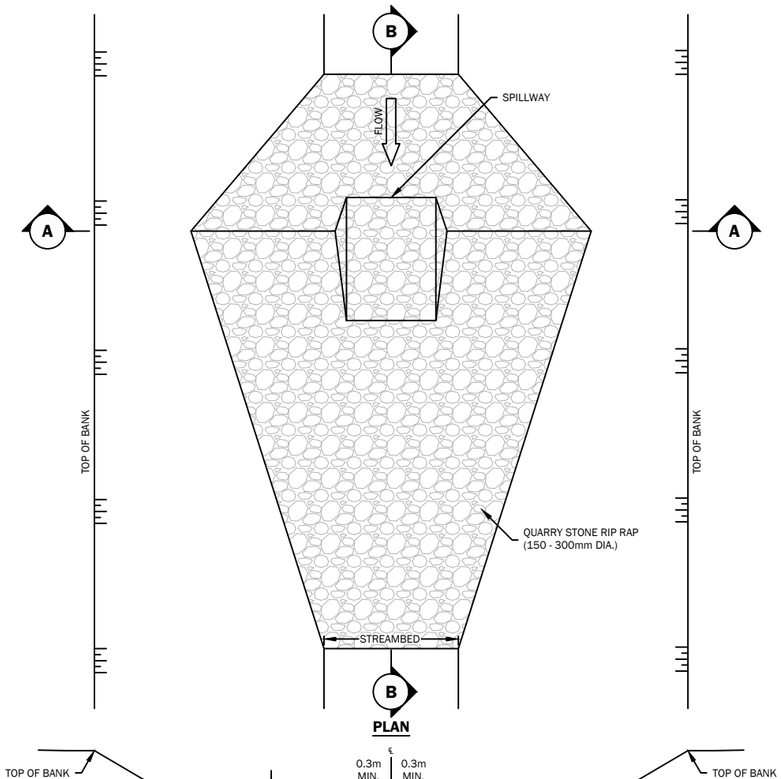


PLAN

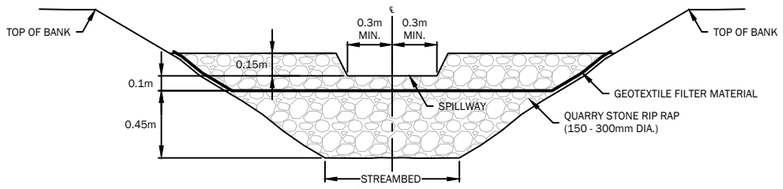
SECTION

TYPICAL RIFFLE POOL SEQUENCE DETAIL

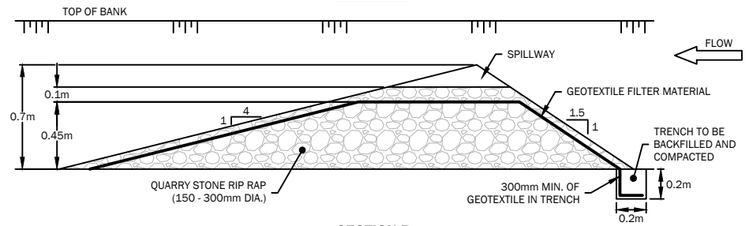
N.T.S.



PLAN



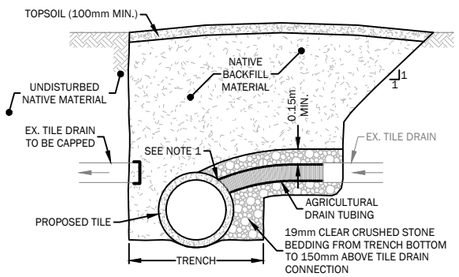
SECTION A



SECTION B

TYPICAL ROCK CHECK DAM DETAIL

N.T.S.



NOTE:
1. ALL TILE CONNECTIONS TO BE EITHER A CORED HOLE WITH AN INSERT COUPLER, OR A MANUFACTURED TEE.
2. CLEAR CRUSHED STONE BEDDING NOT REQUIRED IF DUAL WALL H.D.P.E. PIPE IS USED FOR THE CONNECTION.

TYPICAL TILE CONNECTION DETAIL

N.T.S.

MUNICIPALITY OF
MORRIS-TURNBERRY

MORRIS WARD

MASSON MUNICIPAL DRAIN

Details
(Dwg 2 of 2)

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LICENSED PROFESSIONAL ENGINEER
S.G.R. BRICKMAN
100150920
Oct. 25, 2024
PROVINCE OF ONTARIO

No.	REVISION	DATE (YY-MM-DD)
4	REPORT SUBMISSION	24-10-25
3	MVCA SUBMISSION	24-10-23
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Headway Engineering

DRAWN BY:	DESIGNED BY:	CHECKED BY:
R.U.	M.T.	S.B.
DATE:	REFERENCE No.	DRAWING No.
2024-10-25	MT-003	4 OF 4

CORPORATION OF THE MUNICIPALITY OF MORRIS-TURNBERRY

BY-LAW NO. 54-2024

Being a by-law to provide for drainage works in the Municipality of Morris-Turnberry in the County of Huron.

WHEREAS the Council of the Municipality of Morris-Turnberry, in the County of Huron has procured a report under section 4 of the *Drainage Act, R.S.O. 1990* for the improvement of the Masson Municipal Drain;

AND WHEREAS the report dated October 25th, 2024, has been authored by Headway Engineering, 23-500 Fairway Road South, Suite 308, Kitchener, Ontario, and said report is attached hereto and forms part of this by-law.

AND WHEREAS the estimated total cost of constructing the drainage works is $ 265,400.00.

AND WHEREAS the Council of the Municipality of Morris-Turnberry is of the opinion that the drainage of the area is desirable;

NOW THEREFORE, the Council of the Corporation of the Municipality pursuant to the Drainage Act enacts as follows:

1. **Authorization**

   The attached report is adopted. The drainage works are authorized and shall be completed as specified in the report.

2. **Borrowing**

   The Corporation of the Municipality of Morris-Turnberry may borrow on the credit of the Corporation the amount of $ 265,400.00 being the amount necessary for the construction of the Drainage Works.

   This project will be debentured.

3. **Debentures**

   The corporation may issue debentures for the amount borrowed less the total amount of:

   a. grants received under Section 85 of the Act;
   b. commuted payments made in respect of lands and roads assessed within the municipality;
   c. money paid under subsection 61 (3) of the Act; and
   d. money assessed in and payable by another municipality,

4. **Payment**

   Such debenture(s) shall be made payable within three (3) years from the date of the debenture(s) and shall bear interest at a rate not higher than 2% more than the municipal lending rates as posted by Infrastructure Ontario on the date of sale of such debenture(s).

   a. All assessments of $1,000.00 or less are payable in the first year in which the assessment in imposed.

   b. All assessments under $30.00 shall be added to the municipal tax roll to be collected in the same manner and at the same time as other taxes collected.

5. Citation

This By-law comes into force on the final passing thereof and may be cited as the "Masson Municipal Drain 2024 By-law."

Read a FIRST and SECOND time and PROVISIONALLY ADOPTED this 19th day of November 2024.

Mayor, Jamie Heffer

Clerk, Trevor Hallam

Read a THIRD time and FINALLY PASSED this 14th day of January, 2025.

Mayor, Jamie Heffer

Clerk, Trevor Hallam

MUNICIPALITY OF MORRIS-TURNBERRY
REPORT TO COUNCIL

TO: Mayor and Council
PREPARED BY: Kirk Livingston, Chief Building Official
DATE: October 31ST, 2024
SUBJECT: Property Standards and By-Law Enforcement Report for September and October 2024

RECOMMENDATION

THAT the Council of the Municipality of Morris-Turnberry hereby receive the Chief Building Officials report on Property Standards & By-Law Enforcement for the months of September and October 2024 as submitted for information purposes.

BACKGROUND

The Building Department's main objective is to provide the best professional service to administer and enforce the Ontario Building Code along with any Municipal By-Laws. Through the examination of plans, issuance of building permits, reviewing bylaws, and performing inspections, we ensure compliance with building standards of the Ontario Building Code and compliance with Municipal By-Laws to ensure health and safety, fire protection and structural sufficiency in all buildings in the Municipality.

The findings outlined below provided by Bruce Brockelbank, Property Standards and By-Law Enforcement Officer.

COMMENTS

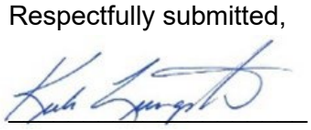
By-law Enforcement – New Complaints

- Turnberry Street – I received a complaint about a dog constantly barking.

Outstanding Files and Ongoing Investigations

- Blyth Road – I've scheduled a meeting with a cleanup company to go over their responsibilities and determine what additional resources will be needed. I've also reached out to a towing company to remove vehicles on the day of the cleanup. Additionally, I plan to hire a police officer to be present during the event.
- Turnberry Street – I was directed to visit the property and charge the owner for not having a dog tag and for allowing the dog to bark. I will go to the property and issue the charges as soon as possible.
- Josephine St – I visited the property to address property standards concerns and issued an order to remove an unlicensed pickup. Since the order was not followed, the vehicle was towed to an impound yard. I also sent a letter to the owner informing them of where the vehicle was taken and how it can be reclaimed.
- I sent Kirk a new Parking Bylaw for comments and any revisions before bringing to council.
- I sent Kirk a draft Sign Bylaw for comments and any revisions before bringing to council.

Respectfully submitted,



Kirk Livingston
Chief Building Official

MUNICIPALITY OF MORRIS-TURNBERRY
REPORT TO COUNCIL

TO: Mayor and Council
PREPARED BY: Kirk Livingston, Chief Building Official
DATE: November 6, 2024
SUBJECT: Building Department Activity Report for September and October 2024

RECOMMENDATION

THAT the Council of the Municipality of Morris-Turnberry hereby receive the Building Department Activity Report for September and October 2024, for information purposes.

BACKGROUND

The Building Departments main objective is to provide the best professional service to administer and enforce the Ontario Building Code. Through the examination of plans, issuance of building permits, and performing inspections, we ensure compliance with building standards of the Ontario Building Code and ensure health and safety, fire protection and structural sufficiency in all buildings in which we live, work and play.

The Chief Building Official provides bi-monthly updates to Council on the operations of the Building Department.

COMMENTS

Permit #	Permit Type	Value of Project	Sq. Feet New Const.	Status
0068 -2024	Deck	$ 12,000.00	64	issued
0069 -2024	Deck	$ 27,000.00	369	issued
0070 -2024	Agricultural Storage Shed	$ 300,000.00	5000	issued
0071 -2024	Agricultural Storage Shed	$ 10,000.00	1600	issued
0072 -2024	Agricultural Storage - Addition	$ 25,000.00	1280	issued
0073 -2024	Deck	$ 60,000.00	1453	issued
0074 -2024	Plumbing	$ 4,000.00	0	issued
0075 -2024	Detached Garage	$ 60,000.00	960	issued
0076 -2024	New Residential Dwelling	$ 60,000.00	1044	issued
0077 -2024	Agricultural Storage Shed	$ 60,000.00	2400	issued
0078 -2024	On Site Sewage System	$ 5,000.00	592	issued
0079 -2024	Open Covered Porch	$ 10,000.00	570	issued
0080 -2024	Detached Garage	$ 11,000.00	288	issued

Total Value of Construction to date; $9,691,525.00 with 80 building permits being issued.
(Last year; $14,214,200.00 with 77 building permits being issued)

Zoning Certificates issued for this year; 38 (Last year 27)

Respectfully submitted,

Kirk Livingston
Chief Building Official

MUNICIPALITY OF MORRIS-TURNBERRY
REPORT TO COUNCIL

TO: Mayor and Council
PREPARED BY: Trevor Hallam, CAO/Clerk
DATE: November 19th, 2024
SUBJECT: 2025 Council Meeting Schedule

RECOMMENDATION

That Council adopt the proposed meeting dates for 2025 by resolution.

BACKGROUND

Each year Council adopts a schedule of regular and planned special meeting dates that takes into consideration statutory holidays, conference dates and historical trends in the volume of business before Council at different times of the year.

COMMENTS

PROPOSED 2025 MEETING DATES

Proposed Meeting Date	# of days to the next regular meeting	Notes
January 14	21	*Single regular meeting in January
January 28	-	*Special Budget Meeting
February 4	14	
February 18	14	
March 4	14	
March 18	21	
April 8	14	
April 22	14	
May 6	14	
May 20	14	
June 3	14	
June 17	21	
July 8	14	
July 22	21	
August 12	21	*Single regular meeting in August
September 2	14	
September 16	21	
October 7	14	
October 21	14	
November 4	14	
November 18	14	
December 2	14	
December 16	28	

This schedule maintains the practice of having a single regular meeting in January and August.

With a number of days between the last meeting in 2024 (December 17) and the first Tuesday in January (January 7) being holidays, there is typically not enough business to warrant a meeting on the first Tuesday of January. Therefore, a single meeting in the middle of January on the 14th is recommended.

A special meeting to review the first draft of the 2024 Budget is proposed for January 28th, at 9:00am. Subsequent updates to the budget can be addressed during regular council meetings as more information becomes available.

The single meeting in August is proposed to accommodate potential summer vacation time for Council and staff as has been done in previous years.

All dates above avoid statutory holidays and conference dates.

Staff recommend that Council adopt the proposed meeting dates for 2025 by resolution.

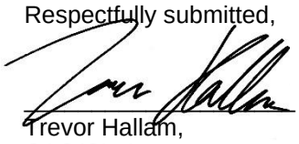
ATTACHMENTS

None.

OTHERS CONSULTED

None.

Respectfully submitted,



Trevor Hallam,
CAO/Clerk

MUNICIPALITY OF MORRIS-TURNBERRY
REPORT TO COUNCIL

TO: Mayor and Council
PREPARED BY: Trevor Hallam, CAO/Clerk
DATE: November 19th, 2024
SUBJECT: Conference Dates 2025

RECOMMENDATION

That Council make their interest in conference attendance known to staff so that registration and accommodation arrangements can be made.

BACKGROUND

Below is a table that includes the conferences most attended by Councilors in previous years and corresponding key dates. If any member of Council is interested in attending the listed conferences, staff request that that interest be expressed at this meeting so that registrations can be completed as soon as possible after they become available.

Conference	Dates	Location	Conference Registration	Accommodation Registration
Rural Ontario Municipal Association	January 19 - 25, 2025	Sheraton Hotel, Toronto	October 2024	October 2024
Ontario Good Roads Association	March 30 – April 2, 2025	Fairmont Royal York Hotel, Toronto	November 2024	January 2025
Association of Municipalities of Ontario	August 17 - 20, 2024	Ottawa	January 2024	January 2024

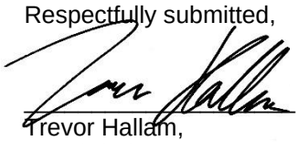
ATTACHMENTS

None.

OTHERS CONSULTED

None.

Respectfully submitted,



Trevor Hallam,
CAO/Clerk

MUNICIPALITY OF MORRIS-TURNBERRY
REPORT TO COUNCIL

TO: Mayor and Council
PREPARED BY: Trevor Hallam, CAO/Clerk
DATE: November 19th, 2024
SUBJECT: Fees and Charges 2025

RECOMMENDATION

That Council direct staff to return an updated fees and charges by-law for 2025 to the December 3rd meeting of Council.

BACKGROUND

Annually, staff review the Fees and Charges By-Law to ensure that it is up to date and meets the needs of the Municipality.

COMMENTS

There are few changes recommended to the Fees and Charges By-Law for 2025. However, staff recommend that Council consider the updates below. A draft fee schedule is also included with this report for reference, with proposed changes highlighted in yellow beside the current fees.

Landfill and Waste Disposal

Tipping Fees:

Staff have compared the current tipping fee of $100/tonne at the Morris Landfill to the tipping fees charged at surrounding landfills.

A summary of the tipping fees for other landfills in Huron County is attached to this report. Currently the Morris Landfill has the lowest charge per tonne in the county.

The Morris Landfill Budget is summarized below:

Total Expenditures	$ 338,450
Total Revenues	$ 254,615
Net Cost to MT (taxes)	$ 83,835

In addition to the budget net costs, unbudgeted land and equipment purchases were made in 2024, with reserve repayments for the land scheduled start in 2025.

A summary of 3 possible options are below with associated Pros and Cons.

Option 1 – No Change, Keep Tipping Fee at $100/tonne

Pros:
- Lower tipping fees for landfill users
- Lower fees for curbside users
- No impact on current operations

Cons:
- Will need to use tax dollars to subsidize landfill operations
- Lowest $/tonne rate in Huron County

Option 2 – Increase Tipping fees up to $120/tonne (Recommended)

Pros:
- Less tax dollars required to subsidize landfill operations
- Continue to gradually move the Morris Landfill towards a user pay system
- Minimum charge of $10 will not impact majority of small tonnage users

Cons:
- High tonnage users will pay 20% more
- Decrease in weight covered by $10 minimum charge
  - Before $10 at $100/tonne covers up to 100kg
  - After $10 at $120/tonne covers up to 83kg
- Regular review of tipping fee likely required every 2 to 3 years to maintain parity with other landfills

Option 3 – Increase Tipping Fee beyond $120+/tonne

Pros:
- Lowest amount of tax dollars required to operate the landfill
- Quickly move the Morris Landfill to a nearly or completely user pay system

Cons:
- Large significant increase may encourage illegal dumping at landfill or on sideroads
- High rate may also result in decrease in tonnage delivered to landfill, resulting in no net financial benefit

Recommendation

It is recommended that council approves the increase from $100/tonne up to $120/tonne and maintain a minimum charge of $10 at the Morris Landfill.

The increase will bring the Morris Landfill tipping fees more in line with surrounding landfills. The increase in revenue will be used to offset the anticipated increase in reserve transfers from capital purchases. Any additional revenues generated will go towards decreasing the annual net cost of operating the Morris Landfill and thereby decrease the landfill's reliance on property taxes.

Curbside User Fees:

Morris-Turnberry (MT) pays Bluewater Recycling Association (BRA) an annual charge of $135.14 per household and business for curbside garbage and recycling pickup. Currently MT is charged for 1,346 households and businesses who use the curbside program. In addition to the BRA contract, tipping fees are charged at $100/tonne for waste collected and disposed at the Morris Landfill. MT recovers costs related to the curbside program by charging waste bin users an annual user fee. The Municipality also previously received a waste diversion grant, which was applied to the municipality's waste budget as a whole. Property taxation was utilized to fund curbside expenses in excess of revenues.

During the 2024 Budget discussions, staff recommended the wheely bin user fee be held at the current levels until the effects of the upcoming changes to the recycling program were known. The Province of Ontario shifted the responsibility of collecting recycling materials from municipalities and placed it onto producers by implementing the Extended Producer Responsibility (EPR) Plan. The logistics of the transition were handled by Bluewater Recycling Association (BRA).

EPR took effect in Morris-Turnberry as of April 1, 2024 and as a result the monthly cost of curbside collection dropped from $15,158 per month down to $8,028 per month. Bluewater's approach to the transition was to split in half the $135.14 annual charge per household & business for waste & recycling collection. The municipality now pays $67.57 annually for each of the 1,346 households & business that use curbside pickup.

Industrial, Commercial and Institutional (ICI) properties are not covered by the new EPR plan. MT is therefore paying an additional $70 per ICI recycling bin a year for collection. There are a total of 77 ICI recycling bins within the municipality.

With the implementation of the EPR, the recycling grant was discontinued. MT received its final grant payment for Q1 2024 in September 2024.

Anticipated Costs

Using 1.7% inflation on the collection charge and no inflation on the ICI surplus charge (provided by BRA), I estimate Morris-Turnberry's 2025 Curbside contract to be $97,885 for 2025 or $8,157 a month. These figures may change based on new enrollment in the program. The tipping fees are estimated to be about $58,300, based on current 2024 projections and recommended fee increase for the Morris Landfill to $120/tonne.

Anticipated Revenues

With the changes to the curbside program, the Municipality has options on how to proceed with user fees. Summarized below are three options with associated Pros & Cons.

Option 1 – No change – User Fees for Waste Bins

Pros:
- Curbside becomes user pay, no property taxes
- No additional work for administration
- Estimated $99,000 reserve in 5 years, begin drawing down in 2034, depleted by 2042
- No need to review fees for estimated 15+ years

Cons:
- Excessive reserve by overcharging program users now for the benefit of future users
- No immediate financial benefit passed on to uses

Option 2 – Decrease User Fees by 10% (Recommended)

Pros:
- Curbside becomes user pay, no property taxes
- Users get immediate price cut of 10%
- Estimated $10,129.72 reserve in 5 years
- Minimal staff time needed to adjust and administer program

Cons:
- Lower reserves than option 1, drawing down in 2027, depleted in 5/6 years
- Review of fees would be required more frequently, minimum every 4 to 5 years

Option 3 – Decrease User Fees & Implement ICI Charge

Pros:
- User Fees better reflect costs incurred by Municipality
- More benefit for residential households (13% decrease)

Cons:
- Additional staff time needed to set up ICI properties and administer program
- More complicated fee structure
- Minimal difference from Option 2 for residential

Forecasts

A 5-year forecast is attached for options 1, 2 and 3 for illustrative purposes. The future curbside contract costs are estimated using an inflation rate of 2%. The curbside tipping fees are based on current 2024 projections increased by 20% to reflect the proposed Morris Landfill tipping fee increase. Any surplus is contributed to a curbside reserve and deficits funded by the curbside reserve.

Summary of Rates for Comparison

		Option 1	Option 2	Option 3	
Gallons		Current	10% Decrease	Waste $/bin	ICI $/bin
35	Rural & Urban	$ 150.00	$ 135.00	$ 130.00	$ 70.00
65	Rural	$ 150.00	$ 135.00	$ 130.00	$ 70.00
65	Urban	$ 220.00	$ 200.00	$ 190.00	$ 70.00
95	Rural & Urban	$ 300.00	$ 270.00	$ 260.00	$ 70.00
			Rounded to nearest $10		

Recommendation

Staff recommend Option 2, to continue with one user fee for waste bins and decrease the user fees by 10%. This option is a balanced approach that allows the curbside program to become fully user pay while also passing on some of the financial benefits of the EPR program. The fees are set to allow for some immediate reserve growth to accommodate future program fluctuations, without drastically overcharging current program users. Minimal time would be required for staff to make the necessary changes and update the accounting program with the new rates. This approach will require a review of the tipping fees on a regular basis and likely a complete review & analysis every 4 to 5 years. This complete review would be recommended to occur once per council term.

Bluevale Hall Rental

The Bluevale Community Committee reviewed the rental fee schedule for the Bluevale Hall in 2023, and approved a fee structure for 2024 through to 2026. The attached draft schedule has been updated with the recommended 2025 rates.

Planning Fees

Planning fees were last reviewed and updated in July of 2024. It is expected that the Planning Department will recommend an increase to the fees for 2025 using a percentage based on CPI. At the time of publishing this report, staff do not have the proposed percentage increase.

Building

Staff are currently investigating a Building Permit deposit of 10% of the total permit fee up to a maximum of $5000. Currently, permit holders are responsible for notifying the Building Department when they are ready for inspections. It has been the experience of staff that permit holders are motivated to call for certain milestone inspections during construction, as they must be completed before construction can continue. In many cases, however, there is less motivation to schedule the final inspection. This results in permits being left open for long periods of time, and staff time being spent to follow up with permit holders to complete the inspection and close the permits. It is anticipated that a deposit due at the time of payment of the permit fee, that is returned following the completion of the final inspection, will serve to reduce the number of permits that remain open for prolonged periods of time. This deposit has been added to the “Other” fees, under the Building Department Fee schedules.

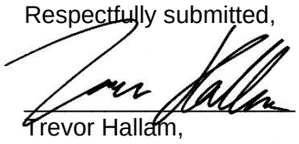
ATTACHMENTS

1. Landfill Tipping Fee Comparsion
2. Draft fees and charges by-law schedule

OTHERS CONSULTED

Sean Brophy, Treasurer
Kelly Tiffin, Tax Collector
Kim Johnston, Deputy Clerk
Mike Alcock, Director of Public Works
Kirk Livingston, CBO/Drainage Superintendent
Kaitlyn Armstrong, Administrative Assistant

Respectfully submitted,



Trevor Hallam,
CAO/Clerk

Summary of Huron County Tipping Fees

Municipality/Township	$/Tonne	Other Charges Details
Morris-Turnberry	$ 100.00	$ 10.00 Minimum Charge - up to 100kg
North Huron	$ 110.00	$ 15.00 Minimum Charge - up to 100kg
South Huron		Small Vehicle Loads
71230 Ausable Line	$ 129.00	$ 15.00 Minimum Charge - up to 100kg
		$ 25.00 100kg to 200 kg
		$ 30.00 201 to 300 kg
ACW	$ 130.00	$ 10.00 Minimum Charge
Ashfileld Landfill		
Goderich	$ 245.00	$ 20.00 Minimum Charge up to 100kg
Mid-Huron Landfill		$ 40.00 101 to 200kg
Central Huron		
Huron East (Seaforth/Tuckersmith)		
Huron East (Grey/Mckillop)		
Walton Landfill	$ -	$ 20.00 Car Trunks
		$ 50.00 Small Trailers, Pickup & Vans
		$ 80.00 Farm Wagons, Large Trailers
		$ 10.00 per Barrel in back of truck
		$ 120.00 Trucks-Single Axel
		$ 150.00 Trucks-Tandem Axle
		$ 100/tonne Trucks - Commercial Packer Trucks
Howick		Must Be Sorted
	$ -	$ 20.00 Car Trunk Loan
		$ 40.00 Pickup Truck Loan
		$ 40.00 Small Trailer Load
		$ 80.00 Large Trailer or Wagon
		$ 60.00 Single Axle Truck - up to 3 Ton
		$ 85.00 Single Axle Truck - Over 3 ton
		$ 200.00 Tandem Truck - Over 5 Ton
		$ 50.00 Dumpster - up to 4 Cubic Yards
Bluewater		
Stanley Landfill	$ -	$ 4.50 Bag Tags
		$ 20.00 Min for Non-Bag Waste
		$ 25.00 per cubic yard - Industrial packer, residential packer Industrial Truck or Container
		$ 125.00 Large Truck, wagon or trailer, up to 5 cubic Yards
		$ 25.00 Small Pickup - 1 cubic yard max
		$ 37.50 Mid Sized Pickup - 1.5 cubic yard max
		$ 50.00 Full Sized Pickup - 2 cubic yard max

*All applicable taxes included unless otherwise noted

Administration			
Tax Certificate		$ 50.00	
Duplicate Tax/AR Statement		$ 10.00	
Zoning Certificate		$ 80.00	
Photocopies		$ 0.20	per sheet
Fax		$ 1.00	per sheet
Misc. Postage		Full cost recovery	
Returned Cheques/PAP		$ 40.00	per occurance
Written confirmation of Prior Year Tax Payments		$ 10.00	per property
Mortgage Company Processing Fee		$ 15.00	per property
Statement Processing Fee		$ 2.00	per statement
Tax Sale Tender Package		$ 25.00	per package
History Book (single)		$ 20.00	
History Books (set of 2)		$ 30.00	

Interest			
Accounts Receivable		1.25%	per month
Tax Arrears		1.25%	per month
Municipal Drain - Maintenance		1.25%	per month
Municipal Drain - Capital Project	Accruing on all project related invoices commencing at the time of payment by the Municipality.	Bank Prime Interest at the time of invoicing by the Municipality	per month
Municipal Drain - Capital Project Assessment Financing	Financed for a maximum term of 3 years	Bank Prime Interest at the time of financing approval	per annum

Licences and Services			
Marriage License		$ 100.00	
Marriage Solemnization		$ 395.50	*HST Inc
Lottery License		2% of prize value	
Commissioning of Oaths	At municipal office only	No Charge	

Planning			
Cash in Lieu of Parkland	per newly created lot	$ 500.00	
Site Plan Control	Initial application	$ 1,000.00	
	Amendment to existing site plan	Full cost recovery	
Drainage Apportionment Agreement	As a condition of Severence	$ 200.00	
Sewage system review	Severance - up to 2 lots	$ 268.00	
	Severance - >2 lots	$ 509.00	
	Plan of Subdivision - >5 lots	$ 1,058.00	
	Minor Variance	$ 127.00	
	Rezoning	$ 127.00	
	Official Plan Amendment	$ 181.00	
	Sourcewater Protection	$ 127.00	
Third party consultation, peer review or any expenses related to any application		Full cost recovery	
Re-circulation due to change made by applicant		$ 200.00	
Lot Grading Deposit	per lot	$ 2,000.00	
Other Planning Fees		Refer to Schedule 'B'	

Water and Sanitary Sewer			
Belgrave System			
Water rate		See Budget for current year	
Initial billing set up		$ 100.00	
Turn on/off curb stop		$ 150.00	
New connection installation		Actual cost of construction	
Capital charge per connection		$ 6,974.56	

By-Law Enforcement			
Animal Control			
Dog Licence - First Dog		$ 20.00	
Dog Licence - Additional dogs		$ 30.00	
Dog Licence - First Pit Bull, Staffordshire Terrier, Cross of either, or dogs deemed to be vicious		$ 100.00	
Dog Licence - Additional Pit Bull, Staffordshire Terrier, Cross of either, or dogs deemed to be vicious		$ 110.00	
Licencing late penalty		$ 20.00	

Animal Control (continued)			
Replacement Licence Tag		$ 10.00	
Administration Fee - Seizure and Impounding		$ 50.00	
Boarding		Actual cost of boarding	
Kennel Licence		$ 125.00	
Prohibited Animal Fee		$ 85.00	

Clean Yards		
Inspection, when inspection of the property pursuant to a complaint confirms that the property does not comply with the Corporation's Clean Yards By-Law	$ 80.00	
Services and Materials expended in carrying out the requirements of an Order when the owner has failed to comply	Actual costs plus 20%	

Property Standards		
Inspection, when inspection of the property pursuant to a complaint confirms that the property does not comply with the Corporation's Property Standards By-Law	$ 80.00	
When an order issued and not appealed or has been confirmed	$ 140.00	
Appeal of a property standards order	$ 140.00	
When an officer of the Corporation attends a Property Standards Appeal Committee meeting where an order has been upheld	$ 140.00	
When an officer of the Corporation attends a court hearing where a conviction has been granted	$ 625.00	
Services and Materials expended in carrying out the requirements of an Order when the owner has failed to comply	Actual costs plus 20%	
Certificate of compliance issued at the owner's request	$ 25.00	

Zoning		
When an officer of the Corporation attends a court hearing where a conviction has been granted	$ 625.00	
Zoning Certificate	$ 80.00	

Landfill and Waste Disposal				
General Waste by weight		$ 100.00	per tonne	120
Minimum Charge		$ 10.00		
Concrete and Bricks (no re-bar)		$ 100.00	per tonne	
Construction/Demolition Waste		$ 100.00	per tonne	
Appliances containing refrigerant		$ 40.00	per appliance	
Yard waste/Wood without nails or metal		No Charge		
Recyclables		No Charge		
Scrap Metal		No Charge		
E-Waste		No Charge		
Tires		No Charge		
Non-Contaminated soil	2 weeks notice and pre-authorization required. Testing may be required.	Cost Recovery		
After Hours entry	$100.00 minimum charge	$ 100.00	per hour	
Curbside pickup recepticles		Cost recovery of current Bluewater Recycling Fees		$ 135.00
Curbside fines/penalties		N/A		Full Cost Recovery

Public Works			
Entrance Construction Permit	Deposit	$ 500.00	
	Fee	$ 250.00	
Damage to Municipal Property		Full Cost Recovery	
Special Signage		Cost of supply and installation	
Equipment (including operator, subject to availability)	Grader	$ 2.00	per minute, 30 minute minimum, plus HST
	Tandem or Backhoe	$ 1.50	per minute, 30 minute minimum, plus HST
Tile Drain Loan Inspection		$ 100 + mileage	per hour

Fire and Emergency Services			
Unauthorized Burn Response		Full Cost Recovery	
Fire Response - Indemnification Technology	Per Truck	Current MTO rate per unit per hour or portion thereof for each unit	
	Per personnel hour	Current rate per person per hour	
	Other costs including but not limited to: Foam, Metered Water, Air Tank Re-filling, Cleaning Equipment, DSPA or similar type unites, cost to replace damaged or destroyed equipment, specialized response costs such as Water Bomber Drops.	Full Cost Recovery. Should the insurer pay the coverage to the property owner, the property owner is liable to remit these funds to the municipality or its representative.	

Bluevale Hall Rental				
Upstairs floor only	no alcohol	$ 113.00	Inc. HST	$ 135.60
Downstairs floor only	no alcohol, includes kitchen	$ 113.00	Inc. HST	$ 135.60
Both floors	no alcohol	$ 169.50	Inc. HST	$ 169.50
Under 2 hour rental		$ 56.50	Inc. HST	$ 56.50
Happy Card Players		$ 39.55	Inc. HST	$ 39.55

Building Permits and Fees			
Single Family Residential & Additions			
per square foot		$ 0.95	
unfinished basement		$ 0.55	
plus finished basement		$ 0.55	
plus attached garage		$ 0.55	
base fee in addition to		$ 200.00	
Accessory Buildings - Residential			
per square foot		$ 0.55	
base fee in addition to		$ 100.00	
Residential - Renovations			
per square foot		$ 0.85	
per $1000 of value of work		$ 14.00	
base fee in addition to		$ 100.00	
Multi-Residential			
per square foot		$ 0.95	
plus finished or unfinished basement		$ 0.55	
plus attached garage		$ 0.55	
base fee in addition to		$ 200.00	
Mobile Homes			
per square foot		$ 0.95	
plus finished or unfinished basement		$ 0.55	
plus attached garage		$ 0.55	
base fee in addition to		$ 200.00	
Commercial/ Industrial/ Institutional			
per square foot		$ 0.85	
base fee in addition to		$ 200.00	
Commercial / Industrial / Institutional - Additions & Renov			
per square foot		$ 0.85	
per $1000 of value of work		$ 14.00	
base fee in addition to		$ 100.00	
Commercial/ Industrial/ Institutional -Accessory			
per square foot		$ 0.60	
base fee in addition to		$ 100.00	
Farm Buildings - Housing Livestock			
per square foot		$ 0.35	
base fee in addition to		$ 100.00	
Farm Buildings for other than Housing Livestock			
per square foot		$ 0.35	
base fee in addition to		$ 100.00	
Agricultural -Additions & Renovations			
per square foot		$ 0.35	
per $1000 of value of work		$ 12.00	
base fee in addition to		$ 100.00	
All Tarped Structures			
per square foot		$ 0.30	
base fee in addition to		$ 100.00	
Tent or Tents occupying an area >60 sq. m		$ 140.00	
Manure Storage Facilities			
Solid - per square foot		$ 0.25	
Liquid - per foot of diameter		$ 11.05	
base fee in addition to		$ 100.00	
Bunkers & Tower Silos			
per $1000 of value of work		$ 14.00	
base fee in addition to		$ 100.00	
Granary			
Per $1000 of value of work		$ 14.00	
base fee in addition to		$ 100.00	
Swimming Pools			
Above Ground - flat fee		$ 100.00	
In ground - flat fee		$ 100.00	

Solid Fuel Burning Appliances-Woodstoves-Chimneys			
per $1000 of value of work		$ 14.00	
base fee in addition to		$ 100.00	

Decks, Balconies and Porches			
per square foot		$ 0.55	
base fee in addition to		$ 100.00	

All Alternate Energy Projects - (Wind/Solar etc.)			
per $1000 of value of work		$ 18.00	
base fee in addition to		$ 100.00	

Septic/Sewage System Permits			
Permit - Class 2 & 3		$ 560.00	
Permit - Class 4 & 5		$ 560.00	
Permit - Tank Repair only or Leaching bed repair		$ 290.00	

Greenhouse			
per square foot		$ 0.25	
base fee in addition to		$ 100.00	

Demolition			
All demolition		$ 150.00	

Other				
Plumbing Permit - per fixture unit		$ 12.00		
Occupancy Permit		$ 120.00		
Any Construction started without a permit		5 x original permit fee		
Minimum Permit fee		$ 100.00		
Change of Use		$ 230.00		
Copy of Permits/Application		$ 100.00		
Any other Building or Structure not specified		$100.00 + $14.00/$1,000 of construction value		
Inspection Only - No permit		$ 120.00	per hour	
Conditional Permit		Same as permit		
Inspection Requested and Not Ready		$ 120.00		
Re-inspection fee		$120.00 + mileage		
Final Inspection Deposit		N/A		10% of permit fee up to maximum $5000

Q3 – 2024 Project Status Report

October 28, 2024

Prepared for:

Headway Engineering
23-500 Fairway Road South
Suite 308
Kitchener, Ontario N2C 1X3
226 243 6614
www.headwayeng.ca

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Kitchener, Ontario

October 28, 2024

Re: Municipality of Morris-Turnberry
Project Status Report
Q3 – 2024 (July to September, 2024)

We are pleased to provide you with our quarterly update on the ongoing projects for the Municipality of Morris-Turnberry. This report is designed to give you a clear and concise overview of the progress made during the Third Quarter of 2024 across all active projects, along with any outstanding tasks and responsibilities.

As always, we are here to support your needs and are available for further discussion or assistance on these and other projects. We look forward to continuing our partnership and making great strides together.

Yours truly,

Stephen Brickman, P.Eng.
Project Engineer and Manager
HEADWAY ENGINEERING

SB/

23-500 Fairway Road South
Suite 308
Kitchener, Ontario N2C 1X3
226 243 6614
www.headwayeng.ca

1.0 PROJECT PHASE KEY

Phase	Description
Information Gathering	Initial data collection, review of background materials, site visits, initial On-Site meeting, and site survey
Design	Processing of survey data, developing preliminary and final designs, preparing cost estimates, and preliminary and final assessment schedules
Public Engagement & Permitting	Engaging stakeholders, presenting design, cost and assessment details, obtaining required permits
Reporting	Preparing final drainage report including printing, shipping and meeting to consider report
Appeals and Drainage Act Processing	Court of Revision, tribunal, and/or referee appeals, Third Reading of the By-Law
Tendering	Preparation of contract documents, issuing tenders, selecting contractors
Construction	Executing construction work, contract administration, final site inspection
Warranty & Close Out	Communicating construction issues to Contractor, preparation of grant application and actual assessment schedules

2.0 ACTIVE PROJECTS SUMMARY TABLE

Project Name	Project Phase	Current Phase Status	Key Deliverables	Next Steps
Grant Drain	Construction	Near Complete	• None this quarter	• Open Ditch Construction
Masson Drain	Reporting	Near Complete	• Preliminary designs, cost estimates, assessments • Public Engagements	• Finalize Report
McArthur Drain	Warranty	In Progress	• Construction complete • Minor construction deficiencies addressed • Release of Statutory 10% Holdback issued	• Warranty Period • Actual Assessment Schedules & Grant Applications
Arbuckle Drain	Design	In Progress	• None this Quarter	• Finalize Design

				• Submit DFO Request for Review
Latronica Drain	Information Gathering	In Progress	• On-site meeting	• Survey • DFO RfR

DETAILED PROJECT UPDATES

Grant Municipal Drain

Section	Details
Deliverables	• None this quarter
Upcoming Steps & Action Items	• Complete open ditch construction works – **Robinson Farm Drainage** • Final Contract Administration – **Headway Engineering, then Municipality of Morris-Turnberry**
General Comments	• Headway Engineering has been in contact with Robinson Farm Drainage recently. Construction of the open ditch can be expected soon.

Masson Municipal Drain

Section	Details
Deliverables	• Preliminary designs, cost estimates, assessments • Public Engagements
Upcoming Steps & Action Items	• Report – **Headway Engineering** • Processing the report – **Municipality of Morris-Turnberry and Headway Engineering**
General Comments	• Final drain report to be filed next quarter (Q4)

McArthur Municipal Drain

Section	Details
Deliverables	• Construction complete • Minor construction deficiencies addressed by Contractor • Release of Statutory 10% Holdback issued
Upcoming Steps & Action Items	• Warranty Period – **TAS (if required)** • Actual Assessment Schedules & Grant Applications – **Municipality of Morris-Turnberry, then Headway Engineering**
General Comments	• **Morris-Turnberry** to provide **Headway Engineering** with final project costs and grant application

Arbuckle Municipal Drain

Section	Details
Deliverables	• None this Quarter
Upcoming Steps & Action Items	• Finalize Design – **Headway Engineering** • Submit DFO Request for Review (RfR) – **Headway Engineering**
General Comments	• The design is well underway. • DFO is drafted and will be submitted soon

Latronica Municipal Drain

Section	Details
Deliverables	• On-Site Meeting
Upcoming Steps & Action Items	• Survey – **Headway Engineering** • DFO RfR Report – **Headway Engineering** • Design – **Headway Engineering**
General Comments	

3.0 SUMMARY & SUPPORT OPPORTUNITIES

This quarter, Headway Engineering made substantial progress across active projects for Morris-Turnberry. The Grant Drain's next key step is the open ditch construction. The Masson Drain project is in the final stages of the reporting phase, having completed designs, cost estimates, assessments, and public engagement; the final report is now being prepared. The McArthur Drain is progressing through the warranty phase, with actual assessment schedules, and grant applications upcoming. The Arbuckle Drain design phase is underway, with the next steps including finalizing the design and submitting a DFO Request for Review. Lastly, the Latronica Drain project remains in the information-gathering phase, with a survey and DFO RfR being the next key steps.

We are fully equipped, available, and prepared to take on new work, and we look forward to supporting the Municipality's future projects.

Belgrave Summary (with SCADA Data)

October, 2024

WELL FLOW		Flow, L/s	Volume, m3
McCrea	Max:	3.82	58.69
	Average:	3.29	44.14
	Total:		1,324.31
Jane	Max:	1.50	58.08
	Average:	1.37	28.57
	Total:		857.05
Combined:	Min:		52.59
	Max:		110.52
	Average:		72.71
	Total:		2,181.36

TREATED FLOW - Discharge

Max:	82.41	m3
Average:	60.52	m3
Total:	1,815.61	m3

SCADA On-Line Analyzer

CL2 Residual (free):

Max:	1.87	mg/L
Min:	0.89	mg/L
Average:	1.47	mg/L

TURBIDITIES	McCrea	Jane	
Max:	0.26	0.23	NTU
Min:	0.26	0.23	NTU
Average:	0.26	0.23	NTU
# Grab Samples:	1	1	

Treated Water Grab Residuals:

CL2 Residual (free):

Max:	1.66	mg/L
Min:	0.99	mg/L
Average:	1.45	mg/L
# Grab Samples:	18	

CHEMICAL USE

Chlorine:		Pump # 1	Pump # 2
Total	Litres	0.00	115.45
Total	kg	0.00	7.51
Average, mg/L	Dosage	0.00	7.38

Potassium Permanganate:			
Total	Litres	110.98	66.79
Total	kg	2.22	1.34
Average, mg/L	Dosage	1.55	1.27

CHLORINATION ON DISTRIBUTION SYSTEI

Humphrey On-Line Analyzer:

CL2 Residual (free)

Max:	1.49	mg/L
Min:	1.39	mg/L
Average:	1.27	mg/L

Distribution Grab Residuals:

CL2 Residual (free)

Max:	1.49	mg/L
Min:	0.95	mg/L
Average:	1.31	mg/L
# Grab Samples:	18	

BACTERIOLOGICAL TESTING

Treated Water to Distribution

Tests Done:	4
E.Coli Found:	0
Total Coliform Found:	0

Heterotrophic Plate Counts

Tests Done:	4
Counts >500/mL:	0

Distribution Water

Tests Done:	8
E.Coli Found:	0
Total Coliform Found:	0

Heterotrophic Plate Counts

Tests Done:	4
Counts >500/mL:	0

Jane Raw Water

Tests Done:	4
E.Coli Found:	0
Total Coliform Found:	0

McCrea Raw Water

Tests Done:	4
E.Coli Found:	0
Total Coliform Found:	0

Operators that operated the system:

Steve Walmsley	Water Treatment - Class 4	October 31, 2025
Ryan Mackay	Water Treatment - Class 1	May 31, 2027
Jeff Johnston	Water Treatment - Class 2	April 30, 2027
Kole Kennedy	Water Treatment -OIT	July 21, 2025

Outstanding Action Items
Open Session

November 19

Meeting Date	Action Item	Action By	Current Status	Next Step
February 6, 2024	Turnberry Conservation Area Memorial Gate Repairs	CAO	Staff procuring quotes and working with MVCA to determine best plan of action	Report to Council with quotes and proposed plan of action.

CORPORATION OF THE MUNICIPALITY OF MORRIS-TURNBERRY

BY-LAW NO. 55-2024

Being a by-law to confirm the proceedings of the Council of the Corporation of the Municipality of Morris-Turnberry, for its meeting held on November 19th, 2024.

WHEREAS Section 9 of the *Municipal Act 2001, S.O. 2001, c. 25* provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

AND WHEREAS Section 5 (3) of the *Municipal Act 2001, S.O. 2001, c. 25* provides that a municipal power, including a municipality's capacity, rights, powers and privileges under Section 9, shall be exercised by by-law unless the municipality is specifically authorized to do otherwise;

AND WHEREAS it is deemed expedient that the proceedings of the Council of the Corporation of the Municipality of Morris-Turnberry for the November 19th, 2024, meeting be confirmed and adopted by By-law;

NOW THEREFORE, the Council of the Corporation of the Municipality of Morris-Turnberry enacts as follows:

1. The action of the Council of the Corporation of the Municipality of Morris-Turnberry at its meeting held the 19th day of November 2024, in respect of each recommendation contained in the Minutes and each motion and resolution passed and other action taken by the Council of the Corporation of the Municipality of Morris-Turnberry at the meeting, is hereby adopted and confirmed as if all such proceedings were expressly embodied in this By-Law; and

2. The Mayor and proper officials of the Corporation of the Municipality of Morris-Turnberry hereby authorize and direct all things necessary to give effect to the action of the Council to the Corporation of the Municipality of Morris-Turnberry referred to in the preceding section thereof;

3. The Mayor and CAO/Clerk are authorized and directed to execute all documents necessary in that behalf and to affix thereto the Seal of the Corporation.

Read a FIRST and SECOND time this 19th day of November 2024

Read a THIRD time and FINALLY PASSED this 19th day of November 2024

_____
Mayor, Jamie Heffer

_____
Clerk, Trevor Hallam