

AGENDA

**Regular Council Meeting
Tuesday, February 4, 2025, at 6:30 p.m.
Powassan Council Chambers
252 Clark Street, Powassan, ON**

1. CALL TO ORDER

2. LAND ACKNOWLEDGMENT

"We respectfully acknowledge that we are on the traditional territory of the Anishinaabe Peoples, in the Robinson-Huron and Williams Treaties areas. We wish to acknowledge the long history of First Nations and Métis Peoples in Ontario and show respect to the neighbouring Indigenous communities. We offer our gratitude for their care of, and teachings about, our earth and our relations. May we continue to honour these teachings."

3. ROLL CALL

4. DISCLOSURE OF MONETARY INTEREST AND GENERAL NATURE THEREOF

5. APPROVAL OF THE AGENDA

6. DELEGATIONS TO COUNCIL

6.1 Renee Meyer, ACT Lead Volunteer - Canadian Cancer Society

6.2 Travis Tennant and Jeff Eckensviller – Kraft Hockeyville 2025

6.3 Diane Cole, Coordinator and John Thomson, Treasurer - Powassan and District Foodbank Presentation

7. ADOPTION OF MINUTES OF PREVIOUS OPEN SESSION MEETINGS OF COUNCIL

7.1 Regular Council Meeting of January 7, 2025

8. MINUTES AND REPORTS FROM COMMITTEES OF COUNCIL

8.1 Powassan Maple Syrup Committee – Minutes of January 15, 2025

8.2 Recreation Committee Meeting – Minutes of October 23, 2025

8.3 Recreation Committee Meeting - Minutes of December 4, 2025

9. MINUTES AND REPORTS FROM APPOINTED BOARDS

9.1 Powassan and District Union Public Library – Minutes of December 16, 2024

9.2 Powassan Nipissing Callander (PNC) Police Detachment Board – Minutes of November 25, 2024

10. STAFF REPORTS

- 10.1 Operations and Facilities Manager, F. Schmeltz – 2024 Biennial Bridge and Culvert Inspection Report
- 10.2 Deputy Clerk, K. Bester – Fire Protection Grant
- 10.3 Deputy Clerk, K. Bester – Planning Report (44 Purdon Line) from Planscape Inc.
- 10.4 Treasurer/Director of Corporate Services, B. Robinson – Signing Authority Bylaw
- 10.5 Treasurer/Director of Corporate Services, B. Robinson – 2025 Budget Meetings
- 10.6 Treasurer/Director of Corporate, B. Robinson – Blue Box Transition
- 10.7 Clerk, A. Quinn – Proposed Changes to Procedural Bylaw 2023-18, Section 5.9
- 10.8 Deputy Clerk, K. Bester – Commitment to Support Seniors Active Living Centre Application
- 10.9 Treasurer/Director of Corporate Services, B. Robinson – Tender for Pool Repairs

11. BY-LAWS

- 11.1 Bylaw 2025-03 – Zoning Bylaw Amendment (44 Purdon Line)
- 11.2 Bylaw 2025-04 – Signing Authority

12. UNFINISHED BUSINESS

- 12.1 9-1-1 Service Agreement between the Municipality of Powassan and Bell 9-1-1 Services
- 12.2 Tatham Engineering - Trout Creek Community Centre Detailed Structural Investigation Final Report

13. NEW BUSINESS

- 13.1 Powassan Maple Syrup Festival/Week – Northern Ontario Heritage Fund Corporation application
- 13.2 City of North Bay – Household Hazardous Waste Program 2025 Levy
- 13.3 Ontario Clean Water Agency – 2024 Annual/Summary Report for the Powassan Drinking Water System
- 13.4 North Bay Mattawa Conservation Authority – 2025 Budget and Municipal Levy

14. CORRESPONDENCE

- 14.1 Ministry of Municipal Affairs and Housing – Municipal Accountability Act, 2024
- 14.2 Near North Crime Stoppers – Crime Stoppers Month
- 14.3 Ministry of Rural Affairs – Enabling Opportunity: Ontario's Rural Economic Development Strategy

15. ADDENDUM

- 15.1 Mayor Mclsaac- Tariff Response

16. NOTICE OF SCHEDULE OF COUNCIL AND BOARD MEETINGS

17. CLOSED SESSION

18. MOTION TO ADJOURN



PROCLAMATION

Canadian Cancer Society - February 4th as World Cancer Day

- WHEREAS** people in our community have been directly affected by cancer and share a strong bond with others who experience this disease; and
- WHEREAS** the Canadian Cancer Society is proud to be a champion and voice for Canadians who care about cancer and is committed to uniting and inspiring Canadians to take control of cancer; and
- WHEREAS** through World Cancer Day, the Canadian Cancer Society is highlighting the importance of making cancer care in Canada affordable, and highlighting the strength and courage that Canadians facing cancer show every day; and
- WHEREAS** many of Canadian Cancer Society volunteers in Powassan and local donors are part of a collective society united by the same goals, helping people live longer and improving the lives and experiences of those affected by cancer; and
- WHEREAS** World Cancer Day is an opportunity to honour all those affected by Cancer and work together to create a world where cancer care is affordable, convenient, and equitable for all Canadians.

NOW THEREFORE BE IT RESOLVED THAT

I, Peter McIsaac, Mayor of the Municipality of Powassan,
do hereby recognize February 4 as
WORLD CANCER DAY
in Ontario.

Dated at the Municipality of Powassan, this 4th day of February 2025.

Peter McIsaac, Mayor
Municipality of Powassan



PROCLAMATION

Canadian Cancer Society – April as Daffodil Month

- WHEREAS** people in our community have been directly affected by cancer and share a strong bond with others who experience this disease; and
- WHEREAS** the Canadian Cancer Society is proud to be a champion and voice for Canadians who care about cancer and is committed to uniting and inspiring Canadians to take control of cancer; and
- WHEREAS** through Daffodil Month, funds are raised to invest in research that will change the future of cancer and a support system that makes life better for those affected by cancer; and,
- WHEREAS** many of Canadian Cancer Society volunteers in Powassan and local donors are part of a collective of people united by the same goals, helping people live longer and improving the lives and experiences of those affected by cancer; and
- WHEREAS** the daffodil is the symbol of strength, courage, and life for those living with cancer and for local people to rally around by donating, proudly wearing a daffodil pin, buying a digital daffodil in honour or memory of a loved one, or volunteering; and

NOW THEREFORE BE IT RESOLVED THAT

I, Peter McIsaac, Mayor of the Municipality of Powassan,
do hereby recognize the Month of April as

DAFFODIL MONTH

in Ontario.

Dated at the Municipality of Powassan, this 4th day of February 2025.

Peter McIsaac, Mayor
Municipality of Powassan

Regular Council Meeting
Tuesday, January 7, 2025, at 6:30 pm
Powassan Council Chambers

Present: Peter McIsaac, Mayor
Markus Wand, Deputy Mayor
Dave Britton, Councillor
Randy Hall, Councillor
Leo Patey, Councillor

Staff: Brayden Robinson, Treasurer/Director of Corporate Services
Allison Quinn, Clerk

Presentations: Powassan and District Union Public Library 2025 Budget Presentation
– Marie Rosset and Laurie Forth

Disclosure of Monetary Interest and General Nature Thereof:

P. McIsaac Item 9.3 Relative named in minutes

2025-01 Moved by: D. Britton Seconded by: L. Patey
That the agenda of the Regular Council Meeting of January 7, 2025, be approved. **Carried**

2025-02 Moved by: L. Patey Seconded by: D. Britton
That the minutes of the Regular meeting of Council of December 3, 2025,
be adopted. **Carried**

2025-03 Moved by: D. Britton Seconded by: R. Hall
That the minutes from the Powassan and District Union Public Library meeting of November
18, 2024, be received. **Carried**

2025-04 Moved by: R. Hall Seconded by: M. Wand
That the District of Parry Sound Social Services Administration Board CAO's Report of
December 2024, be received. **Carried**

Mayor McIsaac left the Chair; Deputy Mayor Wand took the Chair.

2025-05 Moved by: L. Patey Seconded by: D. Britton
That the minutes from the Golden Sunshine Municipal Non-Profit Housing Corporation
committee meeting of November 19, 2024, be received. **Carried**

Mayor McIsaac returned to Chair.

2025-06 Moved by: D. Britton Seconded by: R. Hall
That the memo from Manager of Operations and Facilities, F. Schmeltz, regarding the Public
Works Update be received. **Carried**

- 2025-07** Moved by: R. Hall Seconded by: M. Wand
That Bylaw 2025-01, being a Bylaw to authorize temporary borrowing from time to time to meet current expenditures during the fiscal year 2025 and ending December 31, 2025.

Be READ a FIRST and SECOND time and considered READ a THIRD and FINAL time and adopted as such in open Council this 7th day of January 2025 for the immediate wellbeing of the Municipality. **Carried**
- 2025-08** Moved by: M. Wand Seconded by: L. Patey
That Bylaw 2025-02, being a Bylaw to provide for an interim Tax Levy for 2025.

Be READ a FIRST and SECOND time and considered READ a THIRD and FINAL time and adopted as such in open Council this 7th day of January 2025, for the immediate wellbeing of the Municipality. **Carried**
- 2025-09** Moved by: L. Patey Seconded by: D. Britton
That the correspondence regarding the revised OPP Annual Billing Statement for 2025, be received. **Carried**
- 2025-10** Moved by: D. Britton Seconded by: R. Hall
That the North Bay Parry Sound District Health Unit 2025 Municipal Levy Notice, be received. **Carried**
- 2025-11** Moved by: R. Hall Seconded by: M. Wand
That the Ontario Clean Water Agency's 2024 Management Review report for Powassan's Drinking Water Quality Management System dated December 12, 2024, be received.

Recorded Vote: Requested by Councillor Britton
Councillor Britton Yea
Councillor Hall Yea
Councillor Wand Yea
Councillor Patey Yea
Mayor McIsaac Yea **Carried**
- 2025-12** Moved by: L. Patey Seconded by: D. Britton
That the Ontario Clean Water Agency's Quality and Environmental Management System Operation Plan for the Powassan Drinking Water System, dated November 28, 2024, be received.

Recorded Vote: Requested by Councillor Patey
Councillor Patey Yea
Councillor Hall Yea
Councillor Wand Yea
Councillor Britton Yea
Mayor McIsaac Yea **Carried**
- 2025-13** Moved by: D. Britton Seconded by: R. Hall
That the report from Councillor Hall regarding the Kraft Hockeyville 2025 Contest be received. **Carried**

- 2025-14** Moved by: R. Hall Seconded by: M. Wand
That the report from Councillor Hall regarding the development of a Powassan snowmobile/ATV trail for the 2025 season, be received. **Carried**
- 2025-15** Moved by: M. Wand Seconded by: L. Patey
That the report from Councillor R. Hall regarding Procedural Bylaw 2023-18 Item 5.9, which provides rules for members of council participating in council meetings electronically, be received. **Carried**
- 2025-16** Moved by: L. Patey Seconded by: M. Wand
That the correspondence dated December 16, 2024, from the Ministry of Infrastructure, regarding the Municipal Housing Infrastructure Program, be received. **Carried**
- 2025-17** Moved by: M. Wand Seconded by: D. Britton
That the correspondence dated November 5, 2024, from the Town of Aurora regarding a request for the Redistribution of the Provincial Land Transfer Tax and GST to Municipalities for Sustainable Infrastructure Funding, be received; and,

THEREFORE be it resolved that the Council of the Municipality of Powassan formally requests the Provincial Government to consider redistributing a portion of the Land Transfer Tax collected on property transactions to municipalities; and,

FURTHER that Council calls on the Federal Government to allocate a percentage of the GST collected on property sales to municipalities; and,

FURTHER that this redistribution of the Land Transfer Tax and GST should be structured to provide predictable and sustainable funding to municipalities, allowing for better long-term planning and investment in infrastructure projects that benefit local communities, thus ensuring that local governments receive a fair share of the revenue to address critical infrastructure needs; and,

THAT copies of this resolution be forwarded to Prime Minister Justin Trudeau, Premier Doug Ford, the Ontario Minister of Finance, the Minister of Municipal Affairs and Housing, local Members of Parliament (MPs) and Members of Provincial Parliament (MPPs), and all 444 Municipalities in Ontario, the Federation of Canadian Municipalities (FCM), and the Association of Municipalities of Ontario (AMO) for their endorsement and advocacy. **Carried**
- 2025-18** Moved by: R. Hall Seconded by: L. Patey
That the correspondence dated December 9, 2024, from the Ministry of Emergency Management Preparedness and Response regarding the Emergency Management Modernization Act, be received. **Carried**
- 2025-19** Moved by: L. Patey Seconded by: D. Britton
That the correspondence dated December 10, 2024, from NECO Community Futures Development Corporation regarding the 2025 Maple Syrup Week and Festival application, be received. **Carried**

2025-20

Moved by: D. Britton Seconded by: M. Wand
That Council now adjourns to closed session at 8:26 p.m. to discuss:

17.1 Adoption of Closed Session Minutes of November 5, 2024

17.2 Identifiable Individuals – Section 239(2)(b) of the Municipal Act and under Section 9(4)(b) of the Procedural Bylaw – Matters regarding an identifiable individual, including municipal or local board employees.

17.3 Legal Matters – Section 239(2)(e) of the Municipal Act and under Section 9(4)(e) of the Procedural Bylaw – Litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board.

17.4 Security of Property - Section 239(2)(a) of the Municipal Act and under 9.4(a) of the Procedural Bylaw – Security of property of the municipality or local board. **Carried**

2025-21

Moved by: R. Hall Seconded by: L. Patey
That Council now reconvenes to regular session at 9:01 p.m.

Carried

2025-22

Moved by: D. Britton Seconded by: R. Hall
That Council now adjourns at 9:01 p.m.

Carried

Mayor

Clerk

**POWASSAN MAPLE SYRUP FESTIVAL
COMMITTEE MEETING MINUTES
JANUARY 15, 2025**

Call to order:

Meeting called to order at 6:10 pm. with the following members in attendance:

Christine Wendover / Diane Cole / Leo Patey / Mike Odrowski / Monika Gibbings / Paul Long/ Angela Ashford / Lori Costello / Audrey & Dave Matthews

Municipal staff in attendance: Kim Bester

Call to Order – Moved by Audrey / Seconded by Angela – **Carried**

1. Review of the October 16, 2024 minutes – Moved by Monika / Seconded by Christine - **Carried.**

2. **Maple Producers** –

Around 70 people attended the Algonquin Local of the Ontario Maple Syrup producers annual information day in South River on January 14, 2025.

3. **Old Business** –

4. **New Business** –

a) We have around 59 vendor spaces registered so far. Kim and Christine will review Indoor applications received at the end of January and determine which vendors will have space inside. Leo asked that we look at increasing our vendor fees for 2026, especially as indoor spaces are very limited.

b) Funding updates –

- NECO has already committed to providing \$1500
- Our application to NOHFC was for \$12,443 to cover an expanded Kidz Zone (bouncy castles / entertainer, etc.), the Kidz Coloring contest and additional Facebook advertising. We should hear back sometime in February.
- Our application to Experience Ontario was for \$11,000 to cover events containers within the proposed Maple Week (bus tours to two sugar bushes on the Saturday before the festival / Cooking Classes / Maple Dinner / Large Banner / Maple Appetizers, radio advertising in Espanola, etc. Not sure of timeline for response.

c) The Powassan Girl Guides have offered to assist with the Kidz Zone by providing games, and hot dogs on a fire. This area (bouncy castles and games) would work by having kids pay a fee to participate (an all day fee)

d) Leo's suggestions were discussed – we will be doing the bus tours IF Experience Ontario funding is successful. Mr. Morrow will be doing the small scale production presentation at 250 Clark. Moose (our mascot) will be attending a few Voodoos games to promote the festival. The Coloring contest (banner contest) will be open to students in

- Powassan, Nipissing, East Ferris, etc. We can revisit the idea of incorporating the history of the area into next year's festival,
- e) St. Joseph's church would like to have their vendor space again this year in the food court for free – in exchange for setting up the tents and tables for anyone to sit and eat at.
 - f) Draft 1 of the budget was provided. The proposed activities will be dependent on funding received.
 - g) The MNR Bear Watch representatives have committed to attending again this year.
 - h) Elite Chainsaw Art – Andy has provided information on this carver – who will attend this year.
 - i) Members agreed to put an ad in the Nipissing Reading (front page – top banner) at a cost of \$259.00. The free paper has a total distribution of around 14000 copies per month.

Other Discussions:

- a) We will request to borrow tents from the Powassan Agricultural Society – one 20x40 and two 20x20 – for use at the stage area. A rental fee may apply.
- b) Andy had indicated that he had contacted a local “knowledge keeper” – he will provide further details later on. We could budget to provide a \$500 honorarium for this person's attendance. Leo also advised that his daughters had a contact for someone involved in a dream circle.
- c) Angela suggested that we include a question on our prize basket ballots regarding “where” visitors heard about the festival (i.e. website / facebook / radio, etc.)
- d) Angela suggested that we put the itinerary of events on the sandwich boards throughout the festival grounds.
- e) Monika to contact 3-4 buskers re: participating at the 2025 festival.
- f) Sponsor letters to be available for our February meeting – local ones to be distributed by hand and others to be mailed out.
- g)

Motion to end the meeting at 7:10 pm – moved by Audrey, seconded by Monika. **Carried**

Next meeting – Wed., February 12, 2025 – 6:10 pm

Minutes approved by: _____
Mike Odrowski, Chair

Recorded by : _____
Kimberly Bester, Secretary

Recreation Committee Minutes

October 23 - 7:00pm, 250 Clark, Maple Room

Attendees: Kim Lindsay, Councillor Leo Patey, Brian Eckensviller, Ted Hummel, Jeff Eckensviller, Jim Gadsden

Staff: Allison Quinn

Absent with Regrets: Mayor McIsaac, Kirsten Pedersen, Nathan Stewart, Jared Dupuis, Booster Club Rep.

Guests: None.

1. Call to Order @ 7:00 p.m.

2. Agenda

- Approval of the Agenda of October 23, 2024 - *Carried*
Correspondence to be removed from agenda.

3. Disclosure of Pecuniary Interest – None

4. Presentations

5. Minutes

- Adoption of the minutes of September 11, 2024 - *Carried*

Councillor Patey introduced himself to the group. As mentioned in Item 10 of the minutes Councillor Patey will be the Council representative now and Councillor Hall will be the representative on the Library Board.

A. Quinn let the group know that Gerry Giesler has resigned from the board.

A. Quinn mentioned that there had been a previous discussion last March about removing facility updates from the agenda as that is no longer part of the mandate and that if anyone has questions, they can contact Shaun directly.

6. Event Updates

- a) Sip and Savour – nothing new to update.
- b) Canoe Regatta – nothing to update.
- c) Fish Derby – nothing to update.
- d) Trout Creek Playground Improvements – nothing new from the last meeting.
- e) Trails Funding – A. Quinn to check and see if signage to Love Lake will be done.
- f) Winter Carnival – A. Quinn to ensure the Family Day weekend is reserved for the carnival.
- g) Maple Hill Sap Run – no updates.
- h) New Year's Eve (moved from New Business) – the family celebration will continue; the municipal 19+ event planned upstairs has been cancelled as it was rented for another function.

7. Outstanding Business

- a) TCCC updates – Councillor Patey gave an update on the engineer’s report regarding TCCC. It is up on the Municipal website as part of the October 15 agenda package.
- b) Security Cameras at TCCC, specifically facing the stables – cameras are already in place.
- c) Carnival Financials – A. Quinn will email B. Eckensviller an update and bring the information back to the next meeting.

8. New Business

- a) Timing of ice going in at TCCC – B. Eckensviller inquired why the ice went in if the dog show is no longer happening and when staff knew the dog show was moving. A. Quinn mentioned that the dog show moved to West Nipissing, and that there isn’t enough being booked at TCCC until late October to warrant putting the ice in sooner. B. Eckensviller would like to see the TC ice rental fees lowered. He gave a comparison of the TCCC rates with other neighbouring municipal rates. Councillor Patey to discuss with staff.

A. Quinn to ensure the public skating information is back up on the digital signs.

9. Community Updates

- a) K. Lindsay updated the group on the Curling Club. It’s open and there are ladies, mixed, men’s, doubles and junior sessions. Junior is for ages 8-13.

10. **Next Meeting:** Wednesday, November 13, 2024

11. **Adjournment:** Meeting adjourned at 7:41 p.m.

Chair

Clerk

Recreation Committee Minutes

December 4, 2024 - 7:00pm, 250 Clark, Maple Room

Attendees: Kim Lindsay, Councillor Leo Patey, Brian Eckensviller, Jim Gadsden, Nathan Stewart

Staff: Allison Quinn

Absent with Regrets: Mayor McIsaac, Jared Dupuis, Booster Club Rep., Jeff Eckensviller

Guests: None.

1. Call to Order @ 7:04 p.m.

2. Agenda

- Approval of the Agenda of December 4, 2024- *Carried*
 - There was a discussion, and it was agreed, to remove correspondence from future agendas.

3. Disclosure of Pecuniary Interest – None

4. Presentations

5. Minutes

- Adoption of the minutes of October 23, 2024 - *Carried*

6. Event Updates

- a) Sip and Savour – nothing new to update.
- b) Canoe Regatta – nothing to update.
- c) Fish Derby – There was a discussion regarding a winter fish derby. The date would be Monday, February 17 – the Monday of the Family Day weekend. A. Quinn to look into.
- d) Trout Creek Playground Improvements – nothing new from the last meeting.
- e) Trails Funding - nothing new to update.
- f) Winter Carnival – no updates yet.
- g) Maple Hill Sap Run – Planning has started.
- h) New Year’s Eve – Family event with skating, hot chocolate and fireworks will be happening at the TC Community Centre; a private +19 event will be happening in the hall. Tickets can be purchased by the public. A. Quinn to email more updates to the group.
- i) Maple Syrup Festival – Councillor Patey spoke about having a booth at the Maple Syrup Festival to promote recreation and events in the municipality. The booth would be run by volunteers.

7. Outstanding Business

- a) TCCC updates – The posts were installed at the arena and completed the first week of December. Any reports on the building are on the municipal website.
- b) Carnival Financials – A. Quinn emailed B. Eckensviller the updates.
- c) Ice Rental Fees – Councillor Patey has discussed with staff.
- d) Public Skating on digital signs – Public Skating info should be up there now. There was some discussion about how the TCCC sign should be updated and what works best visually. A. Quinn to look into and ensure events are updated.

8. New Business – No new business.

9. Community Updates

- a) N. Stewart gave an update on the PMHA Black and Gold tournament – 14 teams were involved, utilizing both arenas; food was served in the upstairs hall at the Sportsplex. It was a successful weekend.

During Community Updates there was a discussion regarding the committee’s focus. It was agreed to revisit the mandate at the next meeting and refocus everyone’s efforts so no one’s time is being wasted. Members should bring their suggestions to the next meeting or can email Allison at aquinn@powassan.net.

It was also suggested that the municipality communicate more effectively, and perhaps differently to the public. Councillor Patey and A. Quinn agreed to look into that further.

10. Next Meeting: Wednesday, January 22, 2025

11. Adjournment: Meeting adjourned at 8:07 p.m.

Chair

Clerk

Powassan & District Union Public Library

Minutes for Monday, December 16, 2024 – 6:15 p.m.

Board Meeting @ Library

In-person: Randy Hall, Laurie Forth, Bernadette Kerr, Steve Kirkey, Debbie Piper, Pat Stephens, Marie Rosset

Via Zoom: Tina Martin, Brenda Lennon, Valerie Morgan

Item	Action	Responsibility
1. Call to order	6:16 pm	
2. Respect and Acknowledgement Declaration	Declaration read by CEO We respectfully acknowledge that we are on the traditional territory of the Anishinaabe Peoples, in the Robinson-Huron and Williams Treaties areas. We wish to acknowledge the long history of First Nations and Métis Peoples in Ontario and show respect to the neighbouring Indigenous communities. We offer our gratitude for their care for, and teachings about, our earth and our relations. May we continue to honour these teachings and accept their value going forward.	
5. General Consent Motion: Present the general Consent Motion for December 2024, which includes: a) Approval of December 16, 2024 Agenda b) Approval of Minutes from the November 18, 2024 meeting c) Approval of the November 2024 Financial Statements d) Approval of November 2024 Library Reports	Motion: 2024-40 That the General Consent Motion for December 2024 be adopted as presented Moved by: Bernadette Kerr Seconded by: Steven Kirkey Adopted as presented. Carried	
4. Disclosure of pecuniary interest	None	
5. General Business a) New Board Member, Councillor Randy Hall - Welcome b) Grant Updates	Randy Hall attended first meeting. The two other Council members talked about process of supporting the library while supporting their councils. OTF Capital Grant	

<p>c) 2024 PDUPL Volunteer of the Year Award</p> <p>d) Upcoming Holiday Activities</p>	<ul style="list-style-type: none"> Issues with replacement of light fixture through Save on Energy not resolved to date. Resolution planned for early next year. New Heat pump installation done. Working without any problems. Upgrades to accessibility features postpone until early next year. <p>OTF Resilience Grant</p> <ul style="list-style-type: none"> Contacted CAO for second payment, which was received by Municipality Sept 14, 2024 (\$9,000). Still have not received funds. End of Grant report to be completed by April 17, 2025 <p>Senior's Grant</p> <ul style="list-style-type: none"> Activities proceeding as planned Final report due April 30, 2025 <p>New Canada Summer Job (CSJ) program.</p> <ul style="list-style-type: none"> Laurie Forth completed application by deadline - Dec 19 <p>Horizon Grants</p> <ul style="list-style-type: none"> Will apply in 2025 to cover costs of Community Conversations. <p>Enbridge Giving Back to Community Grant</p> <ul style="list-style-type: none"> Will schedule for early 2025 <p>Consensus to give the 2024 award to Rodi Roadknight. Well deserved, responsible for the organization of many 2024 events at the library.</p> <ul style="list-style-type: none"> Dec 20: Annual Holiday Open House with prizes and draws 	<p>CEO to contact Save on Energy to complete work satisfactorily.</p> <p>CEO</p> <p>CEO</p> <p>CEO</p> <p>Jen Fryer, CEO</p>
<p>6. Correspondence</p>	<p>None</p>	
<p>7. Committee Reports</p> <p>a) Property Committee</p>	<p>See above 5 b). Grants Update - OTF Capital Grant.</p>	

<p>b) Financial Committee</p>	<p>Financial Committee met on December 9th to complete and approve 2025 budget CEO presented budget to Board. After some discussions it was approved unanimously. Still waiting from the Ontario Library Services JASI, for the accurate distribution of active patrons by Union Members. 2025 Budget presentation schedule:</p> <ul style="list-style-type: none"> • January 7th: Municipality of Powassan Council • January 7th: Township of Nipissing Council • January 14th: Township of Chisolm Council <p>Motion: 2024-41 That the 2025 PDUPL Budget be adopted as presented. Moved by: Brenda Lennon Seconded by: Laurie Forth Carried</p> <p>CEO requested approval for reinvesting GIC reserves into cashable GIC. Given.</p>	<p>CEO, Laurie Forth Steven Kirkey, Debbie Piper CEO, Laurie Forth</p>
<p>c) Policy Committee</p>	<p>None for this month.</p>	
<p>d) Friends of the Library</p>	<ul style="list-style-type: none"> • In 2024 the Friends contributed close to \$5,000 to cover many costs, such as programming, furniture, and technology • Christmas Basket draw continues and will close on December 20th at the end of Open House. 	
<p>e) Adjournment</p>	<p>Motion: 2024-42 That the December 16, 2024 meeting be adjourned at 7:30 pm Moved by: Debbie Piper</p>	<p>Next meeting: January 20, 2025</p>

Chairperson: *Kristine Martin*
Kristine Martin, Chair

Recorder: *Marie Rosset*
Marie Rosset, CEO



**NORTH BAY OPP DETACHMENT BOARD 3
PNC Police Services Board**

MEETING MINUTES

Monday, November 25, 2024, at 6:00 p.m.
Powassan Municipal Office, 250 Clark Street, Powassan

Members Present:

Councillor Wand, Powassan Municipal Representative
Councillor Kirkey, Nipissing Municipal Representative
Councillor Carr, Callander Municipal Representative
Marta Hughes-Bernard, Powassan Community Representative
Shawn Mahoney, Nipissing Community Representative
Keri Tache, Callander Community Representative

Non-Members Present:

Inspector McMullen, North Bay OPP Representative

Staff:

Brayden Robinson (Powassan)

Absent with regrets: Allison Quinn (Powassan)

1. Call to Order

The meeting was called to order at 6:05 p.m.

2. Land Acknowledgement

3. Disclosure of Conflict of Interest and/or Pecuniary Interest and General Nature Thereof
None.

4. Adoption of the Agenda - Resolution 2024-01

Moved by: J. Carr Seconded by: M. Wand

That the agenda of the PNC Detachment Board meeting of November 25, 2024, be approved.

Carried

5. Approval of Past Minutes - Resolution 2024-02

Moved by: S. Kirkey Seconded by: K. Tache

That the minutes of the PNC Detachment Board meeting of September 23, 2024, be adopted.

Carried

6. Presentations/Delegations

None.



7. Business Arising from Previous Minutes

7.1 Oath of Office – All members completed their Oath of Office.

7.2 Appoint Secretary/Treasurer – Resolution 2024-03

Moved by: S. Kirkey Seconded by: J. Carr

That Keri Tache be appointed as the Secretary-Treasurer for the PNC Detachment Board.

Carried

7.3 Terms of Reference – Resolution 2024-04

Moved by: M. Wand Seconded by: M. Hughes

That the Terms of Reference be adopted as presented.

Carried

7.4 Approve Code of Conduct and Acknowledgement of Understanding – Resolution 2024-05

Moved by: J. Carr Seconded by: S. Kirkey

That the Code of Conduct be approved as presented and that all members sign the acknowledgement of understanding.

Carried

7.5 One Drive Set Up – B. Robinson to set up before the next meeting.

8. New Business

8.1 Insurance – Each municipality will investigate insurance quotes.

8.2 OPP Strategic Plan Review – Inspector McMullen presented the report.

8.3 Municipal Safety and Wellbeing Plan Review and Discussion – Members reviewed the report.

8.4 Police Record Checks – Members will have their record checks done and then share with A. Quinn for filing.

8.5 Procedural Bylaw Draft – Resolution 2024-06

Moved by: S. Kirkey Seconded by: M. Hughes

That the draft Procedural Bylaw be received for review and that any changes be sent to staff by January 2, 2025.

Carried

9. Reports

Inspector McMullen presented the OPP Detachment Board Report for October 2024.

10. Correspondence

None.

11. **Addendum** – Resolution 2024-07

Moved by: M. Hughes Seconded by: S. Kirkey

That Allison Quinn be appointed as administrative support for the PNC Detachment Board.



Carried

12. Closed Session

None.

13. Next Meeting

The next meeting will be held Monday, January 27, 2025

14. Adjournment – Resolution 2024-08

Moved by: M. Wand Seconded by: M. Hughes

That the PNC Detachment Board meeting of November 25, 2024, be adjourned at 7:13 pm.

Carried

STAFF REPORT

To: Council
From: Operations
Re: 2024 Biennial Bridge and Culvert Inspection Report

RECOMMENDATION:

That the memo from the Manager of Operations and Facilities F. Schmeltz be received; and further that Council reduces the speed limit to 30 km/hr and approves a load restriction of 5 tonnes be placed on the culverts located at or near Lot 4 Concession 5, O'Connor Line and Lot 5 Concession 7, Hunt Line.

ANALYSIS:

Attached is the 2024 OSIM inspection report.

The OSIM report has an estimated cost breakdown of repairs or replacements needed for our current bridge and culvert inventory. This breakdown recommends \$975,000 in immediate repairs or replacements. Estimates for the following 5 years total \$6,690,000, of which \$1,500,000 is allocated for the Hummel Bridge. The report shows that our structures are aging out and significant investment will be needed moving forward. Over the next 5 years, the report recommends the rehabilitation of one bridge, replacement of two additional bridges, and replacement of 5 large culverts.

Culvert structures 217 and 218 are noted as the greatest immediate areas of concern. Both are large culverts located on O'Connor and Hunt Lines, respectively and are classed as due immediately for replacement in the OSIM inspection report. The Engineer has recommended supporting the two culverts against collapse until replacement can occur. Operations contacted the inspecting engineer for clarification on support, the response for which is as follows:

As discussed for Bridge 217 and 218, there probably is not really any form of practical / cost effective temporary support that could be implemented that would not create an issue with regards to debris accumulation, flow disruption, etc.

Instead, the following temporary measures are recommended to be implemented:

-Reduce permitted loads on roadway over structure. The lower the weight of the vehicles traversing over the culvert, the lower the risk of large wheel loads causing further issues. It is suggested to limit the load to 5 Tonnes (gross vehicle weight). This would all but eliminate anything but passenger vehicles and pick-up trucks. If emergency vehicles do need to cross, this should be allowed provided they travel at reduced speeds. I am not sure if this is also a school bus route though?

-Reduce speed limit on roadway over structure. Lowering the traffic speed would normally result in lower dynamic impact loads from passing vehicles.

-Implement periodic monitoring (e.g., weekly inspections) and supplemental inspections

after heavy rains, periods of high snow melt, etc.. This could be completed by maintenance staff. Mainly these inspections would be to flag progressing and sudden roadway settlements, large movements of the culvert walls, etc. If these inspections flag any progressing issues, the roadway may need to be closed.

It should be noted that, for culverts in the conditions as observed for 217 and 218, it cannot be accurately predicted if and when some more serious issues may arise (large deformations, large roadway settlements, partial / full collapse of pipe, etc.) as these structures rely on their shape and support from the backfill in order to perform as intended structurally. The recommendations presented above are intended to minimize the potential for a sudden and without warning collapse. Through monitoring, there still remains the possibility that further issues may develop and the need for more drastic intervention (namely closing of the road) may become warranted.

With regards to Bridge 6, this bridge is already posted at 10 tonnes. I reviewed the 2024 and 2022 OSIMs and it does not appear that any appreciable further movement has occurred at this south abutment and the condition of the abutments does appear to be similar over the last several OSIM cycles. In addition, there is likely sufficient redundancy with this structure that sudden failure would not occur without some prior warning (e.g., large cracking forming in the deck, obvious differential settlement, etc.). At this time, I don't think we need to flag this condition as requiring immediate intervention; although we do recommend this structure for work as 'priority 2' after the Hummel Bridge so planning for renewal should at least commence soon.

Operations is requesting that Council reduce the speed limit from 60 km/hr to 30 km/hr for 100 meters in both directions from the cross culverts located at or near Lot 5 Concession 7, Hunt Line and Lot 4 Concession 5, O'Connor Line respectively. Additionally, Operations is recommending that a 5-tonne load restriction be implemented on the above-mentioned locations.

Operations will begin inspections of the culverts after rain/thaw events to ensure the integrity of the supporting roadside banks remains intact. There may also be changes in the snowplow routes to accommodate the load restrictions, which will be managed internally as needed.



MUNICIPALITY OF POWASSAN
BRIDGE MANAGEMENT STUDY REPORT
13 BRIDGES / 27 CULVERTS

NOVEMBER 2024

Report Submitted by:



Suite 400, 39 Robertson Road, Ottawa, Ontario K2H 8R2
Office: 613-695-3737 Fax: 613-680-3636

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Appendices

Appendix A Bridge Management Study Summary Tables

A-1 Bridges (13 Structures)

A-2 Culverts (27 Structures)

Attachment 1 OSIM Inspection Reports (Bridges 1 to14)

Attachment 2 OSIM Inspection Report (Culverts 201 to 228)

1.0 INTRODUCTION

The Municipality of Powassan have retained HP Engineering to develop a bridge management study for 40 structures owned and maintained by the Municipality.

Each structure in the Municipality's inventory was visually inspected using Municipal Bridge Appraisal Forms. Inspection forms for each structure present visual observations, suggested rehabilitation, further required investigation and budget cost information. Refer to Attachment 1 for individual inspection sheets for bridge and culvert type structures, respectively.

The following report summarizes costs for suggested rehabilitation and engineering investigation and suggests prioritization of various needs (rehabilitation and investigation) for the Municipality's maintenance and capital works planning and budgeting. Appendix A presents a summary of budgetary costs for all structures (in numerical order of structure number).

2.0 STRUCTURE INSPECTIONS

A total of 40 structures, owned and maintained by the Municipality, were visually inspected in accordance with the Municipal Bridge Appraisal forms. The inspections were performed during the summer of 2024.

For each structure, components were screened for visual signs of deterioration. The components were then given a rating (on the inspection forms), whereby the components are visually rated on a scale of 1 to 6 (1 being poor, 6 being excellent) based on their observed conditions. This provides quantitative data as to the extent of the observed deterioration for each component. Explanatory statements are provided at the end of the document; comments are typically made to flag concerns that would require maintenance or repair works.

The inspection forms also provide information regarding suggested engineering investigation and repairs and associated budgetary estimates of expected costs. Suggested engineering investigations are subdivided based on time of need as either 6-10 years, 1-5 years, and less than a year. Repairs and associated budgetary estimates are subdivided based on time of need as either none, 6 to 10 years, 1 to 5 years, and less than 1 year. The basis of selection for budget costs are further discussed in Section 3.0 of this report.

Photographs of each inspected structure are included with the inspection sheets including one photograph of an approach, an elevation as well as any significant deterioration.

Individual inspection forms for the structures are included in the appendices where the structures are separated into sequential order from Structure Numbers 1 to 14 and 201 to 228.

3.0 DETERMINATION OF COSTS

3.1 *Repair, Rehabilitation and Replacement*

Given the cursory information obtained during the visual inspections and without the benefit of detailed design information, it is impractical to develop detailed cost estimates for each structure. For

these reasons, benchmark budget costs were developed for categories of repair, rehabilitation and replacement. Traditionally, benchmark costs do not necessarily provide accurate costs for individual repairs / replacement, but have proven to provide sufficient accuracy for budgeting purposes when dealing with a large number of structures.

For the purpose of this study, benchmark costs for the rehabilitation and replacement of structures are based on maintaining the existing width, length and alignment of each structure. However, the costs to replace the existing structures with structures meeting current geometric standards are included for comparison. For this purpose, an overall roadway width of 10 metres was used for both bridge and culvert type structures. More accurate costs for each structure would be provided upon further engineering study and design based on exact repair, rehabilitation and replacement needs (including change in geometry). The following benchmark costs have been established for this study following the requirements of the inspection forms.

Bridge and Culvert Replacement Costs

Budget costs for the replacement of bridges are usually based on the deck surface area of individual structures (m²). Therefore, benchmark replacement costs for this study were determined using the following unit costs including approaches, administration and design costs, based on the spans of individual bridges and taking into account approach roadway costs (which do not vary with bridge span). In addition, the varying widths of bridges were taken into account to provide more realistic unit costs and to avoid large discrepancies in the replacement cost between bridges of different lengths, but similar surface areas.

Total Bridge Replacement Unit Costs		
Bridge Length (m)	Width (m)	Unit Replacement Cost (\$/m²)
3-10	<10 m	\$8,000.00
	≥10 m	\$7,500.00
10-20	<10 m	\$7,500.00
	≥10 m	\$6,500.00
20-30	<10 m	\$6,500.00
	≥10 m	\$5,500.00
>30	<10 m	\$5,500.00
	≥10 m	\$4,500.00

In the case of culvert type structures, the plan area (or deck surface area) used in the calculation was ('length of spans' + 1 m) x ('width of roadway' + 1 m). The purpose of using the Total Bridge Replacement Unit Costs table for culvert type structures is to normalize the replacement cost figures. Although culverts are generally less expensive to construct than bridges, it is generally accepted that

the expected life span is approximately 50% of a bridge. It is valid therefore, on a life cycle cost basis, to utilize the Total Bridge Replacement Unit Costs table for all structures, whether they are bridge type or culvert type.

Bridge Repair / Rehabilitation Costs

For budgeting purposes, costs for the rehabilitation of bridges are typically expressed as a percentage of the total replacement costs. Rehabilitation costs for this study are separated into four categories as presented in the table below (including administration and design costs).

Bridge Rehabilitation Costs		
Category		% of Replacement Cost
1.	Major Bridge Rehabilitation	50-60
2.	Minor Bridge Rehabilitation	25-50
3.	Major Item Repair	5-25
4.	Minor Item Repair	5 or less

Culvert Repair / Rehabilitation Costs

It is generally not practical to undertake major rehabilitation work to culvert crossings where significant deterioration or deficiencies exist in the metal liner (barrel). Culvert replacement is normally planned in these circumstances. However, the possibility of using liners to repair the culvert exists. The installation cost of liners is usually 50% less than the replacement cost of the culvert. Repair work identified generally included repairs to the inlet and outlet structures such as headwalls, cut-off walls, retaining walls, restoration of backfill, slope protection at the culvert ends and installation / upgrading of guiderail. In the case of concrete barrels, some repair work to the barrels may be included if the opening is large enough to permit construction access.

Approach Roadway Repair / Rehabilitation Costs

For this study, approaches are considered to be 30 m of roadway at each end of individual bridges (60 m total per bridge). Repair / rehabilitation costs for approach roadways have been separated into three categories as presented in the table below (including administration and design costs).

Approach Roadway Repair/Rehabilitation Costs		
Category		Cost
1.	Capital Projects (Partial / Complete Paving, Guiderail)	\$40,000.00
2.	Minor Repairs / Maintenance (Crack Sealing, Guiderail Repairs)	\$14,000.00
3.	Crack Sealing Only	\$7,000.00

Construction Detour Costs

Several alternatives exist to maintain the flow of traffic when a bridge or culvert undergoes major rehabilitation or replacement. These include the construction of a detour structure adjacent to the existing structure, a detour route around (avoiding) the structure and the staging of the construction to allow traffic on the structure during construction. The construction of a detour structure is the most costly option and is usually recommended only when the other options are not possible. The detour route is the least expensive option, but is often not practical due to the length of the detour route and the inconvenience to residents near the structure. The most frequently recommended option is the staging of rehabilitation work to allow the passage of traffic.

Since most bridge projects would consist of rehabilitation and not replacement, the staging of work would be the most frequently used option to maintain traffic during construction. Therefore, the benchmark costs for detours are based on staging of the work per the following. These costs are based on additional costs incurred from staging of the work during construction (extra effort, time). Traffic control costs are presented later in this section.

Detour During Construction Costs		
Category		Cost
1.	Detour - Minor Rehabilitation / Major Repairs / Major Rehabilitation of Bridges Less than 10m Long / Culvert Replacement	\$30,000.00
2.	Detour - Major Rehabilitation / Bridge Replacement	\$100,000.00

Traffic Control Costs

In addition to performing the work in stages to accommodate traffic, the safety of traffic passing on the bridge or over the culvert during construction must also be ensured. The costs of traffic control during staged projects would be as follows:

Traffic Control Costs		
Category		Cost
1.	Traffic Control- Minor Rehabilitation	\$30,000.00
2.	Traffic Control - Major Rehabilitation	\$50,000.00

Utilities / Right of Way Costs

Most bridge or culvert rehabilitation / replacement projects do not require substantial expense for the installation or modification of existing utilities. Similarly, most of these projects do not require an

increase in right of way. Therefore, specific benchmark budget costs for these items were not developed.

Environmental Study Costs

Since bridge or culvert replacements / rehabilitations typically do not involve a change in alignment or a reduction in clearances under the structure, these projects usually fall under the Class A Environmental Assessment for Ontario Highways. This type of environmental assessment does not require detailed environmental and mitigation plans, but typically requires written application with, and permission from, the appropriate environmental agencies (Fisheries and Oceans Canada, Canadian Coast Guard, Ontario Ministry of Natural Resources, Ontario Ministry of the Environment, Local Conservation Authorities). Therefore, the benchmark budget cost for environmental study would be as follows (based on the requirement of Class A Environmental Assessment):

Environmental Study Costs		
Category		Cost
1.	Bridge / Culvert Replacement, Minor and Major Rehabilitation	\$9,500.00

Other Costs

Any other costs not specified in the above (site specific requirements) are deemed to be covered in the total benchmark costs. Therefore, no specific amount for other work is specified in this report.

Contingency Costs

The benchmark costs used for budgeting purposes are based only on information obtained from visual inspections. Because of this, contingency allowances are already built into the benchmark costs. Therefore, specific amounts for contingencies will not be included in this report.

3.2 Engineering Investigation

Further engineering investigation is recommended for several of the bridges and culverts as indicated on individual inspection forms. Benchmark budget costs for engineering investigation work are presented in the table below:

Engineering Investigation			
Category		Type of Structure	Cost
1.	Detailed Inspection / Rehabilitation Study - Full Bridge	Truss	\$27,500.00
		Others	\$22,000.00
		Traffic Barrier Only *	\$5,500.00
2.	Detailed Deck Condition Survey	Exposed Deck	\$5,500.00
		Asphalt Paved Deck	\$8,800.00
		Concrete Culvert with Height of Fill Less than 500 mm **	\$5,500.00
3.	Structure Evaluation	Truss	\$16,500.00
		Others	\$11,000.00
4.	Underwater Investigation	All Bridges	\$11,000.00

* Requirements for traffic barriers on bridges and culverts were determined using the Canadian Highway Bridge Design Code, MTO Standards and good engineering practice. The evaluation of existing traffic barriers was based on assumed values of AADT and good engineering practice. For structures with existing approach guiderail, a review of the required approach / leaving end length of guiderail and end treatments (as per MTO Standards) was not carried out.

** Deck condition survey on concrete culvert includes cores and sawn samples with no corrosion potential survey. Deck condition surveys on concrete culverts with a height of fill greater than 500 mm are not practical.

The benchmark budget costs for a Structure Evaluation and Detailed Deck Condition Survey would be reduced to 50% of that shown in the table above when any one these are performed simultaneously with a Detailed Inspection / Rehabilitation Study.

Other investigations such as fatigue and seismic investigations would be included with the Detailed Inspection and Structure Evaluation (respectively), if deemed necessary by the engineer. Detailed coating condition surveys are typically only required where a failure of coating systems have occurred other than normal deterioration. A DART (Deck Assessment by Radar Technology) survey is not a commonly used investigation method. Detailed deck condition surveys are the most commonly used method of deck inspection. Therefore, individual costs for the various types of investigation described in the above are not provided.

4.0 DISCUSSION

This Bridge Management Study was developed to provide the Municipality of Powassan with the necessary information required to project budgets and set priorities for future bridge and culvert rehabilitation / replacement programs. The attached inspection sheets should be updated accordingly as repairs and rehabilitations are carried out.

Replacement, rehabilitation and engineering investigation budget costs were provided for all of the Municipality's 40 structures based on visual biennial inspections performed by HP Engineering (during the summer of 2024). The costs for individual structures are presented on inspection forms and were based on benchmark costs developed for this study. These should be used for budgeting purposes only. More accurate cost estimates for each structure's needs would be provided based on more detailed scopes of work developed during the design engineering stages.

The estimated replacement value of the Municipality's bridge and culvert inventory (based only on the 40 structures inspected) is approximately **24.84** million dollars.

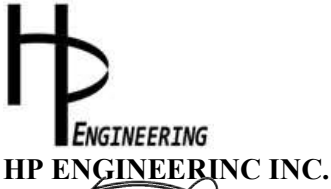
Immediate repair / rehabilitation costs for the 40 structures inspected are estimated to be a total of approximately **975** thousand dollars broken down as **64** and **911** thousand dollars for bridge and culvert type structures respectively.

The longer term repair / rehabilitation costs (1-5 years) for the 40 structures inspected are estimated to be a total of approximately **6.69** million dollars broken down as **4.87** and **1.82** million dollars for bridge and culvert type structures, respectively.

Similarly, the long term repair / rehabilitation costs (6-10 years) for the 40 structures inspected are estimated to be a total of approximately **525** thousand dollars broken down as **167** and **358** thousand dollars for bridge and culvert type structures, respectively.

The costs associated with recommended further Engineering Investigations for the 40 structures inspected was estimated to be a total of approximately **142.5** thousand dollars broken down as **77.5** and **65** thousand dollars for bridges and culvert type structures, respectively. It is noted that approximately half of the costs associated with these recommended further Engineering Investigations are related to deficient and / or non-existing barriers over the structures and on the approaches to the structures

Respectfully submitted,
November 8, 2024



Tashi Dwivedi, P.Eng.
Principal

APPENDIX A

BRIDGE MANAGEMENT SUMMARY TABLES

APPENDIX A-1
BRIDGES
(13 STRUCTURES)

SUMMARY OF PRIORITIZED CAPITAL EXPENDITURES FOR BRIDGE STRUCTURES

Bridge No	Name	Additional Investigations (From 2022 OSIM Inspections)		Repair and Rehabilitation Needs (From 2022 OSIM Inspections and Current Bridge Information)						Prioritization of Major/Minor Capital Work
		Investigation	Cost ⁽²⁾	<1 Year	Cost ⁽²⁾	1-5 Years	Cost ⁽²⁾	6-10 Years	Cost ⁽²⁾	Prioritize Year of Need
1	Main Street Bridge			Install code compliant approach barrier	\$ 64,000.00					3
2	McCarthy Street Bridge	Rehabilitation / Replacement Study	\$ 20,000.00			Superstructure & substructure rehabilitation, including wearing surface repairs, concrete repairs, etc.	\$ 225,000.00			4
4	McCarthy Street Bridge	Rehabilitation / Replacement Study for Barrier Only, Monitor Cracks	\$ 7,500.00			Scour protection, railing improvements	\$ 51,000.00	Concrete repairs to superstructure and substructure	\$ 74,000.00	11
5	Sweezy Street Bridge	Rehabilitation / Replacement Study for Barrier Only	\$ 5,000.00			Approach guiderail	\$ 52,000.00	Substructure concrete repairs	\$ 70,000.00	10
6	Butterfield Road Bridge	Rehabilitation / Replacement Study	\$ 20,000.00			Replace Structure	\$ 1,062,000.00			2
7	Hummel Bridge					Structure Replacement ⁽³⁾	\$ 3,112,000.00			1
8	Maple Hill Road Bridge					End Treatment Repair / Repair Undermining at NE Bearing Cap	\$ 11,000.00			9
9	South Bridge					Replace End Treatments and Connections to Deck	\$ 28,000.00			8
10	Pine Tree Way Bridge					Install New Guiderail	\$ 64,000.00			7
11	Memorial Park Drive East							Concrete Repairs to Substructure	\$ 23,000.00	12
12	Main Street Bridge	Rehabilitation / Replacement Study	\$ 20,000.00			Minor rehabilitation	\$ 232,000.00			5
13	North Bridge	Rehabilitation / Replacement Study for Barrier Only	\$ 5,000.00			Replace End Treatments and Connections to Deck	\$ 28,000.00			6
14	Genesee Creek Bridge (Removed)									N/A
TOTALS										

Notes:

- (1) For bridges scheduled for Major Rehabilitation / Replacement, it has been assumed that barrier work will be completed at the same time that the structure is replaced. Therefore for these structures, the barrier costs have not been included in the 'Prioritization of Capital Work and Engineering Investigations' section of the table above.
- (2) Costs provided in summary table above are full value of the recommended works. The Municipality has shared ownership of several structures and should only consider their share of the value above for budgeting purposes
- (3) Replacement cost includes additional Engineering Investigations as outlined in HP Engineerings recent Preliminary Design Report prepared for the Township of Nipissing.

APPENDIX A-2
CULVERTS
(27 STRUCTURES)

SUMMARY OF PRIORITIZED CAPITAL EXPENDITURES FOR CULVERT STRUCTURES

Culvert No	Name	Additional Investigations (From 2022 OSIM Inspections)		Repair and Rehabilitation Needs (From 2022 OSIM Inspections and Current Bridge Information)						Prioritization of Major/Minor Capital Work													
		Investigation	Cost ⁽²⁾	<1 Year	Cost ⁽²⁾	1-5 Years	Cost ⁽²⁾	6-10 Years	Cost ⁽²⁾	Prioritize Year of Need	Estimated Major/Minor Capital Work Expenditure per Year ⁽¹⁾⁽²⁾										Total		
											2025	2026	2027	2028	2029	2030	2031	2032	2033	2034			
201	Forestry Road Culvert					Install new guiderail	\$ 64,000.00			5					\$ 64,000.00								
202	Forestry Road Culvert					Install new guiderail	\$ 64,000.00			2		\$ 64,000.00											
203	Main Street Culvert	Rehabilitation / replacement study for barrier only	\$ 5,000.00			Guardrail posts and end treatments	\$ 13,000.00			4			\$ 18,000.00										
204	McEchern Street Culvert					Install new guiderail	\$ 64,000.00			3			\$ 64,000.00										
205	McCarthy Street Culvert (House 301 Entrance)									N/A													
206	McCarthy Street Culvert (House 401 Entrance)									N/A													
207	McCarthy Street Culvert (House 403 Entrance)									N/A													
208	McCarthy Street Culvert (House 405 Entrance)									N/A													
209	McCarthy Street Culvert (House 411 Entrance)									N/A													
210	McCarthy Street Culvert (House 419 Entrance)									N/A													
211	McCarthy Street Culvert (Field Entrance)									N/A													
213	Hemlock Road Culvert	Rehabilitation / replacement study	\$ 10,000.00					Replace Structure	\$ 295,000.00	7					\$ 305,000.00								
214	Hemlock Road Culvert					Install new guiderail	\$ 64,000.00			3			\$ 64,000.00										
215	Purdon Line Culvert					Install new guiderail	\$ 64,000.00			3			\$ 64,000.00										
216	Maple Hill Road Culvert					Install new guiderail	\$ 64,000.00			3			\$ 64,000.00										
217	O'Conner Line Culvert	Rehabilitation / replacement study	\$ 10,000.00	Replace structure	\$ 420,000.00					1	\$ 430,000.00												
218	Hunt Line Culvert	Rehabilitation / replacement study	\$ 10,000.00	Replace structure	\$ 491,000.00					2	\$ 501,000.00												
219	Genesee Lake Road Culvert	Rehabilitation / replacement study	\$ 10,000.00			Replace structure	\$ 440,000.00			4			\$ 450,000.00										
220	Chiswick Line Culvert					Install new guiderail	\$ 64,000.00			4			\$ 64,000.00										
221	Chiswick Line Culvert	Rehabilitation / replacement study	\$ 10,000.00			Replace structure	\$ 510,000.00			5				\$ 520,000.00									
222	Memorial Park Drive East Culvert									N/A													
223	Bridge Street Culvert							Rehabilitate structure	\$ 63,000.00	8							\$ 63,000.00						
224	Lindquist Line Culvert					Install new guiderail	\$ 64,000.00			3			\$ 64,000.00										
225	Pine Tree Way Culvert					Install new guiderail	\$ 64,000.00			9			\$ 64,000.00										
226	Hemlock Road Culvert	Rehabilitation / replacement study	\$ 10,000.00			Replace structure	\$ 215,000.00			7							\$ 225,000.00						
227	Hemlock Road Culvert					Install new guiderail	\$ 64,000.00			4			\$ 64,000.00										
228	McCarthy Street Culvert									N/A													
TOTALS											\$ 430,000	\$ 565,000	\$ 384,000	\$ 596,000	\$ 584,000	\$ 305,000	\$ 288,000	\$ -	\$ -	\$ -	\$ -	\$ 3,152,000	

Notes:

- (1) For bridges scheduled for Major Rehabilitation / Replacement, it has been assumed that barrier work will be completed at the same time that the structure is replaced. Therefore for these structures, the barrier costs have not been included in 'Prioritization of Capital Work and Engineering Investigations'
- (2) Costs provided in summary table above are full value of the recommended works. The Municipality has shared ownership of several structures and should only consider their share of the value above for budgeting purposes

ATTACHMENT 1

OSIM INSPECTION REPORTS

BRIDGES

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Bridge Name:	Main Street, Trout Creek	Bridge No.:	1
Road Name:	Main Street	Road Section No.:	
Location:	0.30 km E of Highway 11	MTO Site No.:	044-0000-
Roadside Env.:	S	Post Sign:	t t t
BL Posting:	t t t	Crossing Type:	O-WAT, Over Water
Bylaw No.:		Low Clear Sign:	Narrow Structure Sign:
Bylaw Exp. Date:		Eastings:	17 627231
		Northing:	5093831
		Federal Navigable Waterway:	Unknown
		Bridge Value:	\$ 614,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		MunicA
<input checked="" type="checkbox"/> Shared?		Adjacent Bridge No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Substructure Yr:	2006	Span Length:	8.2 m	Logitudinal Joints:	0
Superstructure Yr:	2006	Deck Type:	CC - Corrugated Metal, Filled	Transverse Joints:	0
Bridge Type:	W - IB - S	Deck Length:	9.2 m	Number of Bearings:	0
Crossing Skew:	-00 °	Deck Width:	7.4 m	Soil Condition:	G
Number of Spans:	1	Deck Area:	68.1 m ²	Abutment and Foundation Type:	Closed - SF

ROAD OVER BRIDGE

Existing Road Class:	LR	No. of Lanes:	2.0	Barrier Walls/Railings:	FB
Operational Status:	2W - OAT	Median Type/Width:	m	Min Vertical Clearance:	m
Wearing Surface:	A	Safety Curb/	(A) N N 0.2 m		
Travel Deck Width:	7.00 m	Sidewalk and Curb	(B) N / S 0.2 m		

ROAD UNDER BRIDGE

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:	m	Min Vertical Clearance:	m
Opening Under:	m	Safety Curb/	(A) m		
Surface Width:	m	Sidewalk and Curb	(B) / m		

E. TRAFFIC DATA

Legal Speed Limit:	50	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	150	AADT:	165
<input checked="" type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
Source:		DHV:	vph	DHV:	vph
Bridge 1 Asset Master		Trucks:	%	Trucks:	%
		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	181

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T.Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. BRIDGE NEEDS

Field	MCR	PCR	TON	Comments
Superstructure	6	6	ADEQ	
Wearing Surface	4	5	6-10	
Deck Condition	5	6	ADEQ	
Expansion Joints	0	0	ADEQ	
Railing/guiderail	5	2	1-5	
Substructure	6	6	ADEQ	
Coating	0	0	ADEQ	
Streams/Waterways	5	6	6-10	
Curb/Sidewalk	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
Road Over Bridge				
RO-Trav. Deck Width	7	6.5	ADEQ	
RO-LOS	A	E	ADEQ	
RO-Min. Vertical Clear.		4.5	ADEQ	No value for: Min Vertical Clearance
RO-Sidewalks	N	Y	NOW	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
Maintenance	OTHm	Approach guiderail end treatments	1-5	0	48,000	16,000	64,000
		Rehabilitation / Replacement Study for Barrier only				-	-
			Maintenance	Subtotal:	48,000	16,000	64,000

I. ENGINEERING RECOMMENDATIONS

Bridge Drawings:
 Estimated Posting: t
 Evaluated Posting: t t t
 Closure Date:
 Closure Type:
 Monitoring Interval:

 Monitoring Component:

J. DESIGN PARAMETERS

Design Class:
 Operational Status: -
 Abutment Type:
 Design Deck Width:
 Design Deck Length:

K. IMPROVEMENT COSTS

Total Construction/Rehab	64,000
Total Inspection	0
TOTAL	64,000
86405 share @100%	64,000

INSPECTION NOTES

Bridge No.: 1

Bridge No. 1, Main Street, 0.3 km East of Highway 11, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit.
- 8.2 m+/- single span atmospheric corrosion resistant steel girder bridge with a corrugated metal deck covered with asphalt.
- Steel beam guide rail over the structure and on the approaches is in generally fair condition with dents and abrasions throughout. Steel beam guide rail has been constructed too high. From the asphalt wearing surface to the centre bolt is 630 mm. Terminal end treatments have been provided at all four quadrants of the bridge. The guiderail on the south side of the road over the structure has been bolted to the girders. Guiderail on the north side of the structure has been directly welded to the bracket coming off the girders and is in good condition. Loose timber offset blocks with severe splits were noted. Minor collision damage to Southwest end treatment. Length of guiderail and end treatments do not conform to current requirements, and should be replaced with a code compliant guiderail and end treatments.
- Four hazard markers are provided in all quadrants. Signs are in generally good condition with minor dents noted. Hazard markers are loose and leaning in the Northeast and Southwest quadrants.
- Steel HSS curbs are in good condition. The ends of the box beam curbs do not have any end caps.
- Asphalt wearing surface are in generally fair condition with one longitudinal narrow crack down the centre and numerous medium transverse cracks.
- Underside of structure inspection was limited due to limited headspace.
- Corrugated metal deck soffit is in good to fair condition with localized light to moderate corrosion, salt stains, which may indicate water penetration from top of deck.
- Atmospheric corrosion resistant steel girders are in good condition.
- Atmospheric corrosion resistant diaphragms are in generally good condition with minor deformation of one intermediate diaphragm. noted at bearing seats.
- Elastomeric bearings are in good condition.
- Steel closure strips are welded to the girders and are in good condition.
- Asphalt on the approaches is in generally good condition. Asphalt over structure in generally fair condition with numerous medium transverse cracks.
- Watercourse has a partial blockage with no evidence of scour.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Should reattach hazard markers.

L. HISTORY/ GENERAL

Bridge No.: 1

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 1



Photo 1 Structure from east approach



Photo 2 Structure from west approach

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 1

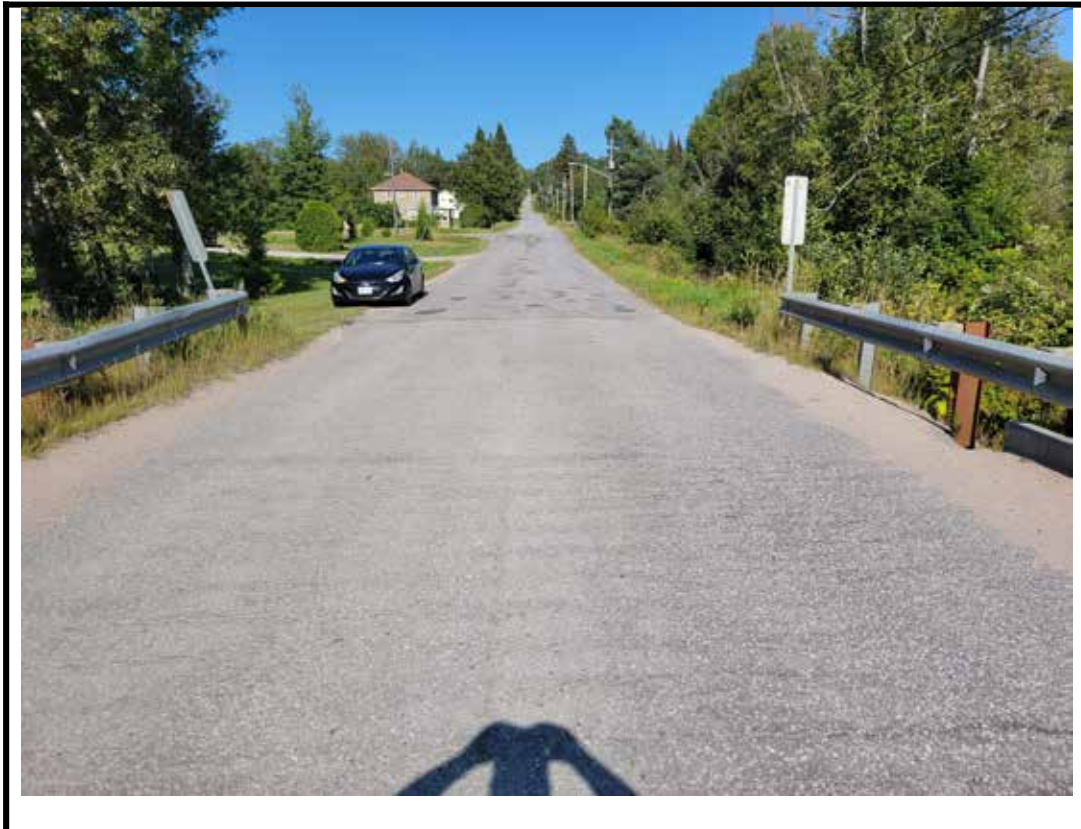


Photo 3 East approach from center of structure



Photo 4 West approach from center of structure



Photo 5 North elevation



Photo 6 South elevation

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 1



Photo 7 Substandard guide rail end treatment at NE corner of structure



Photo 8 Medium and wide cracks on approach wearing surface



Photo 9 Wide cracks and patched pothole on deck top



Photo 10 Localized light corrosion on steel girders and diaphragms



Photo 11 Light corrosion and efflorescence on v-pan soffit



Photo 12 Accumulation of branches and debris at abutment



Photo 13 Sediment accumulation at east abutment wall



Photo 14 Light corrosion on west steel bin abutment at waterline

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Bridge Name:	McCarthy Street, Trout Creek	Bridge No.:	2
Road Name:	McCarthy Street	Road Section No.:	
Location:	0.40 km S of Main Street	MTO Site No.:	044-0000-
Roadside Env.:	R	Post Sign:	t t t
BL Posting:	t t t	Crossing Type:	O-WAT, Over Water
Bylaw No.:		Low Clear Sign:	Narrow Structure Sign:
Bylaw Exp. Date:		Eastings:	17 626637
		Northing:	5093134
		Bridge Value:	\$ 800,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		MunicA
<input type="checkbox"/> Shared?		Adjacent Bridge No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Substructure Yr:	1930	Span Length:	8.5 m	Logitudinal Joints:	0
Superstructure Yr:	1930	Deck Type:	CC - Concrete, Cast in Place	Transverse Joints:	0
Bridge Type:	C - TB - F	Deck Length:	22 m	Number of Bearings:	0
Crossing Skew:	-00 °	Deck Width:	5.8 m	Soil Condition:	U
Number of Spans:	3	Deck Area:	127.6 m ²	Abutment and Foundation Type:	Closed - UN

ROAD OVER BRIDGE

Existing Road Class:	100	No. of Lanes:	2.0	Barrier Walls/Railings:	CB
Operational Status:	2W - CVT	Median Type/Width:	m	Min Vertical Clearance:	m
Wearing Surface:	C	Safety Curb/	(A) N E 0.1 m		
Travel Deck Width:	4.70 m	Sidewalk and Curb	(B) N / W 0.1 m		

ROAD UNDER BRIDGE

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:	m	Min Vertical Clearance:	m
Opening Under:	m	Safety Curb/	(A) m		
Surface Width:	m	Sidewalk and Curb	(B) / m		

E. TRAFFIC DATA

Legal Speed Limit:	50	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus <input type="checkbox"/> Truck Route		AADT:	1	AADT:	1
<input type="checkbox"/> School <input type="checkbox"/> Bike Route		DHV Factor:	%	DHV Factor:	%
Source:		DHV:	vph	DHV:	vph
Bridge 2 Asset Master		Trucks:	%	Trucks:	%
		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.00	20 Year AADT:	1

F. INSPECTIONS

Date:	08/29/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T.Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. BRIDGE NEEDS

Field	MCR	PCR	TON	Comments
Superstructure	3	4	1-5	
Wearing Surface	3	5	1-5	
Deck Condition	3	5	1-5	
Expansion Joints	0	0	ADEQ	
Railing/guiderail	5	6	6-10	
Substructure	3	4	6-10	
Coating	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	
Curb/Sidewalk	3	3	1-5	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
Road Over Bridge				
RO-Trav. Deck Width	6.5	6.5	ADEQ	
RO-LOS	A	E	ADEQ	
RO-Min. Vertical Clear.		4.5	ADEQ	No value for: Min Vertical Clearance
RO-Sidewalks	N	N	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Count	Total
Maintenance	OTHm	Maintenance Improvement	1-5	0	0	0	0
			Maintenance	Subtotal:		0	0
Rehab	CDS	Concrete Deck Soffit Repairs	1-5	0	20,000	5,000	25,000
Rehab	RSB	Rehabilitate Substructure	1-5	0	50,000	2,000	52,000
Rehab	RSP	Rehabilitate Superstructure	1-5	0	120,000	5,000	125,000
Rehab	WSR	Wearing Surface Rehabilitation	1-5	0	10,000	2,000	12,000
			Const Extra	Subtotal:		200,000	14,000
Rehab Extra	brMOB	Mobilization	1-5	0	3,000	1,000	4,000
Rehab Extra	brWPTF	Workplatform / Access	1-5	0	5,000	2,000	7,000
Rehabilitation / Replacement Study						20,000	20,000
			Rehab Extra	Subtotal:		8,000	23,000

I. ENGINEERING RECOMMENDATIONS			
Bridge Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date:			
Closure Type:			
Monitoring Interval:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	
Operational Status:	-
Abutment Type:	
Design Deck Width:	
Design Deck Length:	

K. IMPROVEMENT COSTS		
Total Construction/Rehab		214,000
Total Inspection		31,000
TOTAL		245,000
86405	share @100%	245,000

INSPECTION NOTES

Bridge No.: 2

Bridge No. 2, McCarthy Street, 0.4 km South of Main Street, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit and is closed to vehicular traffic. Chainlink fence installed on structure to reduce the lane width to allow pedestrians only.
- Three span (6.6 m+\", 8.5 m+\", 6.6 m+\"-) span concrete T-beam girder bridge with a concrete deck and concrete wearing surface.
- Concrete railings are in poor condition. Large sections of the railings are missing. The remaining sections are spalled, cracked and delaminated (10m2 poor). Chain link fence has been provided in place of handrails.
- Chain link fence with posts anchored into the deck are provided to accommodate a pedestrian path across the bridge. The chain link fence and posts are in generally good condition with localized broken and loose portions.
- Gravel wearing surfaces on the approaches appear to be in generally fair condition. Localized areas of exposed deck observed.
- Dead end signs located on each side of the structure are in generally fair condition with abrasions noted.
- Concrete top of deck is in fair to poor condition with large spalls, medium to severe scaling, transverse cracking.
- Concrete curbs are in generally fair to poor condition with extensive severe scaling, spalling delaminations and narrow to wide stained and unstained cracks (6.0m2,poor)
- Concrete T-beams and concrete deck soffit are in generally poor condition with extensive spalling, delaminations, staining and cracking. (14.0m2,poor) Timber formwork still in place. Portions of exposed rebar are separated and severely corroded.
- Concrete abutments are in generally fair condition with light scaling and delaminations (2.0m2, poor). Both abutments are severely undermined, exposing the concrete piles.
- Concrete piers are in generally fair condition with extensive light scaling and scouring noted at about the waterline. Delaminations were noted on the pier caps. (2m2,poor)
- Gravel approaches are in fair condition.
- Embankments are in poor condition with severe erosion and appear steep and unstable in all quadrants.
- Watercourse is unobstructed with no evidence of scour.
- A rehabilitation/replacement study of the structure should be performed on the structure immediately.
- Should perform concrete repairs on all concrete components.

L. HISTORY/ GENERAL

Bridge No.: 2

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 2



Photo 1 Structure from east approach



Photo 2 Structure from west approach

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 2



Photo 3 East approach from center of structure



Photo 4 West approach from center of structure

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 2



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Dead end sign and chain link fence at east approach (Typical)



Photo 8 Large section loss of concrete railing



Photo 9 Spalls with exposed corroded reinforcement on concrete barrier



Photo 10 Spalls with exposed corroded reinforcing on exterior girder and interior soffit



Photo 11 Severe spalls with exposed corroded reinforcing on north span girders and soffit



Photo 12 Severe spalls with exposed corroded reinforcing on mid-span girders and soffit



Photo 13 Light scaling and scouring on piers at waterline



Photo 14 Efflorescence and damp staining on interior soffit of mid span

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Bridge Name:	McCarthy Street, Trout Creek	Bridge No.:	4
Road Name:	McCarthy Street	Road Section No.:	
Location:	0.10 km N of Main Street	MTO Site No.:	044-0000-
Roadside Env.:	S	Post Sign:	t t t
BL Posting:	t t t	Low Clear Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626661	Crossing Type:	O-WAT, Over Water
Bylaw Exp. Date:	Northing: 5093928	Federal Navigable Waterway:	No
		Bridge Value:	\$ 419,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		MunicA
<input type="checkbox"/> Shared?		Adjacent Bridge No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Substructure Yr:	1940	Span Length:	2.9 m	Logitudinal Joints:	0
Superstructure Yr:	1940	Deck Type:	TS - Thick Slab	Transverse Joints:	0
Bridge Type:	C - SS - H	Deck Length:	5.9 m	Number of Bearings:	0
Crossing Skew:	-00 °	Deck Width:	7.8 m	Soil Condition:	U
Number of Spans:	1	Deck Area:	46.0 m ²	Abutment and Foundation Type:	Closed - UN

ROAD OVER BRIDGE

Existing Road Class:	LR	No. of Lanes:	2.0	Barrier Walls/Railings:	FB
Operational Status:	2W - OAT	Median Type/Width:	m	Min Vertical Clearance:	m
Wearing Surface:	A	Safety Curb/ (A) N	E 0.0 m		
Travel Deck Width:	6.50 m	Sidewalk and Curb (B) N /	W 0.0 m		

ROAD UNDER BRIDGE

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:	m	Min Vertical Clearance:	m
Opening Under:	m	Safety Curb/ (A)	m		
Surface Width:	m	Sidewalk and Curb (B) /	m		

E. TRAFFIC DATA

Legal Speed Limit:	60	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	20	AADT:	22
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
Source:		DHV:	vph	DHV:	vph
Bridge 4 Asset Master		Trucks:	%	Trucks:	%
		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	24

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T.Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. BRIDGE NEEDS

Field	MCR	PCR	TON	Comments
Superstructure	4	5	6-10	
Wearing Surface	4	5	6-10	
Deck Condition	5	6	6-10	
Expansion Joints	0	0	ADEQ	
Railing/guiderail	5	3	1-5	
Substructure	3	5	6-10	
Coating	0	0	ADEQ	
Streams/Waterways	3	4	1-5	
Curb/Sidewalk	0	0	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
Road Over Bridge				
RO-Trav. Deck Width	6.5	6.5	ADEQ	
RO-LOS	A	E	ADEQ	
RO-Min. Vertical Clear.		4.5	ADEQ	No value for: Min Vertical Clearance
RO-Sidewalks	N	Y	NOW	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Count	Total
Rehab	SPI	Scour Protection Improvements	1-5	0	20,000	6,000	26,000
Rehab	RSP	Rehabilitate Substructure	6-10	0	50,000	2,000	52,000
Rehab	IAG	Railing improvements	1-5	0	20,000	5,000	25,000
Rehab Extra	brMOB	Mobilization	6-10	0	1,000	0	1,000
Rehab Extra	brWPTF	Workplatform / Access	6-10	0	5,000	2,000	7,000
Rehab Extra	brMOB	Mobilization	NOW	0	5,000	2,000	7,000
Rehab Extra	brTCP	Traffic Control/Protection	NOW	0	5,000	2,000	7,000
		Monitor Cracks on Abutment				2,500	2,500
		Rehabilitation Study, Barrier Only				5,000	5,000
		Rehab Extra Subtotal:			16,000	6,000	22,000

I. ENGINEERING RECOMMENDATIONS			
Bridge Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date:			
Closure Type:			
Monitoring Interval:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	
Operational Status:	-
Abutment Type:	
Design Deck Width:	
Design Deck Length:	

K. IMPROVEMENT COSTS		
Total Construction/Rehab		125,000
Total Inspection		7,500
TOTAL		132,500
86405	share @100%	132,500

INSPECTION NOTES

Bridge No.: 4

Bridge No. 4, McCarthy Street, 0.1 km North of Main Street, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit.
- 2.9 m+/- single span cast-in-place concrete solid slab structure with a concrete deck and asphalt wearing surface.
- Steel beam guiderail and end treatments are in generally good condition. Impact damage noted at northwest, Post at end noted leaning. Posts over structure have not been replaced and have posts missing for the guiderail. A traffic barrier study should be performed for the barrier over the structure. Approach end treatments are substandard and should be replaced with code compliant end treatments
- Asphalt wearing surface is in generally fair condition with a rough riding surface and rutting throughout.
- Gravel shoulders are in good condition with vegetative growth.
- Concrete deck soffit is in generally good condition with localized small spalls around steel posts, localized narrow stained crack at West end (1.0m2 poor).
- Concrete abutments are in generally good to localized poor condition with a full height vertical cracks noted in each abutment might be caused by settlement and should be monitored. The cracks have been repaired previously and concrete repairs are delaminated and cracks. (1.0m2 poor). Light honeycombing on the North abutment was noted.
- Concrete abutment footings are in generally fair to poor condition with localized moderate scouring, wide cracking, wet areas and separation of the footing from the abutment wall. A structural review of the footings should be performed. (4.0m2,poor)
- Concrete wingwalls are in good condition.
- Asphalt paved approach roads are in fair condition with a medium crack at the South end. Riding surface is rough with wheel tire rutting throughout.
- Watercourse is unobstructed with undermining and scouring of the south abutment footing.
- Vegetative roadway embankments are in good condition. Washout noted at northwest corner.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- No hazard sign observed at the time of inspection. Hazard sign should be installed.

L. HISTORY/ GENERAL

Bridge No.: 4

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 4



Photo 1 Structure from north approach



Photo 2 Structure from south approach

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 4



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure



Photo 5 East elevation



Photo 6 West elevation



Photo 7 Substandard barrier and end treatment



Photo 8 Vegetation overgrowing approach guide rail



Photo 9 Circular HSS with timber blocking on west barrier



Photo 10 Vertical crack on north abutment wall



Photo 11 Vertical crack on south abutment wall at mid-section



Photo 12 Separation of concrete footing at south abutment wall



Photo 13 Severe scaling and disintegration at base of north abutment wall



Photo 14 Isolated light honeycombing on north abutment

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Bridge Name:	Sweezy Street, Trout Creek	Bridge No.:	5
Road Name:	Sweezy Street	Road Section No.:	
Location:	0.01 km W of McCarthy Street	MTO Site No.:	044-0000-
Roadside Env.:	S	Post Sign:	t t t
BL Posting:	t t t	Low Clear Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626627	Crossing Type:	O-WAT, Over Water
Bylaw Exp. Date:	Northing: 5093968	Federal Navigable Waterway:	No
		Bridge Value:	\$ 264,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		MunicA
<input type="checkbox"/> Shared?		Adjacent Bridge No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Substructure Yr:	1960	Span Length:	1.5 m	Logitudinal Joints:	0
Superstructure Yr:	1960	Deck Type:	TS - Thick Slab	Transverse Joints:	0
Bridge Type:	C - BO - F	Deck Length:	2.1 m	Number of Bearings:	0
Crossing Skew:	-00 °	Deck Width:	9.0 m	Soil Condition:	U
Number of Spans:	1	Deck Area:	18.9 m ²	Abutment and Foundation Type:	Closed - UN

ROAD OVER BRIDGE

Existing Road Class:	LR	No. of Lanes:	2.0	Barrier Walls/Railings:	FB
Operational Status:	2W - OAT	Median Type/Width:	m	Min Vertical Clearance:	m
Wearing Surface:	A	Safety Curb/ (A) N	N 0.0 m		
Travel Deck Width:	5.60 m	Sidewalk and Curb (B) N /	S 0.0 m		

ROAD UNDER BRIDGE

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:	m	Min Vertical Clearance:	m
Opening Under:	m	Safety Curb/ (A)	m		
Surface Width:	m	Sidewalk and Curb (B) /	m		

E. TRAFFIC DATA

Legal Speed Limit:	60	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	55	AADT:	60
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
Source:		DHV:	vph	DHV:	vph
Bridge 5 Asset Master		Trucks:	%	Trucks:	%
		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	66

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T.Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. BRIDGE NEEDS

Field	MCR	PCR	TON	Comments
Superstructure	5	6	6-10	
Wearing Surface	4	5	6-10	
Deck Condition	5	5	6-10	
Expansion Joints	0	0	ADEQ	
Railing/guiderail	5	4	6-10	
Substructure	3	5	6-10	
Coating	0	0	ADEQ	
Streams/Waterways	5	6	6-10	
Curb/Sidewalk	0	0	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
Road Over Bridge				
RO-Trav. Deck Width	5.6	6.5	NOW	
RO-LOS	A	E	ADEQ	
RO-Min. Vertical Clear.		4.5	ADEQ	No value for: Min Vertical Clearance
RO-Sidewalks	N	Y	NOW	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
Maintenance	OTHm	Maintenance Improvement	1-5	0	52,000		52,000
			Maintenance	Subtotal:	52,000		52,000
Rehab	RSB	Rehabilitate Substructure	6-10	0	50,000	10,000	60,000
			Const Extra	Subtotal:	50,000	10,000	60,000
Rehab Extra	brMOB	Mobilization	6-10	0	5,000	0	5,000
Rehab Extra		Traffic Control/Protection	6-10	0	5,000		5,000
						5,000	5,000
			Rehab Extra	Subtotal:	10,000	2,000	12,000

I. ENGINEERING RECOMMENDATIONS			
Bridge Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date:			
Closure Type:			
Monitoring Interval:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	
Operational Status:	-
Abutment Type:	
Design Deck Width:	
Design Deck Length:	

K. IMPROVEMENT COSTS		
Total Construction/Rehab		122,000
Total Inspection		5,000
TOTAL		127,000
86405	share @100%	127,000

INSPECTION NOTES

Bridge No.: 5

Bridge No. 5, Sweezy Street, 0.01 km West of McCarthy Street, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit.
- 1.5 m+/- single span concrete open footing structure with a concrete deck and asphalt wearing surface. There is approximately 0.4 m of gravel fill on top of the structure.
- Steel beam guide rail on steel posts is provided over the structure and is in good condition. Intermediate guide rail posts have not been provided. Localized collision damage was noted. Terminal end treatments are provided at all four quadrants. Northwest end treatment is damaged. Guiderail and end treatments do not meet current requirements and should be replaced with a code compliant guiderail and end treatments. Northwest post noted leaning out.
- Asphalt wearing surface is in generally fair condition with light ravelling. Wide crack observed on south half of wearing surface (0.5 m², poor). Depression noted at northeast wearing surface.
- Concrete deck soffit is in good condition. Concrete patches and wet areas on exterior portion. Parging of concrete patch.
- Concrete abutments are in generally good condition with light scaling and wide vertical cracks (1.0m², poor).
- Wide horizontal crack between the abutment wall and the bottom of the haunch (both sides). Crack should be monitored.
- Roadway embankments are in good condition. Moderate washout noted at northeast embankment.
- Asphalt paved approach roads are in generally good condition with light ravelling, pot holes and asphalt patches.
- Watercourse is unobstructed with no evidence of scour. Moderate volume, low flow, North to South.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Moderate to severe scour noted of abutments throughout. (2 m², poor)
- Cracked noted at footing on north end of structure.
- No hazard signs at structure, it is recommended that hazard signs be installed.

L. HISTORY/ GENERAL

Bridge No.: 5

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 5



Photo 1 Structure from east approach



Photo 2 Structure from west approach

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 5



Photo 3 East approach from center of structure



Photo 4 West approach from center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Substandard guiderail and end treatments over structure



Photo 8 Interior of culvert barrel



Photo 9 Localized honeycombing and small spalls at north end repair construction joint

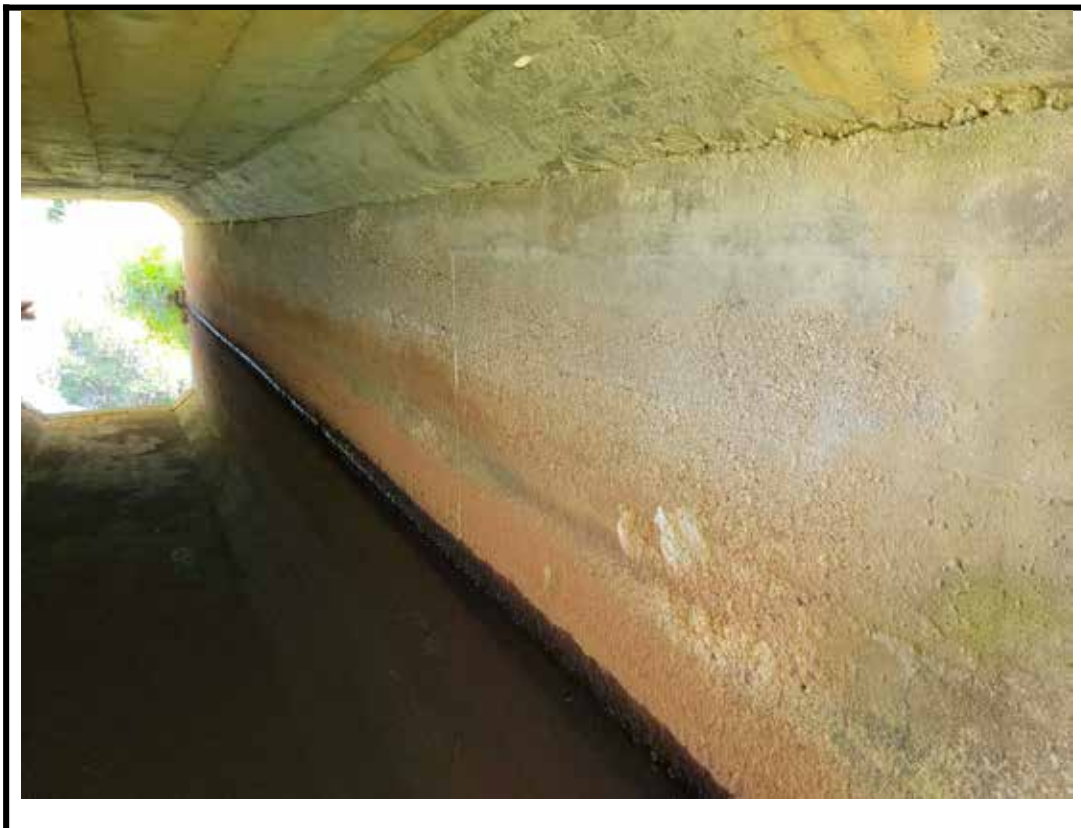


Photo 10 Light to moderate scaling throughout barrel wall



Photo 11 Localized light disintegration at base of reconstruction at SW corner of barrel



Photo 12 Wide crack in reconstruction at NE corner of barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Bridge Name:	Butterfield Road, Lot 37, Conc III/IV	Bridge No.:	6
Road Name:	Butterfield Road	Road Section No.:	
Location:	1.00 km N of Highway 522	MTO Site No.:	044-0000-
Roadside Env.:	R	Post Sign:	10.00 t t t
BL Posting:	10.00 t t t	Crossing Type:	O-WAT, Over Water
Bylaw No.:		Low Clear Sign:	Narrow Structure Sign: NS
Bylaw Exp. Date:		Federal Navigable Waterway:	Unknown
		Easting:	17 621610
		Bridge Value:	\$ 485,000
		Northing:	5092528
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		MunicA
<input type="checkbox"/> Shared?		Adjacent Bridge No.:		MunicB
Shared With:	86615	Patrol:		
Heritage Status:	R			

D. EXISTING CONDITIONS

Substructure Yr:	1930	Span Length:	10.0 m	Logitudinal Joints:	0
Superstructure Yr:	1930	Deck Type:	CC - Concrete, Cast in Place	Transverse Joints:	0
Bridge Type:	C - TB - H	Deck Length:	12.0 m	Number of Bearings:	0
Crossing Skew:	-00 °	Deck Width:	4.8 m	Soil Condition:	U
Number of Spans:	1	Deck Area:	57.6 m ²	Abutment and Foundation Type:	Closed - UN

ROAD OVER BRIDGE

Existing Road Class:	200	No. of Lanes:	1.0	Barrier Walls/Railings:	CP
Operational Status:	2W - OAT	Median Type/Width:	m	Min Vertical Clearance:	m
Wearing Surface:	A	Safety Curb/ (A) N	E 0.1 m		
Travel Deck Width:	3.80 m	Sidewalk and Curb (B) N	/ W 0.1 m		

ROAD UNDER BRIDGE

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:	m	Min Vertical Clearance:	m
Opening Under:	m	Safety Curb/ (A)	m		
Surface Width:	m	Sidewalk and Curb (B)	/ m		

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	55	AADT:	60
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
Source:		DHV:	vph	DHV:	vph
Bridge 6 Asset Master		Trucks:	%	Trucks:	%
		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	66

F. INSPECTIONS

Date:	08/29/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T.Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. BRIDGE NEEDS

Field	MCR	PCR	TON	Comments
Superstructure	3	4	1-5	
Wearing Surface	3	4	1-5	
Deck Condition	4	5	6-10	
Expansion Joints	0	0	ADEQ	
Railing/guiderail	1	1	NOW	
Substructure	3	4	1-5	
Coating	0	0	ADEQ	
Streams/Waterways	5	5	ADEQ	
Curb/Sidewalk	5	5	6-10	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
Road Over Bridge				
RO-Trav. Deck Width	3.8	6.5	NOW	
RO-LOS	A	E	ADEQ	
RO-Min. Vertical Clear.		4.5	ADEQ	No value for: Min Vertical Clearance
RO-Sidewalks	N	N	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
Const	REB	Remove Existing Bridge	1-5	0	58,000	18,000	76,000
Const	RSL	Replace bridge - same location	1-5	0	630,000	169,000	799,000
Const Subtotal:					688,000	187,000	875,000
Const Extra	bcApp	Approaches	1-5	0	100,000	30,000	130,000
Const Extra	bcDET	Detours	1-5	0	5,000	2,000	7,000
Const Extra	bcENV	Environmental Study Costs	1-5	0	50,000	0	50,000
Const Extra Subtotal:					155,000	32,000	187,000
Maintenance	OTHm	Maintenance Improvement	1-5	0	0	0	0
Maintenance	RBD	Remove Beaver Dam	1-5	0	0	0	0
Rehabilitation / Replacement Study						20,000	20,000
Maintenance Subtotal:					0	0	0

I. ENGINEERING RECOMMENDATIONS			
Bridge Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date:			
Closure Type:			
Monitoring Interval:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	RLHU
Operational Status:	2W -OAT
Abutment Type:	C
Design Deck Width:	10.0
Design Deck Length:	14.0

K. IMPROVEMENT COSTS		
Total Construction/Rehab		1,062,000
Total Inspection		20,000
TOTAL		1,082,000
86405	share @100%	1,082,000

INSPECTION NOTES

Bridge No.: 6

Bridge No. 6, Butterfield Road, Lot 37, Concession III/IV, 1.0 km North of Highway 522, Municipality of Powassan:

- Structure is posted with a 10 tonne load limit.
- 10.0 m+ \- single span cast-in-place concrete T-beam structure with a concrete deck and surface treated wearing surface.
- Concrete parapet walls are in poor condition with localized severe scaling, wide vertical and horizontal cracks, exposed rebar and abrasions. A section of the southeast wall is missing. Cable guiderail with timber posts and railings has been installed on this area. (4.0m², poor)
- Concrete curbs are mostly covered with gravel. The exposed portions of the curb exhibit extensive light scaling and small spalls.
- Surface treated wearing surface is in generally fair to poor condition (covered by sand in 2024; unable to confirm). The wearing surface is partially covered with gravel / sand and has rutting and potholes (2.0m², poor).
- Deck drainage is accommodated by 6 - 75 mm diameter steel drains which do not extend below the T-beams. Debris is partially blocking the inlets.
- Vegetative roadway embankments and rock protection are in fair condition. The concrete slab embankment in the northwest quadrant exhibits movement.
- Hazard markers are provided at 2 quadrants of the structure, NE and SW hazard markers missing. The southwest marker has fallen over. Dents and abrasions at present marker.
- Steel cable guide rail has been provided where the missing section of concrete wall is in the southeast quadrant extending onto the approach and is in generally poor condition. The steel cables are extremely loose. This is not considered a proper traffic barrier nor a temporary traffic barrier and should be addressed immediately.
- Remnants of steel cable guide rail are evident in the southwest quadrant. The guide rail is missing in the northeast quadrant. Steel cable guide rail is provided in the northwest quadrant and is in generally poor condition with extensive slackness of the cables and light corrosion. The flex beam guide rail in the south quadrants is not connected to the structure and broken in the southwest. A terminal end treatment has been provided in the southeast quadrant and a missing end treatment in the southwest quadrant.
- Gravel approach roads are in generally good condition with potholes on South approach.
- Concrete deck soffit is covered with stay-in-place timber form work. Exposed portions of the concrete soffit are in good condition with localized honeycombing and light to moderate scaling noted. Sections of the timber form work are displaced.
- Concrete T-beams are in generally fair to poor condition with areas of light scaling and localized delaminations. Large spall with exposed corroded reinforcing noted on the inside face of the south end of the western exterior girder. Horizontal narrow crack noted on eastern girder and western girder (10.0m², poor). Large delaminations at northwest and delaminations at south abutments.
- Concrete diaphragms are in generally good condition with areas of light scaling and delaminations (1.0m² poor).
- Stone mortared abutments are in generally fair condition with a localized severe loss of mortar and wide cracks on south abutment. A section of the north abutment has been refaced with concrete. This section is in generally fair condition with extensive severe scaling. Rock protection has been placed in front of the abutments.
- Concrete footings are covered with rock protection.
- Watercourse is unobstructed with no evidence of scour. Moderate flow and volume from West to East.
- Should maintain existing load limit posting. Should place load limit sign at the intersection of Highway 522 and Butterfield Road.
- Should replace bridge.
- A proper temporary traffic barrier should be installed on the bridge at the location of the missing traffic barrier section.
- Loss of mortar with vertical cracks observed in both abutments (8 m², poor).
- Confirm the movement of southwest corner of abutment wall.

L. HISTORY/ GENERAL

Bridge No.: 6

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 6



Photo 1 Structure from north approach



Photo 2 Structure from south approach

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 6



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure



Photo 5 East elevation



Photo 6 West elevation



Photo 7 Substandard single cable guiderail on NW approach



Photo 8 No approach barrier present at NE corner of structure & leaning hazard sign



Photo 9 Small spalls, light to moderate scaling, and narrow to medium cracks on parapet



Photo 10 Accumulation of gravel throughout deck top



Photo 11 Potholes and wheel rutting noted on asphalt wearing surface



Photo 12 Deck drain downspout does not extend below girders



Photo 13 Spall and cracks on exterior face of girder at west side



Photo 14 Light to moderate scaling on exposed deck soffit



Photo 15 Timber formwork on north underside of deck



Photo 16 Light concrete disintegration on concrete girder



Photo 17 Wide cracks and mortar missing on south abutment wall



Photo 18 Disintegration at top of the north abutment wall, west end

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Bridge Name:	Hummel Bridge	Bridge No.:	7
Road Name:	Hemlock Road	Road Section No.:	
Location:	0.80 km S of Alsace Road	MTO Site No.:	044-0000-
Roadside Env.:	R	Post Sign:	17.00 t 23.00 t 33.00 t
BL Posting:	17.00 t 23.00 t 33.00 t	Low Clear Sign:	Narrow Structure Sign:
Bylaw No.:		Easting:	17 622464
Bylaw Exp. Date:	10/01/2009	Northing:	5099896
		Crossing Type:	O-WAT, Over Water
		Federal Navigable Waterway:	Yes
		Bridge Value:	\$ 1,766,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	50.00 %	Designation 2		MunicA
<input checked="" type="checkbox"/> Shared?		Adjacent Bridge No.:		MunicB
Shared With:	86615			Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Substructure Yr:	1925	Span Length:	18.3 m	Logitudinal Joints:	0
Superstructure Yr:	1925	Deck Type:	CC - Concrete, Cast in Place	Transverse Joints:	3
Bridge Type:	S - HT - S	Deck Length:	37.5 m	Number of Bearings:	28
Crossing Skew:	-00 °	Deck Width:	4.9 m	Soil Condition:	U
Number of Spans:	3	Deck Area:	183.8 m ²	Abutment and Foundation Type:	Closed - UN

ROAD OVER BRIDGE

Existing Road Class:	200	No. of Lanes:	1.0	Barrier Walls/Railings:	LP
Operational Status:	2W - OAT	Median Type/Width:	m	Min Vertical Clearance:	m
Wearing Surface:	C	Safety Curb/ (A) N	E 0.2 m		
Travel Deck Width:	4.40 m	Sidewalk and Curb (B) N /	W 0.2 m		

ROAD UNDER BRIDGE

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:	m	Min Vertical Clearance:	m
Opening Under:	m	Safety Curb/ (A)	m		
Surface Width:	m	Sidewalk and Curb (B) /	m		

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus <input type="checkbox"/> Truck Route		AADT:	100	AADT:	110
<input checked="" type="checkbox"/> School <input type="checkbox"/> Bike Route		DHV Factor:	%	DHV Factor:	%
Source:		DHV:	vph	DHV:	vph
Bridge 7 Asset Master		Trucks:	%	Trucks:	%
		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	121

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T.Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. BRIDGE NEEDS

Field	MCR	PCR	TON	Comments
Superstructure	4	4	1-5	
Wearing Surface	4	5	1-5	
Deck Condition	4	5	1-5	
Expansion Joints	5	6	6-10	
Railing/guiderail	6	6	ADEQ	
Substructure	5	6	6-10	
Coating	4	5	1-5	
Streams/Waterways	6	6	ADEQ	
Curb/Sidewalk	5	6	6-10	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
Road Over Bridge				
RO-Trav. Deck Width	4.4	6.5	NOW	
RO-LOS	A	E	ADEQ	
RO-Min. Vertical Clear.		4.5	ADEQ	No value for: Min Vertical Clearance
RO-Sidewalks	N	N	ADEQ	

Inspection

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
Inspection	RRA	Rehabilitate/Replace Analysis	NOW	0	0	0	0
Inspection Subtotal:					0	0	0

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
Const	RSL	Bridge currently closed for replacement	NOW	0	3,000,000	112,000	3,112,000

I. ENGINEERING RECOMMENDATIONS

Bridge Drawings: _____

Evaluated Posting: t t t

Closure Type: _____

J. DESIGN PARAMETERS

Design Class: _____

Abutment Type: _____

Design Deck Length: _____

K. IMPROVEMENT COSTS

Total Construction/Rehab	3,112,000
TOTAL	3,112,000
86615 share @50%	1,556,000

Note: Refer to 2021 Preliminary Design Report prepared by HP Engineering for a Full Breakdown of Rehabilitation/Replacement options and anticipated Construction costs.

INSPECTION NOTES

Bridge No.: 7

Bridge No. 7, Hemlock Road, 0.8 km South of Alsace Road, Municipality of Powassan:

-Structure and approaches closed at the time of the inspection (August 2024). Approaches are barricaded preventing vehicular access to the bridge approaches.

-Anticipated structure replacement in 2025 – 2026

-Below information reflects the 2022 condition of the structure.

- Structure is posted with a load limit of L8=17 tonnes; L2=23 tonnes; L1=33 tonnes.
- Three span structure consisting of an 18.3 m+/- structural steel pony truss centre span and 8.4 m+/- structural steel girder spans at each end. Structure has a concrete deck and concrete wearing surface.
- Steel pipe and channel rails are in generally good condition with one top rail disconnected and light corrosion and damaged section at southeast (1.0m2,poor).
- Concrete curbs are in generally fair to poor condition with transverse cracks, concrete patches, delaminations and light scaling (1.0m2,poor).
- Concrete deck wearing surface is in generally fair to poor condition with light scaling and transverse narrow to wide cracks, concrete patches and localized spalling. Most of the transverse cracks in the main span have been sealed. The expansion joint over the south end of the main span consists of an Evazote seal set in the concrete and is in good condition.
- Deck expansion joints consist of strip seals set in steel armouring angles and are in poor condition. Unable to confirm severely torn seals mentioned in previous report due to debris. Extensive leakage was noted.
- Deck drainage is accommodated by 20 - 50 mm diameter holes through the deck slab. Asphalt sub drains exhibit light to severe Corrosion.
- Vegetative roadway embankments are in fair condition. Embankments are steep with minor to moderate erosion noted at all 4 corners of the structure.
- Gabion retaining walls are in good condition. Concrete wall in front of embankments, at the piers is in generally good condition and exhibits a wide crack at both sides (1.0m2, poor).
- Steel beam guiderails on the approaches are in generally good to poor condition with moderate collision damage and are connected to the handrail end posts. The guiderail is protruding at the connection to handrail in all quadrants. The guiderails are end buried at all four quadrants. Guiderail structure connection does not meet requirements and should be replaced with a code compliant guiderail structure connection.
- Gravel approach roads are in fair to good condition with pot holes at both ends (4.0m2, poor). Gravel wearing surface is too low at the bridge.
- Concrete deck soffit is in generally fair condition with narrow stained transverse cracks, wet areas, delaminations and small spalling at stringer top flange (5.0m2,poor).
- Structural steel girders, floor beam stringers and trusses are in generally good condition with localized surface corrosion and breakdown of the paint coatings. Localized moderate to severe corrosion and perforations were noted in the northeast exterior midspan girde. Could not confirm the perforation on interior girder at the south end and the northeast and northwest truss connection plate (1.0m2, poor), mentioned in previous inspection report. Could not confirm the loose cross bracing at the South end.
- Structural steel pier bents are in fair to good condition with severe corrosion on bottom chords and surface delaminations at waterline. Moderate pitting noted on steel piles below high water level. The diagonal bracing on the south pier is broken/cracked mentioned in the previous report could not be verified.
- Concrete abutments are in generally good condition. Narrow cracks and delaminated concrete patch were also noted.
- Waterway is unobstructed. High volument, low flow, West to East.
- No serious evidence of structural distress.
- Should maintain existing load limit posting.
- Should replace expansion joint seals at both abutments, seal cracks, repair spalls on deck, upgrade guiderail end treatments, repair diagonal bracing on pier and clean and paint piers below the highwater level, patch repair curbs, soffit and repair girder.
- No costed for travel deck width deficiency because of low traffic volumes.
- No hazard signs at north and south approaches.
- Waster ponding noted on deck wearing surface. Perforation noted on NW stringer under truss.
- Limited inspection due to centre span due to water level.

L. HISTORY/ GENERAL

Bridge No.: 7

Bridge Closed

Approach roadway is closed to traffic.

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Bridge Name:	Maple Hill Road, Lot 20/21, Conc X	Bridge No.:	8
Road Name:	Maple Hill Road	Road Section No.:	
Location:	0.02 km S of Purdon Line	MTO Site No.:	044-0000-
Roadside Env.:	R	Post Sign:	t t t
BL Posting:	t t t	Low Clear Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 625378	Crossing Type:	O-WAT, Over Water
Bylaw Exp. Date:	Northing: 5101808	Federal Navigable Waterway:	Unknown
		Bridge Value:	\$ 750,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		MunicA
<input type="checkbox"/> Shared?		Adjacent Bridge No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Substructure Yr:	2009	Span Length:	9.2 m	Logitudinal Joints:	0
Superstructure Yr:	2009	Deck Type:	SP - Steel Plate, Non-composit	Transverse Joints:	0
Bridge Type:	S - IB - H	Deck Length:	10.6 m	Number of Bearings:	0
Crossing Skew:	-00 °	Deck Width:	7.2 m	Soil Condition:	U
Number of Spans:	1	Deck Area:	76.3 m ²	Abutment and Foundation Type:	Closed - UN

ROAD OVER BRIDGE

Existing Road Class:	400	No. of Lanes:	2.0	Barrier Walls/Railings:	FB
Operational Status:	2W - OAT	Median Type/Width:	m	Min Vertical Clearance:	m
Wearing Surface:	A	Safety Curb/ (A) N	E 0.0 m		
Travel Deck Width:	5.80 m	Sidewalk and Curb (B) N /	W 0.0 m		

ROAD UNDER BRIDGE

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:	m	Min Vertical Clearance:	m
Opening Under:	m	Safety Curb/ (A)	m		
Surface Width:	m	Sidewalk and Curb (B) /	m		

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	150	AADT:	165
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
Source:		DHV:	vph	DHV:	vph
Bridge 8 Asset Master		Trucks:	2.00 %	Trucks:	2.0 %
		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	181

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T.Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. BRIDGE NEEDS

Field	MCR	PCR	TON	Comments
Superstructure	6	6	ADEQ	
Wearing Surface	6	6	ADEQ	
Deck Condition	6	6	ADEQ	
Expansion Joints	0	0	ADEQ	
Railing/guiderail	4	4	1-5	
Substructure	6	6	ADEQ	
Coating	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	
Curb/Sidewalk	0	0	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
Road Over Bridge				
RO-Trav. Deck Width	5.8	7	NOW	
RO-LOS	A	E	ADEQ	
RO-Min. Vertical Clear.		4.5	ADEQ	No value for: Min Vertical Clearance
RO-Sidewalks	N	N	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Count	Total
Maintenance	OTHm	Repair Northwest End Treatment	1-5	0	1,000	0	1,000
		Repair Undermining at NE Bearing Cap	1-5	0	10,000	0	10,000
Subtotal:					11,000	0	11,000

I. ENGINEERING RECOMMENDATIONS			
Bridge Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date:			
Closure Type:			
Monitoring Interval:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	
Operational Status:	-
Abutment Type:	
Design Deck Width:	
Design Deck Length:	

K. IMPROVEMENT COSTS		
Total Construction/Rehab		11,000
Total Inspection		0
TOTAL		11,000
86405	share @100%	11,000

INSPECTION NOTES

Bridge No.: 8

Bridge No. 8, Maple Hill Road, Lot 20/21, Concession X, 0.02 km South of Purdon Line, Municipality of Powassan:

- Structure is not posted with a load limit.
- 9.2 m+/- atmospheric steel girder bridge with a steel plate deck and asphalt wearing surface.
- Steel thrie beam guide rail is provided over the structure and is in good condition with light abrasions. Flex beam guide rail over the approaches is in good condition with localized light corrosion and two posts exhibit minor rotation. Transition rails missing center posts. Extruder end treatments are provided in all quadrants. Northwest end treatment is not installed plumb (it's crooked) and has a broken connection at base of first post.
- Asphalt wearing surface is in good condition with medium transverse cracks and medium to wide longitudinal cracks noted at south. Potholes noted on gravel wearing surface on approaches beyond asphalt wearing surface sections.
- Steel v-pan soffit is in good condition with light to localized moderate corrosion at panel joints and deck ends.

- Steel girders and diaphragms are in good condition with localized light corrosion. Elastomeric bearings are generally in good condition.
- Steel abutments with concrete bearing seat caps are in good condition with missing bolts in the south abutment. Localized rust staining on the concrete bearing seat. Light undermining was noted at both bearing seat caps.
- Hazard markers are provided on end of guiderail end treatment at all four quadrants of the structure. 3 are in good condition, 1 in fair with abrasions noted.
- Embankments are moderately sloped and well vegetated.
- Watercourse is unobstructed with no evidence of scour. Moderate volume, low flow, East to West.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Should replace bolts from south abutment as regular maintenance.

- Severe undermining noted at NE bearing cap; should be repaired. Slight elevation difference (Settlement) of approach observed at end of deck.

L. HISTORY/ GENERAL

Bridge No.: 8

Year: 2009, RSL Replace bridge - same location, Est Cost: 10812

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 8

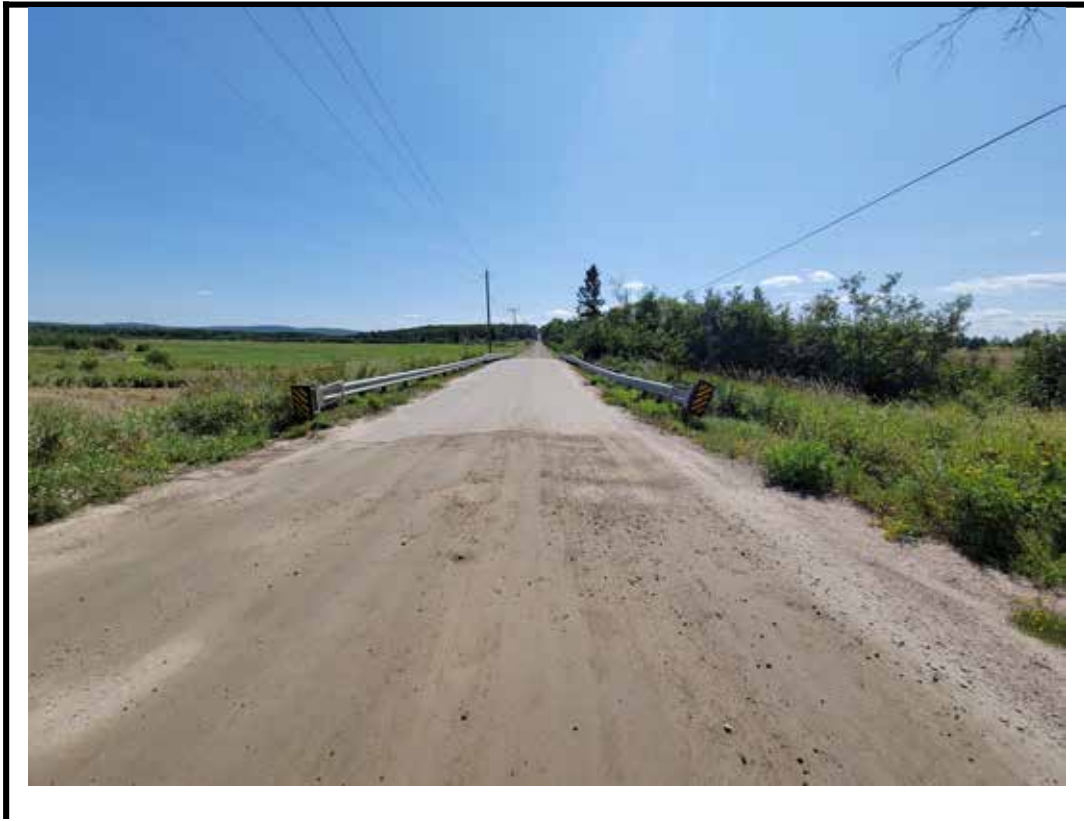


Photo 1 Structure from north approach



Photo 2 Structure from south approach

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 8



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 8



Photo 5 East elevation



Photo 6 West elevation



Photo 7 Potholes observed on north approach wearing surface



Photo 8 End treatment on northwest corner leaning and appear damaged



Photo 9 Transverse cracks noted on approach wearing surface at transition to deck



Photo 10 Missing guide rail post at transition rail to deck barrier (NE shown)



Photo 11 Light corrosion and efflorescence on steel deck soffit end



Photo 12 Localized light rust staining and light corrosion on girder and interior soffit



Photo 13 Undermining at concrete bearing seat cap at south abutment wall



Photo 14 Missing bolts at south abutment wall



Photo 15 Debris accumulating on bearing seat

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Bridge Name:	South Bridge, Lot 20/21, Conc XIII	Bridge No.:	9
Road Name:	Maple Hill Road	Road Section No.:	
Location:	0.60 km N of Highway 534	MTO Site No.:	044-0000-
Roadside Env.:	R	Post Sign:	t t t
BL Posting:	t t t	Crossing Type:	O-WAT, Over Water
Bylaw No.:		Low Clear Sign:	Narrow Structure Sign:
Bylaw Exp. Date:		Eastings:	17 624316
		Northing:	5104347
		Bridge Value:	\$ 1,581,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		MunicA
<input type="checkbox"/> Shared?		Adjacent Bridge No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Substructure Yr:	1985	Span Length:	30.3 m	Logitudinal Joints:	0
Superstructure Yr:	1985	Deck Type:	CC - Concrete, Cast in Place	Transverse Joints:	2
Bridge Type:	P - IB - S	Deck Length:	30.9 m	Number of Bearings:	8
Crossing Skew:	R-10 °	Deck Width:	9.6 m	Soil Condition:	U
Number of Spans:	1	Deck Area:	296.6 m ²	Abutment and Foundation Type:	Closed - UN

ROAD OVER BRIDGE

Existing Road Class:	200	No. of Lanes:	2.0	Barrier Walls/Railings:	NJ
Operational Status:	2W - OAT	Median Type/Width:	m	Min Vertical Clearance:	m
Wearing Surface:	C	Safety Curb/ (A) N	E 0.0 m		
Travel Deck Width:	9.10 m	Sidewalk and Curb (B) N /	W 0.0 m		

ROAD UNDER BRIDGE

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:	m	Min Vertical Clearance:	m
Opening Under:	m	Safety Curb/ (A)	m		
Surface Width:	m	Sidewalk and Curb (B) /	m		

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	130	AADT:	143
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
Source:		DHV:	vph	DHV:	vph
Bridge 9 Asset Master		Trucks:	2.00 %	Trucks:	2.0 %
		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	157

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T.Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. BRIDGE NEEDS

Field	MCR	PCR	TON	Comments
Superstructure	6	6	ADEQ	
Wearing Surface	5	6	6-10	
Deck Condition	6	6	ADEQ	
Expansion Joints	6	6	ADEQ	
Railing/guiderail	5	5	6-10	
Substructure	5	6	6-10	
Coating	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	
Curb/Sidewalk	0	0	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
Road Over Bridge				
RO-Trav. Deck Width	9.1	6.5	ADEQ	Proj Class: 200, 143 (10 YR, 130*1.1)
RO-LOS	A	E	ADEQ	
RO-Min. Vertical Clear.		4.5	ADEQ	No value for: Min Vertical Clearance
RO-Sidewalks	N	N	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Count	Total
Rehab	IAG	New guiderail connection and end treatments	1-5	0	28,000		28,000
		Rehabilitation / Replacement Study for Barrier Only				5,000	5,000
Rehab Subtotal:					28,000	5,000	33,000

I. ENGINEERING RECOMMENDATIONS

Bridge Drawings:

Estimated Posting: t

Evaluated Posting: t t t

Closure Date:

Closure Type:

Monitoring Interval:

Monitoring Component:

J. DESIGN PARAMETERS

Design Class:

Operational Status: -

Abutment Type:

Design Deck Width:

Design Deck Length:

K. IMPROVEMENT COSTS

Total Construction/Rehab	33,000
Total Inspection	0
TOTAL	33,000
86405 share @100%	33,000

INSPECTION NOTES

Bridge No.: 9

Bridge No. 9, South Bridge, Lot 20/21, Concession XIII, MTO Site No. 44-36, Maple Hill Road, 0.60 km North of Highway 534, Municipality of Powassan:

- Structure is not posted with a load limit.
- 30.3 m\ - single span precast concrete girder bridge with a concrete deck and concrete wearing surface.
- Concrete barrier walls are in generally good condition with narrow to medium vertical stained and unstained cracks predominantly at endwalls. Abrasions observed throughout bottom of barrier walls.
- Galvanized steel approach guiderails are in generally good condition with moderate scrape damage at northeast quadrant.
- Concrete wearing surface is in generally good condition with localized light scaling. Build-up of debris along barrier walls.
- Deck drainage is accommodated by 8 - 200 mm diameter galvanized steel deck drains which outlet below the girders.
- Deck expansion joints consist of seals set in armouring angles and are in generally good condition with minor scrape damage. Joints are filled with debris.
- Concrete girders are in good condition.
- Concrete deck soffit is in good condition.
- Concrete diaphragms are in good condition.
- Concrete abutments are in generally good condition with localized light scaling noted throughout and narrow to medium vertical cracks observed at center.
- Concrete wingwalls are in generally good condition with narrow stained cracks and wet areas.
- Watercourse is unobstructed with no evidence of scour. High volume, moderate flow, West to East.
- Vegetative roadway embankments are in good condition. Embankments are steep and well vegetated. Rock protection present on northeast and northwest embankments.
- Steel beam guide rail is provided at all four quadrants of the structure and is in generally good condition with dents and abrasions. Guide rail is end buried at all four quadrants. One missing offset block, some offset blocks are rotated, minor rot noted. Structure connection and end treatments do not meet current standard.
- Asphalt approach roads are in good conditions.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Recommended to install code compliant approach guiderail end treatments and connections to deck barrier.
- Should replace missing offset block and handrail bracket as maintenance.
- Some abrasion noted on approach wearing surface.
- Abrasion noted on parapet wall, small spall on northwest corner. (0.1 m², poor)
- Vegetation and some debris noted against parapet wall.
- Light to local moderate scaling noted on concrete end dams.

L. HISTORY/ GENERAL

Bridge No.: 9

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 9



Photo 1 Structure from north approach



Photo 2 Structure from south approach

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 9



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure



Photo 5 East elevation



Photo 6 West elevation



Photo 7 Substandard end treatment on NW approach guide rail



Photo 8 Deformation and abrasions on NE approach guide rail



Photo 9 Substandard guide rail connection to deck barrier



Photo 10 Light raveling on concrete end dams and end of exposed deck



Photo 11 Deformation and abrasions on steel pipe hand rail post over west side of deck



Photo 12 Narrow vertical cracks with damp staining on deck barrier



Photo 13 Damp staining on north ballast wall



Photo 14 General underside of structure



Photo 15 Graffiti on abutment walls



Photo 16 Weathering and narrow cracks on wingwall

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Bridge Name:	Pine Tree Way, Lot 13/14, Conc XV	Bridge No.:	10
Road Name:	Pine Tree Way, Lot 13/14, Conc XV	Road Section No.:	
Location:	0.60 km N of Lindquist Line	MTO Site No.:	044-0000-
Roadside Env.:	R	Post Sign:	t t t
BL Posting:	t t t	Low Clear Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626310	Crossing Type:	O-WAT, Over Water
Bylaw Exp. Date:	Northing: 5107456	Federal Navigable Waterway:	Unknown
		Bridge Value:	\$ 5,000,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		MunicA
<input type="checkbox"/> Shared?		Adjacent Bridge No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Substructure Yr:	1993	Span Length:	5 m	Logitudinal Joints:	0
Superstructure Yr:	1993	Deck Type:	TS - Thick Slab	Transverse Joints:	0
Bridge Type:	C - BO - F	Deck Length:	5.8 m	Number of Bearings:	0
Crossing Skew:	-00 °	Deck Width:	150.0 m	Soil Condition:	U
Number of Spans:	1	Deck Area:	870.0 m ²	Abutment and Foundation Type:	Closed - UN

ROAD OVER BRIDGE

Existing Road Class:	200	No. of Lanes:	2.0	Barrier Walls/Railings:	SC
Operational Status:	2W - OAT	Median Type/Width:	m	Min Vertical Clearance:	m
Wearing Surface:	A	Safety Curb/ (A) N	E 0.0 m		
Travel Deck Width:	6.10 m	Sidewalk and Curb (B) N /	W 0.0 m		

ROAD UNDER BRIDGE

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:	m	Min Vertical Clearance:	m
Opening Under:	m	Safety Curb/ (A)	m		
Surface Width:	m	Sidewalk and Curb (B) /	m		

E. TRAFFIC DATA

Legal Speed Limit:	60	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	100	AADT:	110
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
<input checked="" type="checkbox"/> Source:		DHV:	vph	DHV:	vph
Bridge 8 Asset Master		Trucks:	2.00 %	Trucks:	2.0 %
		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	121

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T.Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. BRIDGE NEEDS

Field	MCR	PCR	TON	Comments
Superstructure	5	6	6-10	
Wearing Surface	5	6	6-10	
Deck Condition	6	6	ADEQ	
Expansion Joints	0	0	ADEQ	
Railing/guiderail	2	3	1-5	
Substructure	4	6	6-10	
Coating	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	
Curb/Sidewalk	0	0	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
Road Over Bridge				
RO-Trav. Deck Width	6.1	6.5	NOW	
RO-LOS	A	E	ADEQ	
RO-Min. Vertical Clear.		4.5	ADEQ	No value for: Min Vertical Clearance
RO-Sidewalks	N	N	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Count	Total
Maintenance	OTHm	Repair Northwest End Treatment	1-5	0	48,000	16,000	64,000
		Rehabilitation / Replacement Study for Barrier Only				-	-
Maintenance Subtotal:					48,000	16,000	64,000

I. ENGINEERING RECOMMENDATIONS

Bridge Drawings:
Estimated Posting: t
Evaluated Posting: t t t
Closure Date:
Closure Type:
Monitoring Interval:
Monitoring Component:

J. DESIGN PARAMETERS

Design Class:
Operational Status: -
Abutment Type:
Design Deck Width:
Design Deck Length:

K. IMPROVEMENT COSTS

Total Construction/Rehab	64,000
Total Inspection	0
TOTAL	64,000
86405 share @100%	64,000

INSPECTION NOTES

Bridge No.: 10

Bridge No. 10, MTO Site No. 44-317, Pine Tree Way, Lot 13/14, Concession XV, 0.60 km North of Lindquist Line, Powassan, Municipality of Powassan:

- Structure is not posted with a load limit.
- Structure is generally in good condition.
- 5.0 m+/- single span cast-in-place concrete open footing structure with a concrete deck. The structure is covered with 500 mm+/- of fill with a paved roadway surface. This structure is continuous under Highway 11.
- Damage noted on west guiderail at north end.
- Steel cable guide rail over the structure and on the approaches is in generally fair condition. Cable is loose on both sides. The approach guiderail does not meet current standards and should be replaced with a code compliant approach guiderail.
- Asphalt paved roadway is in generally fair condition with longitudinal and transverse cracking throughout.
- Gravel shoulders are in good condition with some vegetation growth.
- Efflorescence, scalling noted under east portion of bridge.
- Splits, checks and rotting noted on barrier posts.
- Concrete deck soffit, abutments and wingwalls are in generally good condition with light scaling and cracks with efflorescence on the abutment walls and narrow to medium cracks with damp stains and efflorescence on the soffit (3.0m², poor).
- Construction joints with efflorescence on the abutments appears to be slightly leaking. Concrete repairs on construction joints observed.
- Vegetative roadway embankments are in good condition.
- Watercourse is unobstructed with no evidence of scour.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Recommended to tighten guide rail cable and reset posts at northwest as maintenance until replaced with a code compliant barrier.

L. HISTORY/ GENERAL

Bridge No.: 10

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.:10



Photo 1 Structure from north approach



Photo 2 Structure from south approach

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.:10



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure



Photo 5 East elevation



Photo 6 West elevation



Photo 7 Substandard approach guiderail with loose cables



Photo 8 Longitudinal and transverse cracks on asphalt wearing surface



Photo 9 General view of east end of barrel



Photo 10 Light to localized moderate scaling and narrow vertical cracks with efflorescence on barrel wall



Photo 11 Narrow to medium horizontal crack with efflorescence on south wall of barrel



Photo 12 Narrow vertical cracks with efflorescence on north wall of barrel



Photo 13 Drop in elevation of bottom slab at transition to west end section of barrel



Photo 14 Narrow crack with efflorescence on soffit, west end of barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Bridge Name:	Memorial Park Drive East, Powassan	Bridge No.:	11
Road Name:	Memorial Park Drive East	Road Section No.:	
Location:	0.10 km E of Bridge Avenue	MTO Site No.:	044-0000-
Roadside Env.:	U	Post Sign:	t t t
BL Posting:	t t t	Low Clear Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626966	Crossing Type:	U-RWY, Under railway
Bylaw Exp. Date:	Northing: 5104502	Federal Navigable Waterway:	No
		Bridge Value:	\$ 2,528,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:	CNR	Date:	
Railway Subdivision:	564	Current Board Order Number:	
Subdivision Mileage:	207.87	Date:	
Transport Canada Crossing No.:	11081	Seniority:	RA
Number of Tracks:	1		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	85.00 %	Designation 2		MunicA
<input checked="" type="checkbox"/> Shared?		Adjacent Bridge No.:		MunicB
Shared With:	CNR	Patrol:		
Heritage Status:	R			

D. EXISTING CONDITIONS

Substructure Yr:	1930	Span Length:	24.8 m	Logitudinal Joints:	0
Superstructure Yr:	1930	Deck Type:	OT - Other	Transverse Joints:	0
Bridge Type:	S - DT - C	Deck Length:	53.0 m	Number of Bearings:	8
Crossing Skew:	-00 °	Deck Width:	5.0 m	Soil Condition:	U
Number of Spans:	3	Deck Area:	265.0 m ²	Abutment and Foundation Type:	Closed - UN

ROAD OVER BRIDGE

Existing Road Class:		No. of Lanes:		Barrier Walls/Railings:	
Operational Status:	-	Median Type/Width:	m	Min Vertical Clearance:	m
Wearing Surface:		Safety Curb/ (A)	m		
Travel Deck Width:	0.00 m	Sidewalk and Curb (B) /	m		

ROAD UNDER BRIDGE

Existing Road Class:	L/R	No. of Lanes:	2	Traffic Barrier:	
Operational Status:	2W - OAT	Median Type/Width:	m	Min Vertical Clearance:	5.00 m
Opening Under:	13.6 m	Safety Curb/ (A) N N 0.2	m		
Surface Width:	8.2 m	Sidewalk and Curb (B) N / S 1.5	m		

E. TRAFFIC DATA

Legal Speed Limit:	50	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	500	AADT:	550
<input checked="" type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
Source:		DHV:	vph	DHV:	vph
Bridge 11 Asset Master		Trucks:	2.00 %	Trucks:	2.0 %
		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	605

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T.Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. BRIDGE NEEDS

Field	MCR	PCR	TON	Comments
Superstructure	5	5	6-10	
Wearing Surface	0	0	ADEQ	
Deck Condition	5	5	6-10	
Expansion Joints	0	0	ADEQ	
Railing/guiderail	0	0	ADEQ	
Substructure	4	5	6-10	
Coating	4	4	1-5	
Streams/Waterways	0	0	ADEQ	
Curb/Sidewalk	0	0	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
Road Over Bridge				
RO-Trav. Deck Width	8.2	6.8	ADEQ	
RO-LOS	A	E	ADEQ	
RO-Min. Vertical Clear.	5.0	4.5	ADEQ	
RO-Sidewalks	N	Y	NOW	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Count	Total	
Rehab	RSB	Rehabilitate Substructure	6-10	0	10,000	5,000	15,000	
			Rehab	Subtotal:		10,000	5,000	15,000
Rehab Extra	brMOB	Mobilization	6-10	0	1,000	0	1,000	
Rehab Extra	brWPTF	Workplatform / Access	6-10	0	5,000	2,000	7,000	
			Rehab Extra	Subtotal:		6,000	2,000	8,000

I. ENGINEERING RECOMMENDATIONS

Bridge Drawings:
 Estimated Posting: t
 Evaluated Posting: t t t
 Closure Date:
 Closure Type:
 Monitoring Interval:

 Monitoring Component:

J. DESIGN PARAMETERS

Design Class:
 Operational Status: -
 Abutment Type:
 Design Deck Width:
 Design Deck Length:

K. IMPROVEMENT COSTS

Total Construction/Rehab	23,000
Total Inspection	0
TOTAL	23,000
86405 share @85%	19,550
CNR @15%	3,450

INSPECTION NOTES

Bridge No.: 11

Bridge No. 11, Memorial Park Drive East, 0.10 km East of Bridge Street, Powassan, Municipality of Powassan:

- Three span (13.6 m+/-, 24.8 m+/-, 13.6 m+/-) steel deck truss bridge.
- Structure has been inspected from the roadway below.
- Steel open grate trainmen's walk over the structure appears to be good condition.
- Structural steel members are in generally good condition with widespread light to localized medium corrosion and breakdown of the protective paint coating throughout all steel elements.
- Structure timbers appears generally in fair condition with weathering noted with no significant visual indication of rot noted.
- Steel handrailings on structure are in good condition.
- Vegetative embankments are in good condition with severe erosion on each side of the North pier.
- Concrete abutments, piers, wingwalls and retaining walls are in generally good condition with localized staining, narrow random map cracking and light to severe scaling (1.0m2 poor). A narrow vertical crack runs entire length of Southeast pier shaft.
- Stone pier and abutments (north span) generally in good condition. Concrete bearing pad on north pier and abutment have localized deteriorated concrete near bearing.
- Concrete spalling and deterioration noted on top of crash wall at pier.
- Concrete sidewalk below the structure is in good condition with light scaling and a few medium transverse cracks.
- Asphalt paved roadway below the structure is in generally good condition with localized cracking.
- Concrete curb and gutters are in generally good condition with localized light scaling, cracking and abrasions.
- No serious evidence of structural distress.
- Should repair crash wall and pier.
- Leaking observed at south end of structure and north end of structure.
- Abrasion noted on side walk (3 m2 , poor).
- Previous repairs observed on approaches, potholes and wide cracks noted on approaches (3 m2, poor).

L. HISTORY/ GENERAL

Bridge No.: 11

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 11

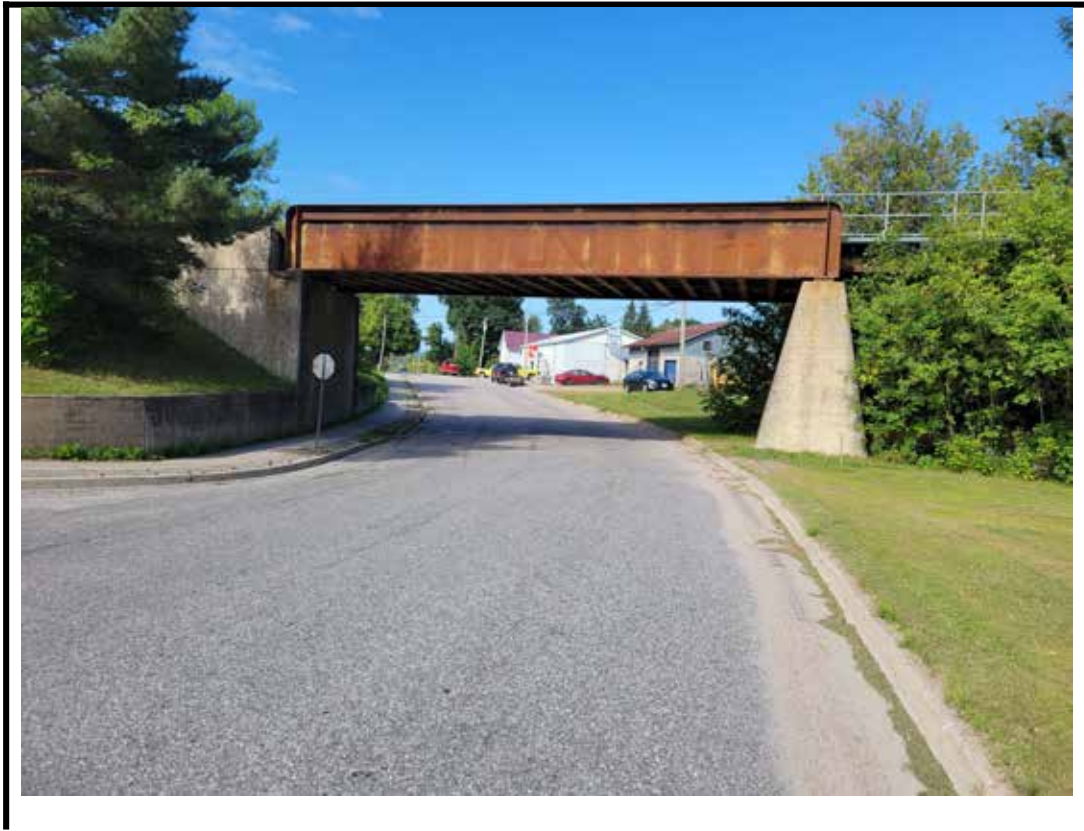


Photo 1 East Elevation

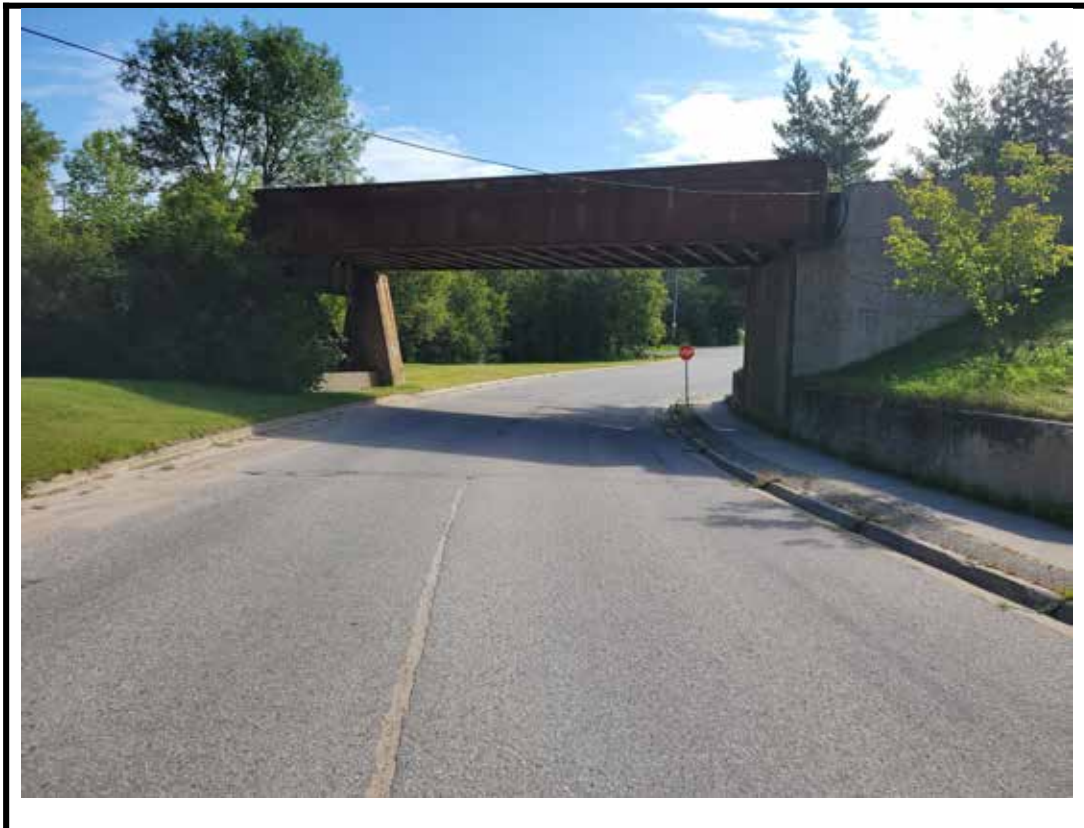


Photo 2 West Elevation



Photo 3 Medium transverse cracks and light to moderate scaling on sidewalk



Photo 4 Light to moderate deteriorated on top of concrete crash wall



Photo 7 Light corrosion and coating failure on structure steel members



Photo 8 South underside of structure



Photo 9 Coating failure and light to moderate corrosion on center span structural steel

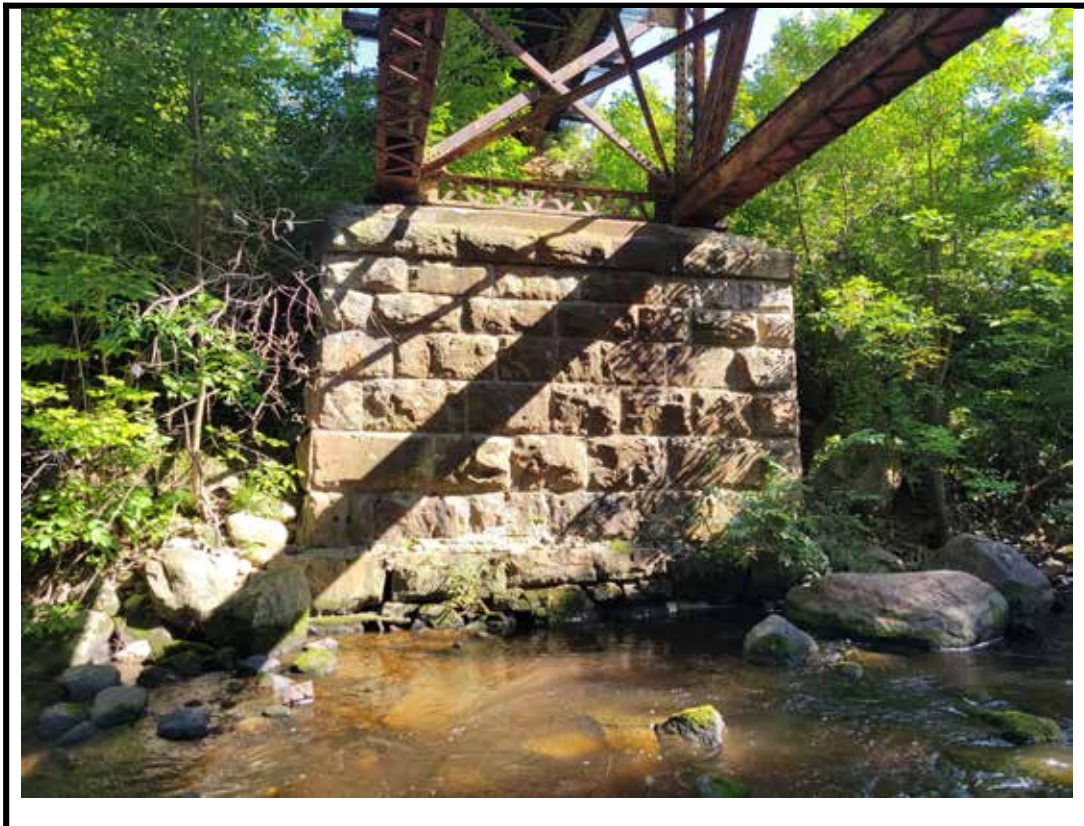


Photo 10 Stone masonry abutment on north end of center span



Photo 11 East elevation of center span



Photo 12 West elevation of center span



Photo 13 East elevation of north span



Photo 14 Coating failure and light to moderate corrosion of structural steel, north span

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Bridge Name:	Main Street, Powassan	Bridge No.:	12
Road Name:	Main Street	Road Section No.:	
Location:	0.01 km S of Valley View Drive East	MTO Site No.:	044-0000-
Roadside Env.:	U	Post Sign:	t t t
BL Posting:	t t t	Crossing Type:	O-WAT, Over Water
Bylaw No.:		Low Clear Sign:	Narrow Structure Sign:
Bylaw Exp. Date:		Eastings:	17 626465
		Northing:	5104537
		Bridge Value:	\$ 958,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		MunicA
<input type="checkbox"/> Shared?		Adjacent Bridge No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Substructure Yr:	1930	Span Length:	12.0 m	Logitudinal Joints:	0
Superstructure Yr:	1930	Deck Type:	CC - Concrete, Cast in Place	Transverse Joints:	0
Bridge Type:	C - TB - H	Deck Length:	13.6 m	Number of Bearings:	0
Crossing Skew:	R-30 °	Deck Width:	10.2 m	Soil Condition:	U
Number of Spans:	1	Deck Area:	138.7 m ²	Abutment and Foundation Type:	Closed - UN

ROAD OVER BRIDGE

Existing Road Class:	CCI	No. of Lanes:	2.0	Barrier Walls/Railings:	CB
Operational Status:	2W - OAT	Median Type/Width:	m	Min Vertical Clearance:	m
Wearing Surface:	A	Safety Curb/	(A) N E 0.1 m		
Travel Deck Width:	7.70 m	Sidewalk and Curb	(B) N / W 1.6 m		

ROAD UNDER BRIDGE

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:	m	Min Vertical Clearance:	m
Opening Under:	m	Safety Curb/	(A) m		
Surface Width:	m	Sidewalk and Curb	(B) / m		

E. TRAFFIC DATA

Legal Speed Limit:	40	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	800	AADT:	880
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
Source:		DHV:	vph	DHV:	vph
Bridge 12 Asset Master		Trucks:	2.00 %	Trucks:	2.0 %
		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	968

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T.Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. BRIDGE NEEDS

Field	MCR	PCR	TON	Comments
Superstructure	4	4	1-5	
Wearing Surface	4	6	6-10	
Deck Condition	4	5	6-10	
Expansion Joints	0	0	ADEQ	
Railing/guiderail	4	5	1-5	
Substructure	3	4	1-5	
Coating	0	0	ADEQ	
Streams/Waterways	5	5	6-10	
Curb/Sidewalk	4	6	6-10	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
Road Over Bridge				
RO-Trav. Deck Width	7.7	6.8	ADEQ	
RO-LOS	A	E	ADEQ	
RO-Min. Vertical Clear.		4.5	ADEQ	No value for: Min Vertical Clearance
RO-Sidewalks	Y	Y	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
Maintenance	OTHm	Maintenance Improvement	1-5	0	0	0	0
			Maintenance	Subtotal:	0	0	0
Rehab	RIR	Railing Improvement/Replacement	1-5	0	10,000	5,000	15,000
Rehab	RRW	Rehabilitate /Replace Retaining Walls	1-5	0	25,000	8,000	33,000
Rehab	IAG	Install Approach Guiderail	1-5	0	52,000	5,000	57,000
Rehab	CDS	Concrete Deck Soffit Repairs	1-5	0	5,000	2,000	7,000
Rehab	RSB	Rehabilitate Substructure	1-5	0	50,000	10,000	60,000
Rehab	RSP	Rehabilitate Superstructure	1-5	0	30,000	10,000	40,000
			Const Extra	Subtotal:	172,000	40,000	212,000
Rehab Extra	brMOB	Mobilization	1-5	0	5,000	2,000	7,000
Rehab Extra	brTCP	Traffic Control/Protection	1-5	0	10,000	3,000	13,000
Rehabilitation / Replacement Study						20,000	20,000
			Rehab Extra	Subtotal:	15,000	25,000	40,000

I. ENGINEERING RECOMMENDATIONS			
Bridge Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date:			
Closure Type:			
Monitoring Interval:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	
Operational Status:	-
Abutment Type:	
Design Deck Width:	
Design Deck Length:	

K. IMPROVEMENT COSTS		
Total Construction/Rehab		232,000
Total Inspection		20,000
TOTAL		252,000
86405	share @100%	252,000

INSPECTION NOTES

Bridge No.: 12

Bridge No. 12, Main Street, 0.01 km South of Valley View Drive East, Powassan, Municipality of Powassan:

- Structure is not posted with a load limit.
- 12.0 m+ \- single span cast-in-place concrete T-beam structure with a concrete deck and asphalt wearing surface.
- Concrete balustrade handrails are in generally fair condition with localized narrow stained cracking, wide cracks, concrete patches, localized surface rust staining and section southwest noted leaning out. Localized pop outs, severe scaling and delaminations were also noted. (4.0m2,poor)
- Steel grate sidewalk with the timber handrail has been cantilevered off the west face of the structure. This sidewalk and handrail are in generally good condition with deteriorated areas noted.
- Abrasions from snow removals noted and some clips are detached. (1.0m2,poor)
- Asphalt wearing surface is in generally fair condition with longitudinal and transverse cracks.
- Concrete deck fascias are in generally fair to locally poor condition with narrow random map cracking, spalling, delamination and severe scaling (4.0m2,poor).
- Concrete deck soffit is in generally good to locally poor condition with stained cracking and localized spalls. (2.0m2,poor)
- Concrete T-beams are in generally good condition with localized concrete patches and narrow stained cracks. Some of the concrete patches are delaminating. There is a wide crack on the Northeast and Southwest exterior girder haunch. Small spalls with exposed corroded reinforcing steel. (2.0m2,poor)
- Concrete abutments are in generally good to locally poor condition with concrete patches, delaminated concrete patches, wet areas, stained cracking, severe scaling and delaminations. (3.0m2,poor)
- Temporary repair of concrete corbel below southwest girder end should be monitored.
- The northeast wingwall has separated from the abutment. A temporary repair has been made and the wingwall is tied back on the wingwall face and the abutment face. Wingwalls are in good condition with a localized wide crack and debonded concrete patches and stained cracks. (2.0m2,poor)
- Deck drainage is accommodated by 4 - 200 mm diameter steel deck drains which outlet below the T-beams, generally in good condition.
- Steel beam guiderail is provided at all four quadrants of the structure and is in generally good condition with localized collision damage. A terminal section end treatment is provided in the northwest, southwest and southeast quadrants. The northeast quadrant is end buried and damaged. Timber guiderail posts exhibit light splits and checks and moderate rot. Several broken posts and spacer blocks observed. End treatments do not meet current requirements, and should be replaced with code compliant end treatments.
- Asphalt paved approach roads are in generally fair to poor condition. Asphalt patches noted at the North end. Pot holes noted at the South end, with medium centerline cracks noted on each approach and wide transverse cracks over structure. (4.0m2 poor).
- Concrete curb and gutter on the approaches is in generally good condition with wide cracking, spalls, and abrasions. (0.5m2)
- Vegetative embankments are in fair to poor condition with severe erosion noted in the Northeast, Southwest and Northwest quadrants.
- A stacked concrete retaining wall in the northeast quadrant has partially collapsed into the watercourse.
- Watercourse is unobstructed with no evidence of scour. Low volume with fast flow noted from east to west at the time of inspection.
- Should repair balustrade handrails, patch fascia, soffit, T-beam and substructure. Should upgrade guide rail end treatments and replace retaining wall.
- Should replace missing guide rail offset blocks as maintenance.
- Large spall noted at northwest abutment corner at wingwall interface.
- Stacked concrete wall at SW and NW have collapsed. Graffiti noted on south abutment wall.
- Curb and concrete barrier appear to be generally in good to fair condition.
- Rehabilitation / replacement study recommended due to age and condition of structure.

L. HISTORY/ GENERAL

Bridge No.: 12

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 12



Photo 1 Structure from north approach



Photo 2 Structure from south approach

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 12



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure



Photo 5 East elevation

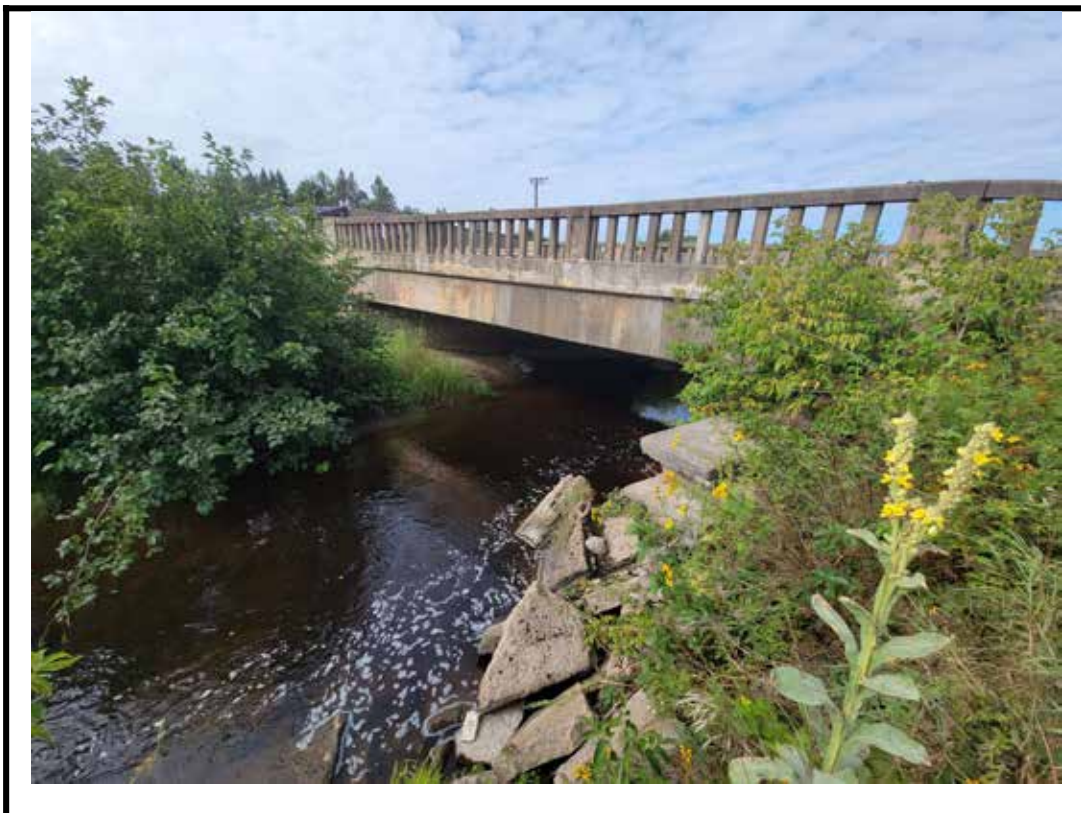


Photo 6 West elevation



Photo 7 Medium to wide cracks and small potholes on south approach wearing surface



Photo 8 Substandard end treatment with severe deformations on SE approach guide rail



Photo 9 Localized spalls and concrete deterioration on west fascia



Photo 10 Damaged timber approach guide rail post on SW approach



Photo 11 Isolated severe disintegration on SE wingwall



Photo 12 Localized severe deterioration of NE wing wall



Photo 13 Medium horizontal crack and spall with exposed corroded reinforcing steel on girder



Photo 14 Small spalls with exposed corroded reinforcing steel on interior girder



Photo 15 Narrow to medium cracks with damp stains and efflorescence on north abutment



Photo 16 NW embankment encroaching into stream, accumulating debris

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Bridge Name:	North Bridge, Lot 20/21, Conc XIV/XV	Bridge No.:	13
Road Name:	Maple Hill Road	Road Section No.:	
Location:	1.85 km N of Highway 534	MTO Site No.:	044-0000-
Roadside Env.:	R	Post Sign:	t t t
BL Posting:	t t t	Low Clear Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 623811	Crossing Type:	O-WAT, Over Water
Bylaw Exp. Date:	Northing: 5105510	Federal Navigable Waterway:	Unknown
		Bridge Value:	\$ 1,555,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		MunicA
<input type="checkbox"/> Shared?		Adjacent Bridge No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Substructure Yr:	1987	Span Length:	29.4 m	Logitudinal Joints:	0
Superstructure Yr:	1987	Deck Type:	CC - Concrete, Cast in Place	Transverse Joints:	2
Bridge Type:	P - IB - S	Deck Length:	30.6 m	Number of Bearings:	8
Crossing Skew:	R-10 °	Deck Width:	9.5 m	Soil Condition:	U
Number of Spans:	1	Deck Area:	290.7 m ²	Abutment and Foundation Type:	Closed - UN

ROAD OVER BRIDGE

Existing Road Class:	200	No. of Lanes:	2.0	Barrier Walls/Railings:	NJ
Operational Status:	2W - OAT	Median Type/Width:	m	Min Vertical Clearance:	m
Wearing Surface:	C	Safety Curb/ (A) N	E 0.0 m		
Travel Deck Width:	8.50 m	Sidewalk and Curb (B) N /	W 0.0 m		

ROAD UNDER BRIDGE

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:	m	Min Vertical Clearance:	m
Opening Under:	m	Safety Curb/ (A)	m		
Surface Width:	m	Sidewalk and Curb (B) /	m		

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2016
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	100	AADT:	110
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
Source:		DHV:	vph	DHV:	vph
Bridge 13 Asset Master		Trucks:	%	Trucks:	%
		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	121

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T.Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. BRIDGE NEEDS

Field	MCR	PCR	TON	Comments
Superstructure	6	6	ADEQ	
Wearing Surface	6	5	6-10	
Deck Condition	6	6	ADEQ	
Expansion Joints	6	5	ADEQ	
Railing/guiderail	5	4	6-10	
Substructure	5	6	ADEQ	
Coating	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	
Curb/Sidewalk	0	0	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
Road Over Bridge				
RO-Trav. Deck Width	8.5	6.5	ADEQ	Proj Class: 200, 110 (10 YR, 100*1.1)
RO-LOS	A	E	ADEQ	
RO-Min. Vertical Clear.		4.5	ADEQ	No value for: Min Vertical Clearance
RO-Sidewalks	N	Y	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Count	Total
Rehab	RIR	New end treatment and structure	1-5	0	28,000		28,000
Rehab	IAG	Connections					
		Rehabilitation / Replacement Study for Barrier Only				5,000	5,000
		Rehab Extra	Subtotal:		28,000	5,000	33,000

I. ENGINEERING RECOMMENDATIONS			
Bridge Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date:			
Closure Type:			
Monitoring Interval:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	
Operational Status:	-
Abutment Type:	
Design Deck Width:	
Design Deck Length:	

K. IMPROVEMENT COSTS		
Total Construction/Rehab		28,000
Total Inspection		5,000
TOTAL		33,000
86405	share @100%	33,000

INSPECTION NOTES

Bridge No.: 13

Bridge No. 13, North Bridge, Lot 20/21, Cone XIV/XV, Maple Hill Road, 1.85 km North of Highway 534, Municipality of Powassan:

- Structure is not posted with a load limit.
- 29.4 m± single span precast concrete girder bridge with a concrete deck and concrete wearing surface.
- Concrete barrier walls are in generally good condition with narrow to medium vertical cracks and localized small spalls. (1 m2)
- Galvanized steel pipe rails are in good condition with localized light corrosion. Localized deformation of west rail.
- Concrete wearing surface is in generally good condition with light scaling, dirt accumulation along the barriers and some abrasions.
- Deck drainage is accommodated by 8 - 200 mm diameter steel deck drains which outlet below the girders.
- Deck expansion joints consist of strip seals set in armouring angles. The end dams, armouring angles and strip seals are in good condition with light scaling on end dams. Expansion joints were filled with debris at time of inspection.
- Vegetative roadway embankments are moderately sloped and well vegetated. Rock protection noted to be in generally good condition on the NE embankment, fair condition at SE and SW embankments.
- Concrete deck soffit is in good condition.
- Precast concrete girders are in good condition.
- Elastomeric bearing pads are in good condition. Limited inspection of bearings due to high abutments
- Concrete abutments are in generally good condition with narrow stained and unstained cracks.
- Concrete wingwalls are in generally good condition with narrow stained and unstained cracks.
- Asphalt approach roads are in good condition.
- Steel beam guiderail is provided in all four quadrants of the bridge. The guiderail is end buried in the northeast, northwest and southeast quadrants. There is a break in the guiderail in the southwest quadrant to accommodate an entrance with a terminal end treatment. On the opposite side of the entrance the guiderail wraps into the entrance with a terminal end treatment. At the other end the guiderail end is buried. Approach guiderail exhibits numerous loose timber offset blocks. Guiderail end treatments and structure connection do not meet current requirements, guiderail should be replaced with a code compliant guiderail. Rotten posts noted throughout guiderail and impact damage observed at northeast guiderail.
- Watercourse is unobstructed with no evidence of scour. High volume, low flow, East to West.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Should patch barrier wall and upgrade guiderail end treatments.
- Damaged steel post for west handrail (1 m2, Poor).
- Localized spalls with exposed corroded reinforcement noted at center diaphragm (1 m2, poor).

L. HISTORY/ GENERAL

Bridge No.: 13

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 13



Photo 1 Structure from north approach



Photo 2 Structure from south approach

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 13



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure



Photo 5 East elevation



Photo 6 West elevation



Photo 7 Substandard guiderail structure connection and spall at end of parapet wall



Photo 8 Substandard end treatment on NW approach guide rail



Photo 9 Substandard end treatment with weathered posts at SE corner of structure



Photo 10 Narrow cracks and scaling noted on parapet wall



Photo 11 Light to localized moderate scaling on exposed deck top



Photo 12 Severe damage and deformation of hand rail and posts on west side of structure



Photo 13 General underside of structure



Photo 14 General view of abutment wall



Photo 15 Cracks and delaminated concrete on underside of concrete diaphragms

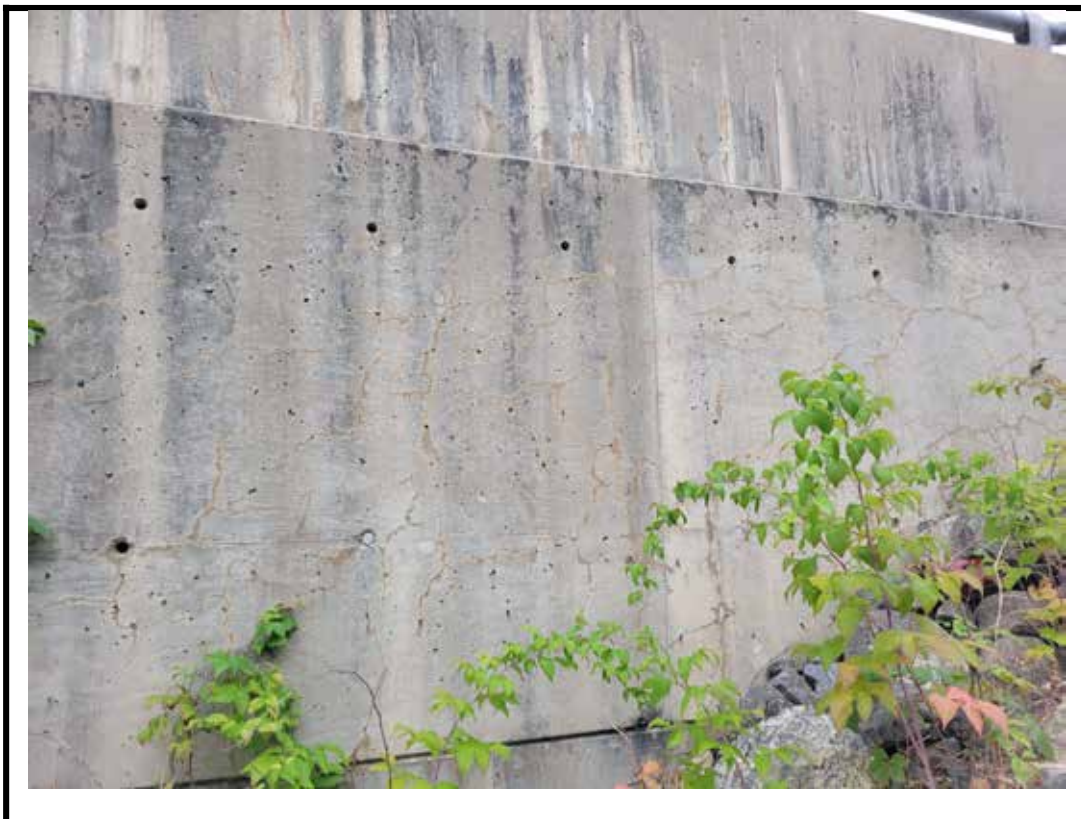


Photo 16 Narrow cracks on NE wingwall

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Bridge Name:	Genesee Creek Bridge	Bridge No.:	14
Road Name:	Memorial Park Drive East	Road Section No.:	
Location:	0.01 km W of Queens Avenue	MTO Site No.:	044-0000-
Roadside Env.:	U	Post Sign:	t t t
BL Posting:	t t t	Low Clear Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626871	Crossing Type:	O-WAT, Over Water
Bylaw Exp. Date:	Northing: 5104340	Federal Navigable Waterway:	Unknown
		Bridge Value:	\$ 294,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:	Original Board Order Number:
Railway Company:	Date:
Railway Subdivision:	Current Board Order Number:
Subdivision Mileage:	Date:
Transport Canada Crossing No.:	Seniority:
Number of Tracks:	

C. JURISDICTION

Owner:	86405	Special Designation:	NSD	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		MunicA
<input type="checkbox"/> Shared?		Adjacent Bridge No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Substructure Yr:	1930	Span Length:	6.4 m	Logitudinal Joints:	0
Superstructure Yr:	1980	Deck Type:	WP - Timber/Wood Planks	Transverse Joints:	0
Bridge Type:	T - LG - S	Deck Length:	8.4 m	Number of Bearings:	0
Crossing Skew:	00 °	Deck Width:	1.0 m	Soil Condition:	U
Number of Spans:	1	Deck Area:	8.4 m ²	Abutment and Foundation Type:	Closed - UN

ROAD OVER BRIDGE

Existing Road Class:	100	No. of Lanes:	1.0	Barrier Walls/Railings:	OT
Operational Status:	2W - CVT	Median Type/Width:	m	Min Vertical Clearance:	m
Wearing Surface:	T	Safety Curb/ (A) N	E 0.0 m		
Travel Deck Width:	1.00 m	Sidewalk and Curb (B) N /	W 0.0 m		

ROAD UNDER BRIDGE

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:	m	Min Vertical Clearance:	m
Opening Under:	m	Safety Curb/ (A)	m		
Surface Width:	m	Sidewalk and Curb (B) /	m		

E. TRAFFIC DATA

Legal Speed Limit:	50	Traffic Count		10 Year Traffic Forecast	
		Year:	0	Year:	10
Route Designations		AADT:	1	AADT:	
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	DHV Factor:	%	DHV Factor:	%
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV:	vph	DHV:	vph
Source:		Trucks:	%	Trucks:	%
Bridge 14 Asset Master		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:		20 Year AADT:	0

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T.Dwivedi, P.Eng.
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INSPECTION NOTES

Bridge No.: 14

Bridge No. 14, Memorial Park Drive East, 0.01 km West of Queens Avenue, Powassan, Municipality of Powassan:

-Pedestrian bridge superstructure has been removed and the approaches have been barricaded by steel fences circa 2023

-Substructure remains.

- South stone masonry abutment wall is in fair to generally good condition with some loss of mortar and wide vertical cracks (1.0m2, poor). The bearing seat consists of two 4" x 4" square timbers that are in good condition. Severe undermining noted at full length.

- North cast-in-place concrete abutment is in generally good condition with narrow vertical cracks, light scaling and severe undermining of the footing in the northwest quadrant. The bearing seat consists of formed cast-in-place concrete that is in generally good condition with outward rotation, wall appears to be rotated inwards, Timbers not bearing on cip

- Vegetated embankments are in poor condition. Steep with severe erosion on all embankments.

- Watercourse is unobstructed with no evidence of scour. Moderate volume, high flow, East to West.

- Severe undermining noted on both abutment walls.

L. HISTORY/ GENERAL

Bridge No.: 14

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE

SITE PHOTOGRAPHS

Site No.: 14



Photo 1 Structure from north approach



Photo 2 Structure from south approach



Photo 3 North abutment remaining



Photo 4 South abutment remaining

ATTACHMENT 2

OSIM INSPECTION REPORTS

CULVERTS

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Bear Creek Road	Culvert No.:	201
Road Name:	Bear Creek Road	Road Section No.:	
Location:	0.3 km W of Sunset Cove Road	MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:		Easting:	17 618926
Bylaw Exp. Date:		Northing:	5109325
		Crossing Type:	O-WAT, Over Water
		Federal Nav. Waterway:	Unknown
		Culvert Value:	\$ 540,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:	0	Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		MunicA
<input type="checkbox"/> Shared?		Adjacent Culvert No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Year Constructed:	2023	Cell/Span Width/Dia.:	1.5 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	10.7 m	Upstream:	N
Material/ Type:	HDPE	Max Height:	1.5 m	Downstream:	N
Crossing Skew:	-00 °	Length:	13 m	Soil Condition:	U
No of Cells/Spans:	3	Type/Depth of Fill: E	1.0 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		
----- ROAD OVER CULVERT -----					
Existing Road Class:	100	Platform Width:	9.0 m	Safety Curb/	(A) N / N 0.0 m
Operational Status:	2W - OAT	Surface Width:	8.0 m	Sidewalk and Curb	(B) N / S 0.0 m
Surface Type:	HCB	No. of Lanes:	2.0	Roadside Safety:	(A) N NO
					(B) S NO
----- ROAD THROUGH CULVERT -----					
Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	30	AADT:	33
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
Source:		DHV:	vph	DHV:	vph
Culvert 201 Asset Master		Trucks:	2.00 %	Trucks:	2.0 %
		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	36

F. INSPECTIONS

Date:	08/29/2024	Inspected By:	Derick Batrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	6	6	ADEQ	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	5	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	9	6	ADEQ	Proj Class: 100, 33 (10 YR, 30*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	1.8	3	ADEQ	

Recommended Needs

Impr. Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Count	Total
Rehab	cRSP	Install Approach Guiderails	1-5	0	48,000	16,000	64,000
Const Subtotal:							64,000
Rehab Extra Subtotal:							

I. ENGINEERING RECOMMENDATIONS

J. DESIGN PARAMETERS

K. IMPROVEMENT COSTS

Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

Design Class:	
Design Platform Width:	
Material/Type:	0 -
Width/Diameter:	
Maximum Height:	
Culvert Length:	
No. of Culverts:	
Depth of Fill:	

Total Construction/Rehab	64,000
Total Inspection	0
TOTAL	64,000
86405 share @100%	64,000

INSPECTION NOTES

Culvert No.: 201

Culvert No. 201, Forestry Road, Lot 20/21, Concession I, 2.2 km South of Main Street, Municipality of Powassan:

- Structure is not posted with a load limit.
- Three span (1.5 m+/- each) corrugated HDPE round pipe culvert with approximately 1.0 m of gravel fill and a gravel wearing surface. Newly installed circa 2023
- No traffic protection has been provided over the structure or on the approaches. Code compliant approach guiderail should be installed at the structure.
- Gravel roadway is in good condition.
- Roadway embankments are in good condition.
- New 3 span corrugated HDPE round pipe barrels have been installed since the last inspection (2022). New barrels are generally in good condition
- Watercourse is unobstructed with no evidence of scour, moderate flow from south to north.
- No serious evidence of structural distress.
- No load posting warranted

L. HISTORY/ GENERAL

Culvert No.: 201

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 201



Photo 1 Structure from east approach



Photo 2 Structure from west approach

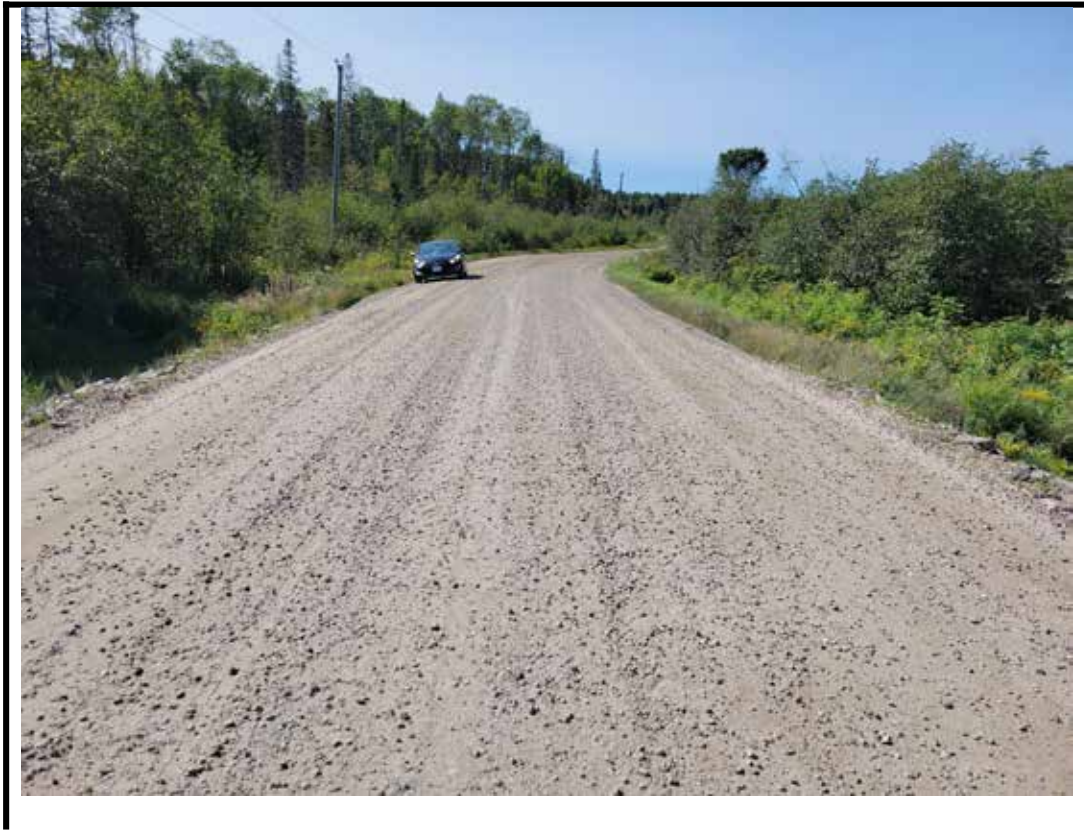


Photo 3 East approach from center of structure



Photo 4 West approach from center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Interior of east barrel; replaced since 2022 inspection



Photo 8 Interior of middle barrel; replaced since 2022 inspection



Photo 9 Interior of west barrel; replaced since 2022 inspection

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Forestry Road, Lot 22/23, Conc II	Culvert No.:	202
Road Name:	Forestry Road	Road Section No.:	
Location:	1.2 km S of Main Street	MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 628536	Crossing Type:	O-WAT, Over Water
Bylaw Exp. Date:	Northing: 5093228	Federal Nav. Waterway:	Unknown
		Culvert Value:	\$ 313,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	1970	Cell/Span Width/Dia.:	1.8 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	4.7 m	Upstream:	N
Material/ Type:	CST - PR	Max Height:	1.8 m	Downstrea	N
Crossing Skew:	-00 °	Length:	13.7 m	Soil Condition:	U
No of Cells/Spans:	2	Type/Depth of Fill: E	0.4 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	100	Platform Width:	7.4 m	Safety Curb/	(A) N / E 0.0	m
Operational Status:	2W - OAT	Surface Width:	6.4 m	Sidewalk and Curb	(B) N / W 0.0	m
Surface Type:	HCB	No. of Lanes:	2.0	Roadside Safety:	(A) E NO	
					(B) W NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		
Surface Width:	m	Sidewalk and Curb	/		

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	30	AADT:	33
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
Source:		Trucks:	2.00 %	Trucks:	2.0 %
Culvert 202 Asset Master		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	36

F. INSPECTIONS

Date:	08/29/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	3	5	6-10	
Foundations	5	5	6-10	
Guiderail/Barrier	0	0	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	5	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	7.4	6	ADEQ	Proj Class: 100, 33 (10 YR, 30*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	2.2	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
Maintenance	OTHm	Install new guiderail	1-5	0	48,000	16,000	64,000
Maintenance Subtotal:					48,000	16,000	64,000

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:
 Estimated Posting: t
 Evaluated Posting: t t t
 Closure Date/Type:
 Closure Type:
 Monitoring:
 Monitoring Component:

J. DESIGN PARAMETERS

Design Class:
 Design Platform Width:
 Material/Type: 0 -
 Width/Diameter:
 Maximum Height:
 Culvert Length:
 No. of Culverts:
 Depth of Fill:

K. IMPROVEMENT COSTS

Total Construction/Rehab	64,000
Total Inspection	0
TOTAL	64,000
86405 share @100%	64,000

INSPECTION NOTES

Culvert No.: 202

Culvert No. 202, Forestry Road, Lot 22/23, Concession II, 1.20 km South of Main Street, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit.
- Two span (1.8 m+/- each) corrugated steel round pipe culvert with approximately 0.4 m of gravel fill and a gravel roadway. Minimum fill requirements should be confirmed.

- No traffic protection is provided over the structure or on the approaches. A code compliant guiderail should be installed at the structure.
- Gravel roadway is in good condition.
- Roadway embankments and rock protection are in generally good condition. Some erosion / loss of fill between barrels at east and southwest corner.
- Corrugated steel round pipe culverts are in generally good condition with light corrosion below high water level and moderate corrosion below waterline. The outlet of the culverts are partially undermined and partially overhanging.
- Watercourse is unobstructed with no evidence of scour. Moderate volume and high flow, East to West with large stones in stream.
- No serious evidence of structural distress.
- Some section loss noted at h side of barrel and some salt stains were present in culvert barrel.
- Stone slope protection appears to be generally in good condition with loss of fill at southwest corner and between barrels at inlet.
- Structure does not require posting with a load limit.

L. HISTORY/ GENERAL

Culvert No.: 202

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.:202

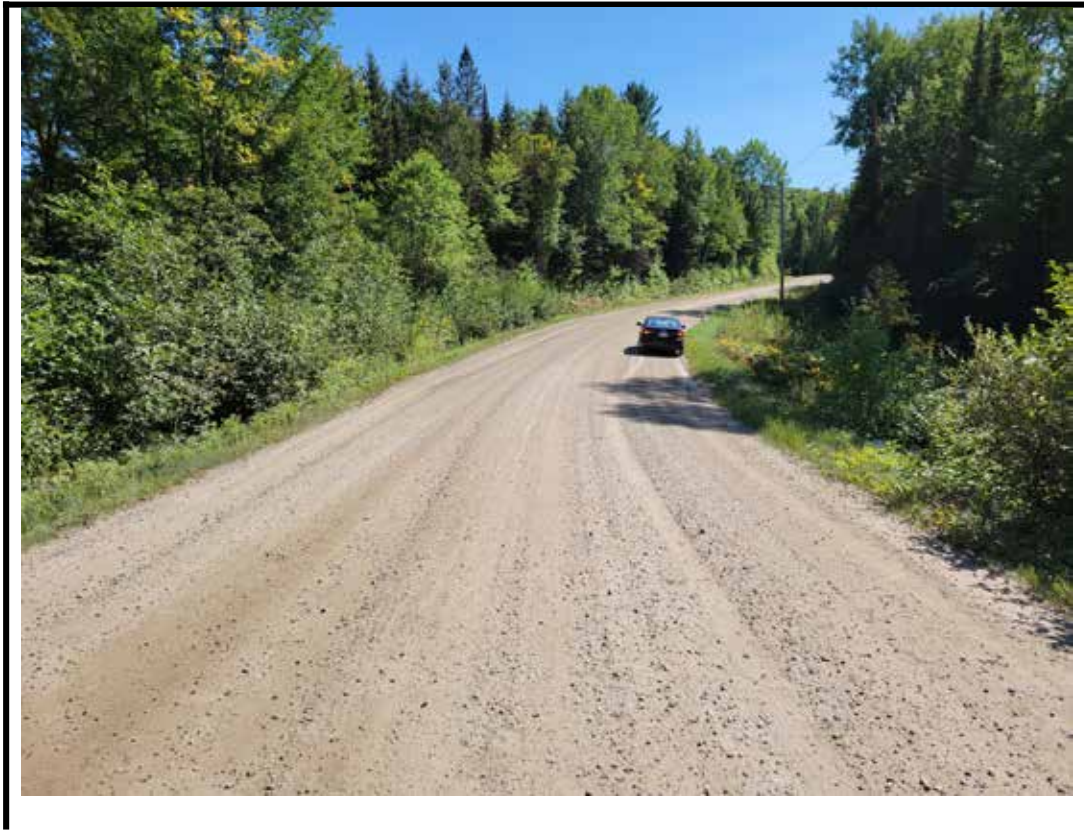


Photo 1 Structure from north approach



Photo 2 Structure from south approach



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure



Photo 5 East elevation



Photo 6 West elevation



Photo 7 Interior of north barrel



Photo 8 Interior of south barrel

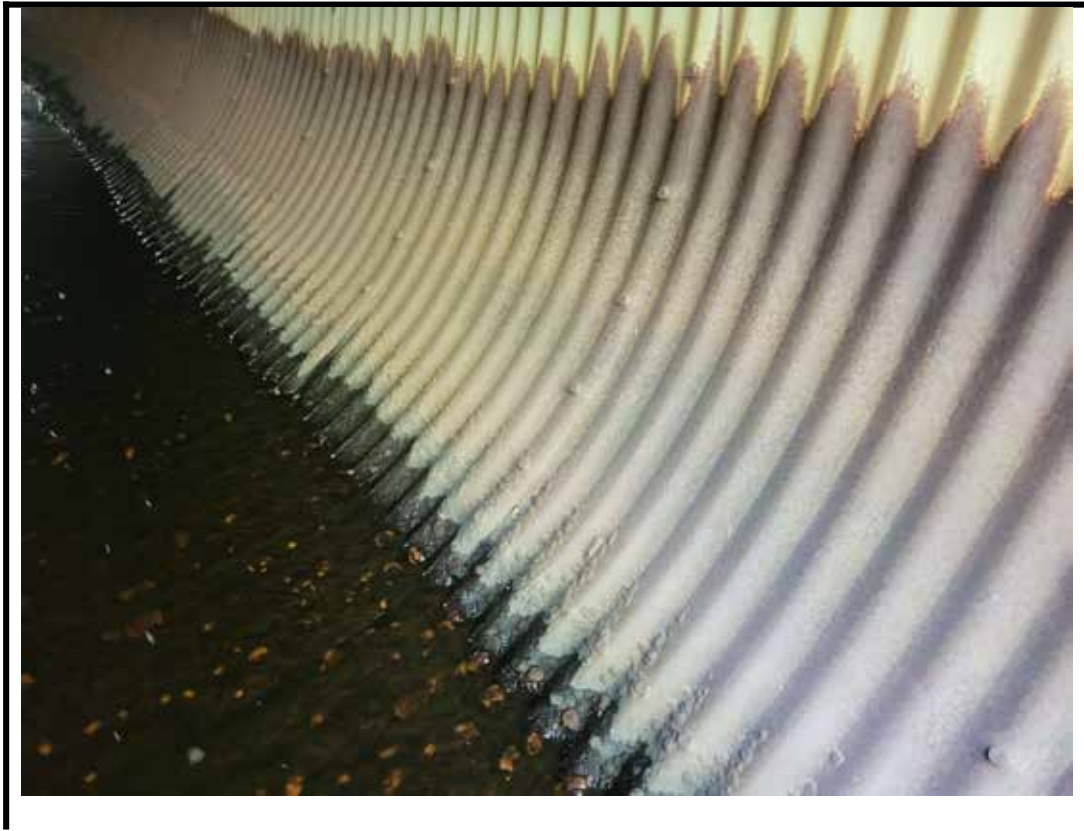


Photo 9 Light to moderate corrosion below the high waterline throughout north barrel



Photo 10 Light to moderate corrosion below the high waterline throughout south barrel

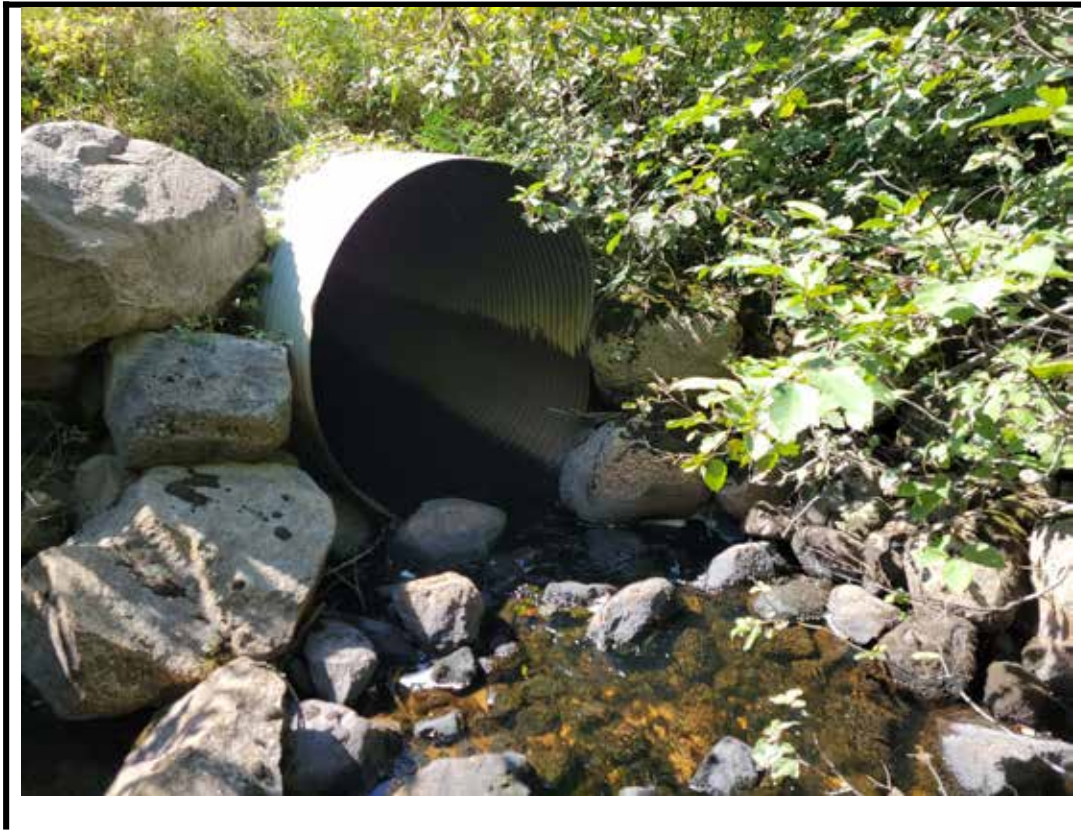


Photo 11 Deformation of east end of north barrel due to large rock slope protection



Photo 12 West end of both barrels are perched

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Main Street, Trout Creek	Culvert No.:	203
Road Name:	Main Street	Road Section No.:	
Location:	0.2 km E of Highway 11	MTO Site No.:	044-0000-
Roadside Env.:	S	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:		Easting:	17 627120
Bylaw Exp. Date:		Northing:	5093790
		Crossing Type:	O-WAT, Over Water
		Federal Nav. Waterway:	Unknown
		Culvert Value:	\$ 422,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Year Constructed:	-	Cell/Span Width/Dia.:	4.6 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	4.6 m	Upstream:	N
Material/ Type:	CSP - PA	Max Height:	2.8 m	Downstrea	N
Crossing Skew:	R-20 °	Length:	22.0 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.7 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	LR	Platform Width:	8.9 m	Safety Curb/	(A) N / N 0.0	m
Operational Status:	2W - OAT	Surface Width:	6.3 m	Sidewalk and Curb	(B) N / S 0.0	m
Surface Type:	HCB	No. of Lanes:	2.0	Roadside Safety:	(A) N FB	
					(B) S FB	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		
Surface Width:	m	Sidewalk and Curb	/		

E. TRAFFIC DATA

Legal Speed Limit:	50	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	150	AADT:	165
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	2.00 %	Trucks:	2.0 %
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 203 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	181

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P. Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	6	6	ADEQ	
Foundations	6	6	ADEQ	
Guiderail/Barrier	6	4	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	8.9	6.5	ADEQ	Road Class: LR
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	3.5	3	ADEQ	Rdside Safety: 2

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Count	Total
Maintenance	cREC	Guiderail Post and Install End Treatments	1-5	0	13,000		13,000
		Rehabilitation / Replacement Study for Barrier Only				5,000	5,000
Maintenance Subtotal:					13,000	5,000	18,000

I. ENGINEERING RECOMMENDATIONS			
Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	RLHU
Design Platform Width:	9.0
Material/Type:	CSP - PR
Width/Diameter:	4.6
Maximum Height:	4.6
Culvert Length:	32.0
No. of Culverts:	1
Depth of Fill:	0.7

K. IMPROVEMENT COSTS	
Total Construction/Rehab	13,000
Total Inspection	5,000
TOTAL	18,000
86405	share @100%
	18,000

INSPECTION NOTES

Culvert No.: 203

Culvert No. 203, Main Street, 0.2 km East of Highway 11, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit.
- 4.6 m± single span corrugated polymer coated culvert with approximately 0.7 m of earth fill and an asphalt paved roadway.
- The year of the replacement is unknown at this time.
- Steel beam guide rail is provided over the structure and on the approaches and is in generally good condition with fishtail end treatments on all corners. Abrasions noted on SW end treatment. Approach end treatment do not meet current requirements and should be replaced with code compliant end treatment. Missing post in guiderail over structure with over single layer flex beam.
- Asphalt paved roadway is in generally good condition. Medium transverse cracks noted at east.
- Vegetative embankments and rock protection are in good condition.
- Corrugated polymer coated pipe arch culvert is in generally good condition, light localized corrosion of bolts and at plate joints.
- Watercourse is unobstructed with no evidence of scour. Moderate volume, low flow, North to South.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Should replace end treatments & repair guide rail as maintenance.

L. HISTORY/ GENERAL

Culvert No.: 203

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 203



Photo 1 Structure from east approach



Photo 2 Structure from west approach



Photo 3 East approach from center of structure



Photo 4 West approach from center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Deformation of northeast approach barrier end treatment



Photo 8 Transverse crack on east approach wearing surface



Photo 9 Missing barrier post over culvert barrel



Photo 10 Interior of culvert barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	McEachern Street, Trout Creek	Culvert No.:	204
Road Name:	McEachern Street	Road Section No.:	
Location:	0.1 km N of Main Street (Hwy 522)	MTO Site No.:	044-0000-
Roadside Env.:	S	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626721	Federal Nav. Waterway:	Unknown
Bylaw Exp. Date:	Northing: 5093748	Culvert Value:	\$ 252,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	1980	Cell/Span Width/Dia.:	2.0 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	2.0 m	Upstream:	N
Material/ Type:	CST - PA	Max Height:	1.4 m	Downstrea	N
Crossing Skew:	R-45 °	Length:	19.5 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.7 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	LR	Platform Width:	7.0 m	Safety Curb/	(A) N / E 0.0	m
Operational Status:	2W - OAT	Surface Width:	6.0 m	Sidewalk and Curb	(B) N / W 0.0	m
Surface Type:	HCB	No. of Lanes:	2.0	Roadside Safety:	(A) E NO	
					(B) W NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	50	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AAADT:	20	AAADT:	22
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
Source:		Trucks:	2.00 %	Trucks:	2.0 %
Culvert 203 Asset Master		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	24

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	5	5	6-10	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	ADEQ	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	7	6.5	ADEQ	Road Class: LR
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	2.1	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
		Install Approach Guiderail	1-5		48,000	16,000	64,000
		Replace Structure	-		-	-	-
Subtotal:					48,000	16,000	64,000

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:

Estimated Posting: t

Evaluated Posting: t t t

Closure Date/Type:

Closure Type:

Monitoring:

Monitoring Component:

J. DESIGN PARAMETERS

Design Class:

Design Platform Width:

Material/Type: 0 -

Width/Diameter:

Maximum Height:

Culvert Length:

No. of Culverts:

Depth of Fill:

K. IMPROVEMENT COSTS

Total Construction/Rehab	64,000
Total Inspection	0
TOTAL	64,000
86405 share @100%	64,000

INSPECTION NOTES

Culvert No.: 204

Culvert No. 204, McEachern Street, 0.1 km North of Main Street, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit.
- 2.0 m+/- single span corrugated steel pipe arch culvert paved roadway. Height of fill over structure should be confirmed.
- No traffic protection is provided over the structure or on the approaches. It is recommended that a code compliant guiderail be installed at the structure.
- Asphalt paved roadway is in good condition over structure with light ravelling noted. Potholes noted at north end of structure with wide alligator cracks.
- Vegetative embankments are in good condition with light erosion noted. A few pre-cast concrete panels (NW) and concrete waste blocks on NE. Movement noted of one concrete panel.
- Corrugated steel pipe arch culvert is in generally good condition with light corrosion of the invert. Minor deformations of obvert noted under roadway.
- Watercourse is unobstructed with no evidence of scour.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Flow from northwest to southeast noted at the time of inspection.

L. HISTORY/ GENERAL

Culvert No.: 204



Photo 1 Structure from north approach



Photo 2 Structure from south approach



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure



Photo 5 East elevation



Photo 6 West elevation



Photo 7 Light corrosion below the high waterline throughout the barrel



Photo 8 Deformation of culvert under roadway



Photo 9 Rocks accumulating in west end of barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	McCarthy Street, Trout Creek, House 301 Entrance	Culvert No.:	205
Road Name:	McCarthy Street	Road Section No.:	
Location:	0.05 km N of Sweezy Street	MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626595	Federal Nav. Waterway:	No
Bylaw Exp. Date:	Northing: 5094057	Culvert Value:	\$ 176,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	1978	Cell/Span Width/Dia.:	1.5 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	1.5 m	Upstream:	N
Material/ Type:	PST - OTH	Max Height:	1.5 m	Downstrea	N
Crossing Skew:	P-90 °	Length:	6.4 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.3 m	Foundation Type:	UN - Unknown
		Culvert Floor:	EA		

ROAD OVER CULVERT

Existing Road Class:	LR	Platform Width:	4.2 m	Safety Curb/	(A) N / N 0.0	m
Operational Status:	2W - OAT	Surface Width:	3.4 m	Sidewalk and Curb	(B) N / S 0.0	m
Surface Type:	HCB	No. of Lanes:	1.0	Roadside Safety:	(A) N NO	
					(B) S NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		
Surface Width:	m	Sidewalk and Curb	/		

E. TRAFFIC DATA

Legal Speed Limit:	60	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AAADT:	5	AAADT:	5
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	%	Trucks:	2.0 %
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 205 Asset Master		10 year Growth Factor:	1.00	20 Year AADT:	5

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Batrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	6	6	ADEQ	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	ADEQ	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	4.2	4.2	ADEQ	Road Class: LR, Safety Curb: 0
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	1.8	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Cont	Total
Replacement	RES	Replace existing Culvert	-	-	-	-	-
		Rehabilitation / Replacement Study	-	-	-	-	-
Replacement Subtotal:					-	-	-

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:

Estimated Posting: t

Evaluated Posting: t t t

Closure Date/Type:

Closure Type:

Monitoring:

Monitoring Component:

J. DESIGN PARAMETERS

Design Class:

Design Platform Width:

Material/Type: 0 -

Width/Diameter:

Maximum Height:

Culvert Length:

No. of Culverts:

Depth of Fill:

K. IMPROVEMENT COSTS

Total Construction/Rehab	-
Total Inspection	-
TOTAL	-
86405 share @100%	-

INSPECTION NOTES

Culvert No.: 205

Culvert No. 205, McCarthy Street, Entrance to House 301, 0.05 km North of Sweezey Street, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit.
- Culvert is a structure parallel to the roadway and services a private residence.
- 1.5 m+/- 2 mm thick corrugated steel pipe structure with approximately 0.3 m of gravel fill with an asphalt wearing surface. Minimum fill requirements should be confirmed.
- No traffic protection has been provided over the structure or on the approaches.
- No asphalt visible, potholes and settlement noted at asphalt entranceway. It is covered with gravel.
- Vegetative roadway embankments and rock protection are in good condition. Some erosion noted at southwest.
- Corrugated steel plate structure is in good condition. Minor deformations noted at ends.
- Watercourse is unobstructed with no evidence of scour. It is our understanding that the ditch floods frequently. Moderate volume, low flow, North to South.
- No serious evidence of structural distress.

L. HISTORY/ GENERAL

Culvert No.: 205

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 205



Photo 1 Structure from East approach



Photo 2 Structure from West approach

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 205



Photo 3 East approach from the center of structure



Photo 4 West approach from the center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Deformation at north end of barrel



Photo 8 Interior of culvert barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	McCarthy Street, Trout Creek, House 401 Entrance	Culvert No.:	206
Road Name:	McCarthy Street	Road Section No.:	
Location:	0.1 km N of Sweezy Street	MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626586	Crossing Type:	O-WAT, Over Water
Bylaw Exp. Date:	Northing: 5094092	Federal Nav. Waterway:	Unknown
		Culvert Value:	\$ 174,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	1980	Cell/Span Width/Dia.:	2.1 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	2.1 m	Upstream:	N
Material/ Type:	CST - PR	Max Height:	2.1 m	Downstrea	N
Crossing Skew:	P-90 °	Length:	5.8 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.3 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	LR	Platform Width:	3.6 m	Safety Curb/	(A) N / N 0.0	m
Operational Status:	2W - OAT	Surface Width:	2.6 m	Sidewalk and Curb	(B) N / S 0.0	m
Surface Type:	G/S	No. of Lanes:	1.0	Roadside Safety:	(A) N NO	
					(B) S NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		
Surface Width:	m	Sidewalk and Curb	/		

E. TRAFFIC DATA

Legal Speed Limit:	60	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AAADT:	5	AAADT:	5
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	%	Trucks:	%
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 206 Asset Master		10 year Growth Factor:	1.00	20 Year AADT:	5

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	6	6	ADEQ	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	ADEQ	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	3.6	3.6	ADEQ	Road Class: LR, Safety Curb: 0
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	2.4	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
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There are no identified improvements in this inspection.

I. ENGINEERING RECOMMENDATIONS

J. DESIGN PARAMETERS

K. IMPROVEMENT COSTS

Culvert Drawings:

Estimated Posting: t

Evaluated Posting: t t t

Closure Date/Type:

Closure Type:

Monitoring:

Monitoring Component:

Design Class:

Design Platform Width:

Material/Type: 0 -

Width/Diameter:

Maximum Height:

Culvert Length:

No. of Culverts:

Depth of Fill:

Total Construction/Rehab	0
Total Inspection	0
TOTAL	0
86405 share @100%	0

INSPECTION NOTES

Culvert No.: 206

Culvert No. 206, McCarthy Street, Entrance to House 401, 0.1 km North of Sweezy Street, Municipality of Powassan:

- Structure is not posted with a load limit.
- Culvert is a structure parallel to the roadway and services a private residence.
- 1.5 m+/- single span corrugated steel round pipe culvert with approximately 0.3 m of gravel fill. Fill cover appears low and should be verified with designer.
- No traffic protection is provided over the structure or on the approaches.
- Gravel entrance is in good condition.
- Vegetative roadway embankments are in good condition and rock protection is in good condition.
- Corrugated steel pipe culvert is in generally good condition with some light corrosion below the waterline.
- Watercourse is unobstructed. It is our understanding that the ditch floods frequently. Low volume, low flow, North to South. Some channel erosion noted at southwest.
- No serious evidence of structural distress.

L. HISTORY/ GENERAL

Culvert No.: 206

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 206



Photo 1 Structure from East approach



Photo 2 Structure from West approach

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 206



Photo 3 East approach from the center of structure



Photo 4 West approach from the center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Light corrosion at waterline



Photo 8 Interior of culvert barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	McCarthy Street, Trout Creek, House 403 Entrance	Culvert No.:	207
Road Name:	McCarthy Street	Road Section No.:	
Location:	0.15 km N of Sweezy Street	MTO Site No.:	044-0000-
Roadside Env.:	S	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626561	Federal Nav. Waterway:	No
Bylaw Exp. Date:	Northing: 5094139	Culvert Value:	\$ 166,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	Unknown	Cell/Span Width/Dia.:	1.5 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	1.5 m	Upstream:	H R
Material/ Type:	CST - PR	Max Height:	1.5 m	Downstrea	H R
Crossing Skew:	P-90 °	Length:	5.9 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.3 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	LR	Platform Width:	5.3 m	Safety Curb/	(A) N / N 0.3	m
Operational Status:	2W - OAT	Surface Width:	4.3 m	Sidewalk and Curb	(B) N / S 0.3	m
Surface Type:	G/S	No. of Lanes:	2.0	Roadside Safety:	(A) N NO	
					(B) S NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		
Surface Width:	m	Sidewalk and Curb	/		

E. TRAFFIC DATA

Legal Speed Limit:	60	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AAADT:	5	AAADT:	5
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	%	Trucks:	%
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 207 Asset Master		10 year Growth Factor:	1.00	20 Year AADT:	5

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Batrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	6	6	ADEQ	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	ADEQ	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	5.3	5.3	ADEQ	Road Class: LR
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	1.8	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Count	Total
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There are no identified improvements in this inspection.

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

J. DESIGN PARAMETERS

Design Class:	
Design Platform Width:	
Material/Type:	0 -
Width/Diameter:	
Maximum Height:	
Culvert Length:	
No. of Culverts:	
Depth of Fill:	

K. IMPROVEMENT COSTS

Total Construction/Rehab	0
Total Inspection	0
TOTAL	0
86405 share @100%	0

INSPECTION NOTES

Culvert No.: 207

Culvert No. 207, McCarthy Street, Entrance to House 403, 0.15 km North of Sweezey Street, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit.
- Culvert is a structure parallel to the roadway and services a private residence.
- The year of replacement is unknown at this time.
- 1.5 m+/- single span corrugated steel round pipe culvert with 0.3 m of gravel fill and a gravel wearing surface, Minimum requirements for fill height should be confirmed.
- Gravel wearing surface is in generally good condition.
- Vegetative roadway embankments are in good condition. Rock protection is in generally good condition.
- Corrugated polymer coated pipe culvert is in generally good condition.
- Watercourse is unobstructed with no evidence of scour. It is our understanding that the ditch floods frequently. Low volume, low flow, North to South.
- No serious evidence of structural distress.

L. HISTORY/ GENERAL

Culvert No.: 207



Photo 1 Structure from East approach



Photo 2 Structure from West approach



Photo 3 East approach from the center of structure



Photo 4 West approach from the center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 General view of barrel looking south



Photo 8 Light corrosion below the high water line throughout the barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	McCarthy Street, Trout Creek, House 405 Entrance	Culvert No.:	208
Road Name:	McCarthy Street	Road Section No.:	
Location:	0.2 km N of Sweezy Street	MTO Site No.:	044-0000-
Roadside Env.:	S	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626538	Federal Nav. Waterway:	Unknown
Bylaw Exp. Date:	Northing: 5094179	Culvert Value:	\$ 178,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	2005	Cell/Span Width/Dia.:	1.5 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	1.5 m	Upstream:	R
Material/ Type:	CST - PR	Max Height:	1.5 m	Downstrea	R
Crossing Skew:	P-90 °	Length:	9.0 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.3 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	LR	Platform Width:	6.4 m	Safety Curb/	(A) N / N 0.0	m
Operational Status:	2W - OAT	Surface Width:	5.4 m	Sidewalk and Curb	(B) N / S 0.0	m
Surface Type:	G/S	No. of Lanes:	2.0	Roadside Safety:	(A) N NO	
					(B) S NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		
Surface Width:	m	Sidewalk and Curb	/		

E. TRAFFIC DATA

Legal Speed Limit:	60	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AAADT:	5	AAADT:	5
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	%	Trucks:	%
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 208 Asset Master		10 year Growth Factor:	1.00	20 Year AADT:	5

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Batrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	6	6	ADEQ	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	ADEQ	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	6.4	6.4	ADEQ	Road Class: LR
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	1.8	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Count	Total
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There are no identified improvements in this inspection.

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

J. DESIGN PARAMETERS

Design Class:	
Design Platform Width:	
Material/Type:	0 -
Width/Diameter:	
Maximum Height:	
Culvert Length:	
No. of Culverts:	
Depth of Fill:	

K. IMPROVEMENT COSTS

Total Construction/Rehab	0
Total Inspection	0
TOTAL	0
86405 share @100%	0

INSPECTION NOTES

Culvert No.: 208

Culvert No. 208, McCarthy Street, Entrance to House 405, 0.2 km North of Sweezy Street, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit.
- Culvert is a structure parallel to the roadway and services a private residence.
- 1.5 m+/- single span corrugated steel round pipe culvert with approximately 0.3 m of gravel fill. Fill cover requirements should be confirmed
- Gravel entranceway is in good condition.
- Vegetative roadway embankments are in good condition.
- Corrugated steel pipe culvert is in good condition with minor deformations noted at ends and light corrosion observed at waterline.
- Watercourse is unobstructed with no evidence of scour. It is our understanding that the ditch floods frequently. Low volume, low flow, North to South.
- No serious evidence of structural distress.

L. HISTORY/ GENERAL

Culvert No.: 208

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 208



Photo 1 Structure from East approach



Photo 2 Structure from West approach



Photo 3 East approach from the center of structure



Photo 4 West approach from the center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Interior of culvert barrel



Photo 8 Light corrosion noted at waterline

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	McCarthy Street, Trout Creek, House 411 Entrance	Culvert No.:	209
Road Name:	McCarthy Street	Road Section No.:	
Location:	0.3 km N of Sweezy Street	MTO Site No.:	044-0000-
Roadside Env.:	S	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626507	Federal Nav. Waterway:	Unknown
Bylaw Exp. Date:	Northing: 5094275	Culvert Value:	\$ 166,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	1970	Cell/Span Width/Dia.:	1.5 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	1.5 m	Upstream:	H R
Material/ Type:	CST - PR	Max Height:	1.5 m	Downstrea	H R
Crossing Skew:	P-90 °	Length:	6.0 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.3 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	LR	Platform Width:	5.4 m	Safety Curb/	(A) N / N 0.3	m
Operational Status:	2W - OAT	Surface Width:	4.4 m	Sidewalk and Curb	(B) N / S 0.3	m
Surface Type:	G/S	No. of Lanes:	2.0	Roadside Safety:	(A) N NO	
					(B) S NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		
Surface Width:	m	Sidewalk and Curb	/		

E. TRAFFIC DATA

Legal Speed Limit:	60	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	5	AADT:	5
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	%	Trucks:	%
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 209 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	5

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Batrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	6	6	ADEQ	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	ADEQ	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	5.4	5.4	ADEQ	Road Class: LR
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	1.8	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
Const	cREC	Remove existing culvert	-	-	-	-	-
Const	cRSL	Replace culvert, same location	-	-	-	-	-
			Const	Subtotal:	-	-	-
Const Extra	ccAPP	Approaches	-	-	-	-	-
Const Extra	ccENV	Environmental Study	-	-	-	-	-
Const Extra	ccMOB	Mobilization	-	-	-	-	-
			Rehab Extra	Subtotal:	-	-	-
					-	-	-

I. ENGINEERING RECOMMENDATIONS			
Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	RLLU
Design Platform Width:	5.4
Material/Type:	CSP - PR
Width/Diameter:	1.5
Maximum Height:	1.5
Culvert Length:	6.0
No. of Culverts:	1
Depth of Fill:	0.3

K. IMPROVEMENT COSTS		
Total Construction/Rehab		-
Total Inspection		-
TOTAL		
86405	share @100%	-

INSPECTION NOTES

Culvert No.: 209

Culvert No. 209, McCarthy Street, Entrance to House 411, 0.3 km North of Sweezey Street, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit.
- Culvert is a structure parallel to the roadway and services a private residence.
- 1.5 m+/- single span corrugated steel round pipe culvert with approximately 0.3 m of gravel fill and a gravel wearing surface, fill requirements to be confirmed.
- No traffic protection is provided over the structure or on the approaches.
- Gravel wearing surface is in good condition.
- Corrugated steel pipe culvert is in generally good condition with light corrosion below the waterline.
- Vegetative roadway embankments are in good condition.
- Watercourse is unobstructed with no evidence of scour. It is our understanding that the ditch floods frequently. Low volume, low flow, North to South.
- No serious evidence of structural distress.

L. HISTORY/ GENERAL

Culvert No.: 209



Photo 1 Structure from East approach



Photo 2 Structure from West approach



Photo 3 East approach from the center of structure



Photo 4 West approach from the center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Typical view of interior barrel



Photo 8 Light corrosion noted at waterline

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	McCarthy Street, Trout Creek, House 419 Entrance	Culvert No.:	210
Road Name:	McCarthy Street	Road Section No.:	
Location:	0.35 km N of Sweezy Street	MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626366	Federal Nav. Waterway:	Unknown
Bylaw Exp. Date:	Northing: 5094106	Culvert Value:	\$ 204,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	1970	Cell/Span Width/Dia.:	1.2 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	3.0 m	Upstream:	N
Material/ Type:	CST - PR	Max Height:	1.2 m	Downstrea	N
Crossing Skew:	P-90 °	Length:	7.8 m	Soil Condition:	U
No of Cells/Spans:	2	Type/Depth of Fill: E	0.3 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		
--- ROAD OVER CULVERT ---					
Existing Road Class:	LR	Platform Width:	4.5 m	Safety Curb/	(A) N / N 0.0 m
Operational Status:	2W - OAT	Surface Width:	3.5 m	Sidewalk and Curb	(B) N / S 0.0 m
Surface Type:	G/S	No. of Lanes:	1.0	Roadside Safety:	(A) N NO (B) S NO
--- ROAD THROUGH CULVERT ---					
Existing Road Class:		No. of Lanes:	0	Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	10	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	5	AADT:	5
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	%	Trucks:	%
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 210 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	5

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	6	6	ADEQ	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	ADEQ	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	4.5	4.5	ADEQ	Road Class: LR, Safety Curb: 0
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	1.5	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Cont	Total
			-	-	-	-	-
			-	-	-	-	-
			Const Subtotal:		-	-	-
			-	-	-	-	-
			-	-	-	-	-
			Rehab Extra Subtotal:		-	-	-

I. ENGINEERING RECOMMENDATIONS			
Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	RLLU
Design Platform Width:	4.5
Material/Type:	CSP - PR
Width/Diameter:	1.2
Maximum Height:	1.2
Culvert Length:	8.0
No. of Culverts:	1
Depth of Fill:	0.3

K. IMPROVEMENT COSTS	
Total Construction/Rehab	-
Total Inspection	-
TOTAL	-
86405 share @100%	-

INSPECTION NOTES

Culvert No.: 210

Culvert No. 210, McCarthy Street, Entrance to House 419, 0.325 km North of Sweezey Street, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit.
- Culvert is a structure parallel to the roadway and services a private residence.
- 1.5 m +/- corrugated steel pipe culvert with 0.3 m +/- of fill, minimum fill requirements to be confirmed.
- No traffic protection is provided over the structure or on the approaches.
- Gravel wearing surface is in good condition.
- Roadway embankments are in good condition.
- Corrugated steel pipe culvert is in generally good condition with light corrosion at and below the waterline.
- Watercourse is unobstructed with no evidence of scour. It is our understanding that the ditch floods frequently. Low volume, low flow, North to South.

L. HISTORY/ GENERAL

Culvert No.: 210

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 210



Photo 1 Structure from East approach



Photo 2 Structure from West approach

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 210



Photo 3 East approach from the center of structure

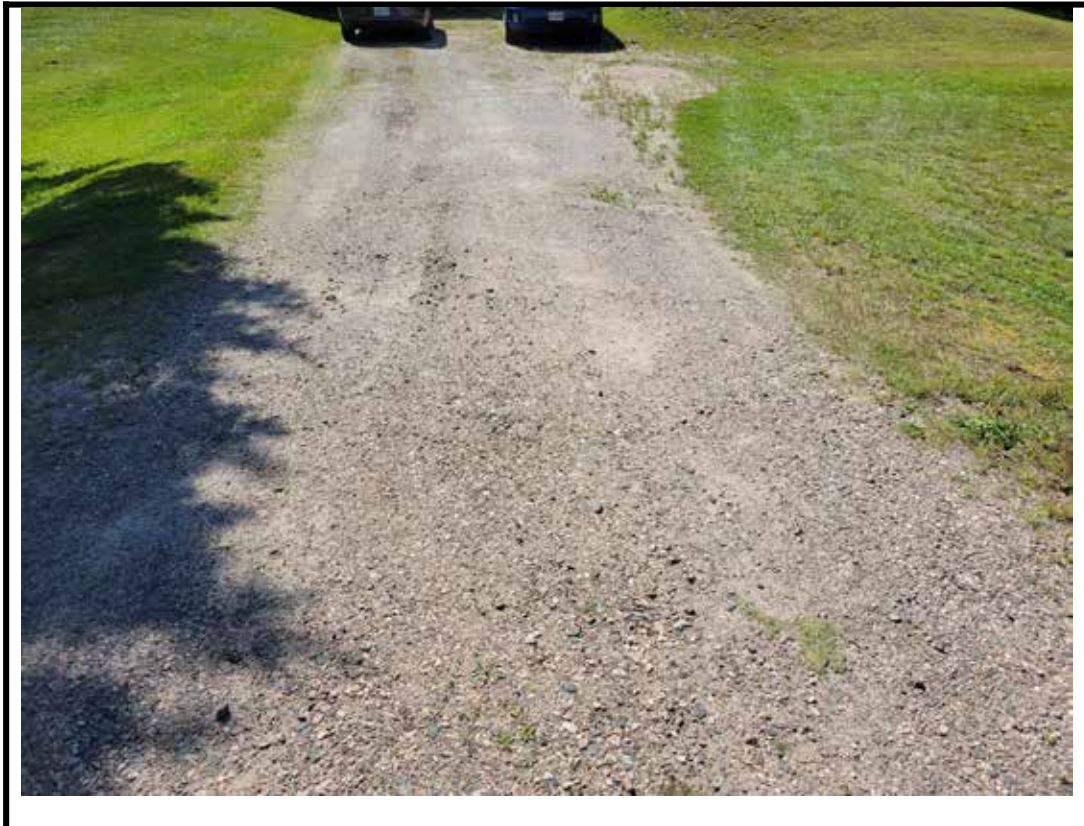


Photo 4 West approach from the center of structure



Photo 5 North elevation

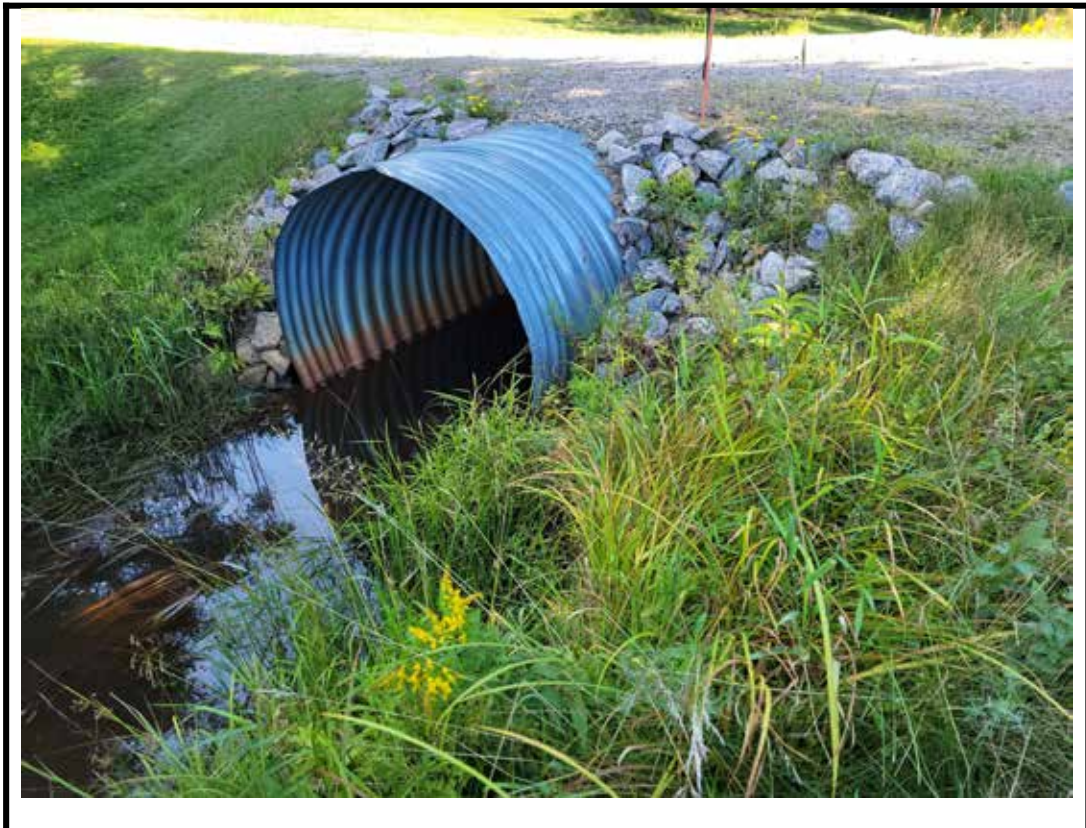


Photo 6 South elevation



Photo 7 Light to severe corrosion noted along waterline



Photo 8 Typical view of culvert barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	McCarthy Street, Trout Creek, Field Entrance	Culvert No.:	211
Road Name:	McCarthy Street	Road Section No.:	
Location:	0.6 km N of Sweezy Street	MTO Site No.:	044-0000-
Roadside Env.:	S	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626378	Federal Nav. Waterway:	Unknown
Bylaw Exp. Date:	Northing: 5094576	Culvert Value:	\$ 216,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	-	Cell/Span Width/Dia.:	1.0 m	End Treatment:	A B C D
Year Extended:		Total Width/Dia.:	2.4 m	Upstream:	N
Material/ Type:	PST - PR	Max Height:	1.0 m	Downstrea	N
Crossing Skew:	P-90 °	Length:	8.4 m	Soil Condition:	U
No of Cells/Spans:	2	Type/Depth of Fill: E	0.4 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	LR	Platform Width:	6.6 m	Safety Curb/	(A) N / N 0.0	m
Operational Status:	2W - OAT	Surface Width:	5.0 m	Sidewalk and Curb	(B) N / S 0.0	m
Surface Type:	G/S	No. of Lanes:	2.0	Roadside Safety:	(A) N NO	
					(B) S NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	50	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AAADT:	5	AAADT:	5
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	%	Trucks:	%
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 211 Asset Master		10 year Growth Factor:	1.00	20 Year AADT:	5

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Batrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	4	6	ADEQ	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	ADEQ	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	6.6	6.5	ADEQ	Road Class: LR
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	1.4	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Cont	Total
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There are no identified improvements in this inspection.

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

J. DESIGN PARAMETERS

Design Class:	
Design Platform Width:	
Material/Type:	0 -
Width/Diameter:	
Maximum Height:	
Culvert Length:	
No. of Culverts:	
Depth of Fill:	

K. IMPROVEMENT COSTS

Total Construction/Rehab	0
Total Inspection	0
TOTAL	0
86405 share @100%	0

INSPECTION NOTES

Culvert No.: 211

Culvert No. 211, McCarthy Street, Field Entrance, 0.6 km North of Swezey Street, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit.
- Culvert is a structure parallel to the roadway and services a private residence.
- Twin (1.0 m+)- each) corrugated steel pipe culverts.
- No traffic protection is provided over the structure or on the approaches.
- Gravel entranceway is in good condition.
- Embankments are in good condition.
- Light to moderate corrosion noted at top of pipes throughout, suspect pipes have been rotated 180° or have been used previously. Limited inspection due to size of culverts.
- Watercourse is unobstructed with no evidence of scour. It is our understanding that the ditch floods frequently. low flow, North to South.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- The year of the replacement is unknown at this time.

L. HISTORY/ GENERAL

Culvert No.: 211

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 211



Photo 1 Structure from East approach



Photo 2 Structure from West approach



Photo 3 East approach from the center of structure



Photo 4 West approach from the center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Damage at north end of west culvert barrel



Photo 8 Interior of west culvert barrel



Photo 9 Interior of east culvert barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Hemlock Road, Lot 25/26, Cone VII			Culvert No.:	213
Road Name:	Hemlock Road			Road Section No.:	
Location:	1 km S of Tower Line			MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t	Crossing Type:	O-WAT, Over Water
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:	Federal Nav. Waterway:	No
Bylaw No.:		Easting:	17 624573	Culvert Value:	\$ 225,000
Bylaw Exp. Date:		Northing:	5098338	Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	2000	Cell/Span Width/Dia.:	1.8 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	1.8 m	Upstream:	N
Material/ Type:	CST - PR	Max Height:	1.8 m	Downstrea	N
Crossing Skew:	-00 °	Length:	16.4 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.6 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	200	Platform Width:	9.0 m	Safety Curb/	(A) N / E 0.0	m
Operational Status:	2W - OAT	Surface Width:	8.0 m	Sidewalk and Curb	(B) N / W 0.0	m
Surface Type:	G/S	No. of Lanes:	2.0	Roadside Safety:	(A) E NO	
					(B) W NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AAADT:	60	AAADT:	66
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	2.00 %	Trucks:	2.0 %
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 213 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	72

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	2	5	6-10	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	9	6.5	ADEQ	Proj Class: 100, 66 (10 YR, 60*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	2.4	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
		Install code compliant approach guiderail	1-5	0	48,000	16,000	64,000
		Replace Structure	6-10		231,000	(included)	231,000
		Maintenance	Subtotal:		279,000	16,000	295,000

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:
 Estimated Posting: t
 Evaluated Posting: t t t
 Closure Date/Type:
 Closure Type:
 Monitoring:
 Monitoring Component:

J. DESIGN PARAMETERS

Design Class:
 Design Platform Width:
 Material/Type: 0 -
 Width/Diameter:
 Maximum Height:
 Culvert Length:
 No. of Culverts:
 Depth of Fill:

K. IMPROVEMENT COSTS

Total Construction/Rehab	295,000
Total Inspection	0
TOTAL	295,000
86405 share @100%	295,000

INSPECTION NOTES

Culvert No.: 213

Culvert No. 213, Hemlock Road, Lot 25/26, Concession VII, 1.0 km South of Tower Line, Municipality of Powassan:

- Structure is not posted with a load limit.
- 1.8 m+/- single span corrugated steel round pipe culvert with approximately 0.6 m of gravel fill and a gravel wearing surface.
- No traffic protection is provided over the structure or on the approaches. Recommended to install a code compliant approach barrier.
- Gravel roadway is in good condition.
- Roadway embankments are in good condition, with minor erosion noted at all corners.
- Corrugated steel pipe culvert is in fair to localized poor condition with light to moderate corrosion at bottom of barrel with perforations and minor deformation noted at the east end of the culvert. Minor undermining noted at inlet.
- Watercourse is unobstructed with no evidence of scour. moderate volume, low flow, West to East.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Perforation noted at inlet of barrel on west side.
- Structure should be planned for replacement in the 6-10 year horizon.

L. HISTORY/ GENERAL

Culvert No.: 213

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 213



Photo 1 Structure from north approach

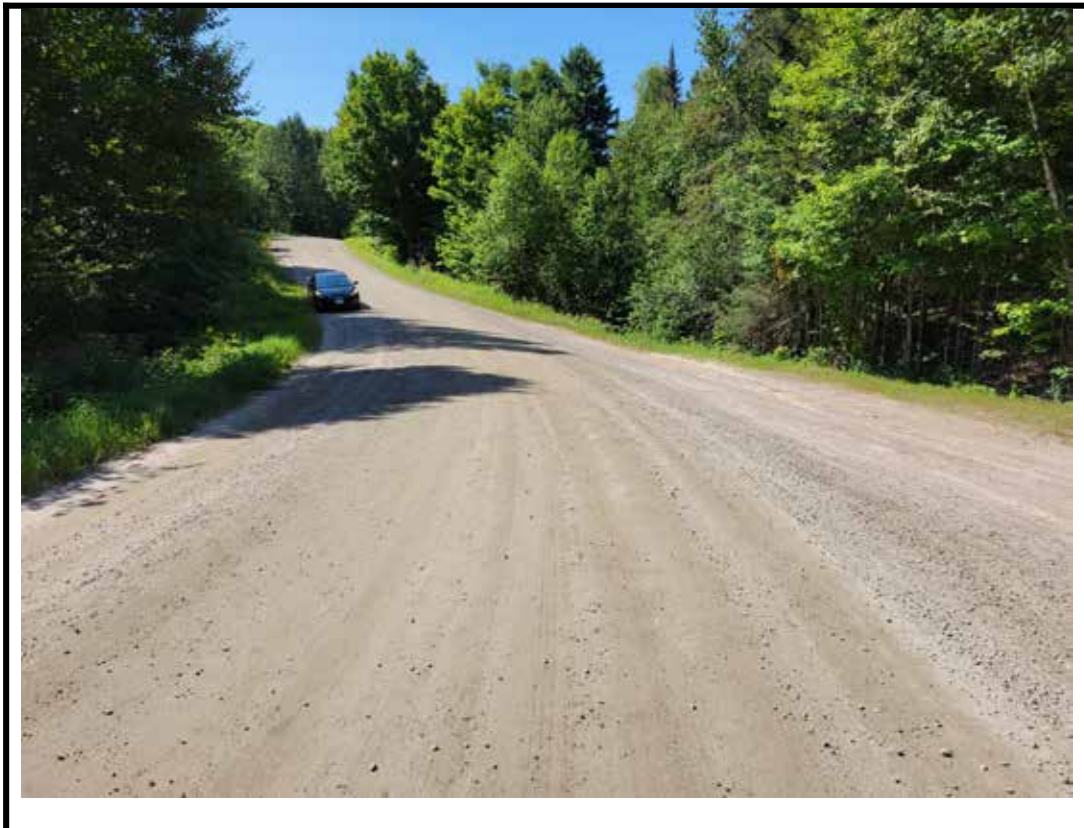


Photo 2 Structure from south approach

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 213



Photo 3 North approach from center of structure

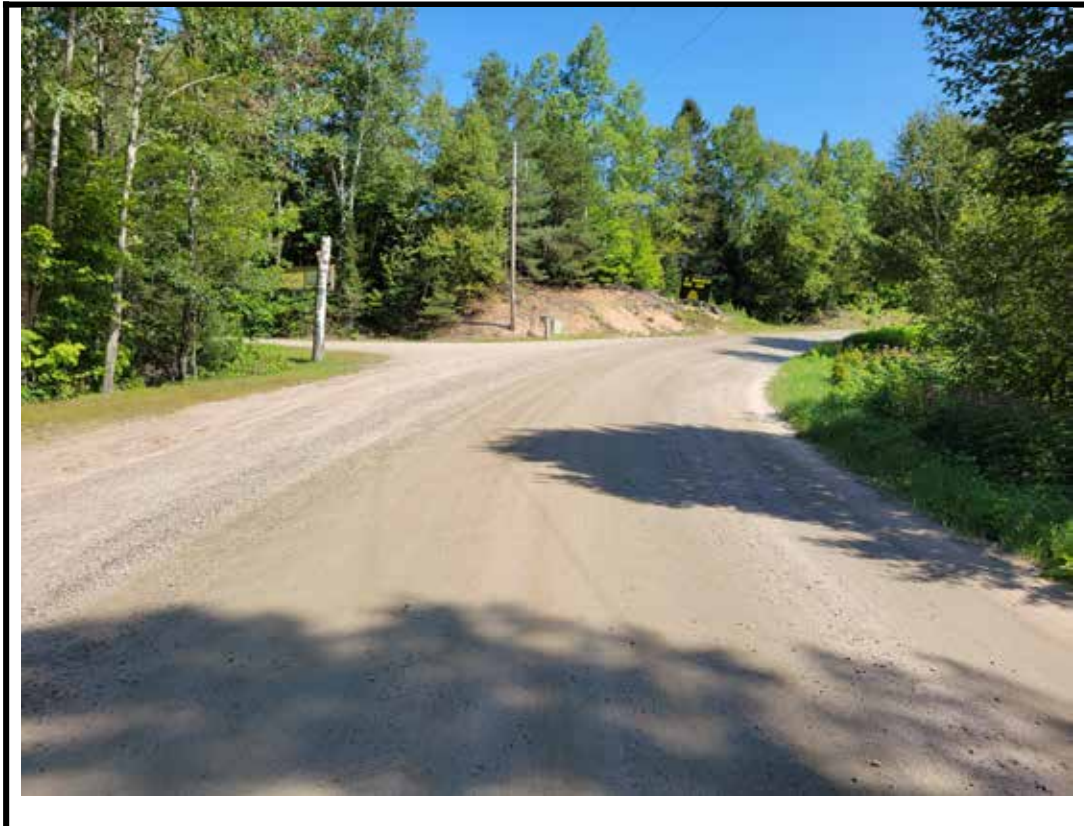


Photo 4 South approach from center of structure



Photo 5 East elevation



Photo 6 West elevation



Photo 7 Moderate to severe corrosion and perforations noted at bottom of barrel, west end



Photo 8 Light to moderate corrosion below the high water line throughout barrel

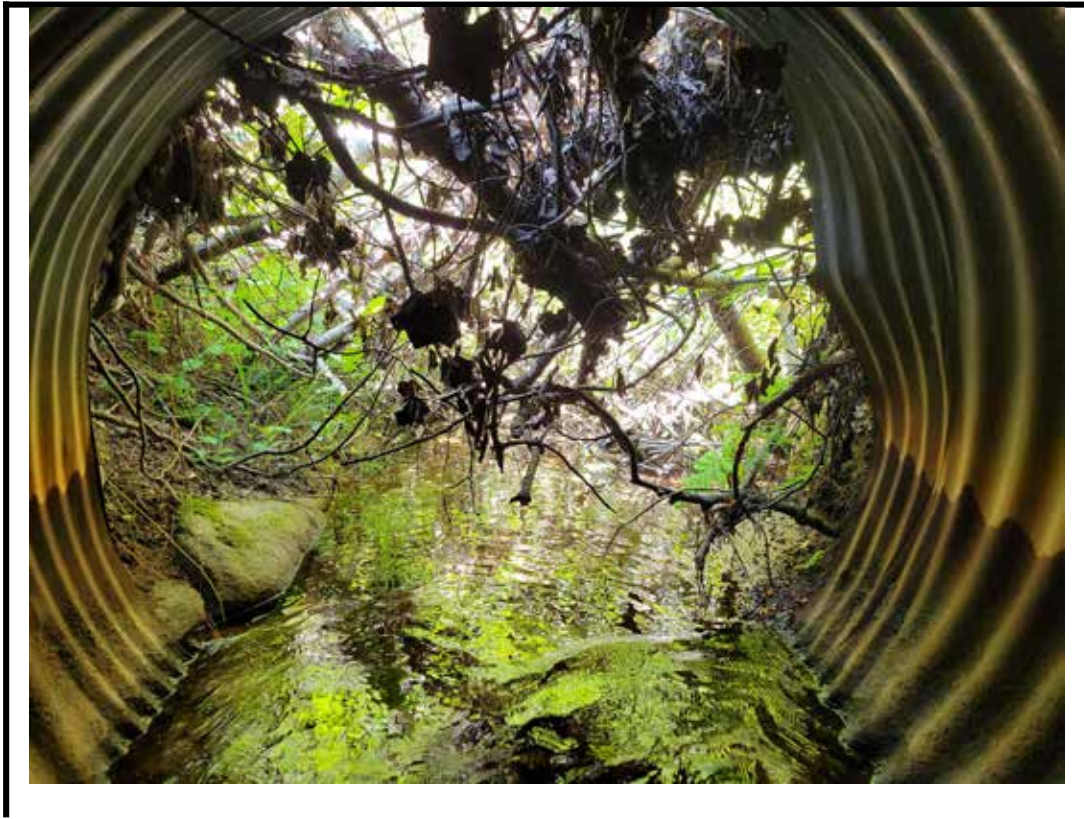


Photo 9 Deformation of east end of barrel



Photo 10 Accumulation of branches on the top of the east end of the barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Hemlock Road, Lot 27, Cone VII/IX			Culvert No.:	214
Road Name:	Hemlock Road			Road Section No.:	
Location:	0.02 km W of Tower Line			MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t	Crossing Type:	O-WAT, Over Water
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:	Federal Nav. Waterway:	Unknown
Bylaw No.:		Easting:	17 623750	Culvert Value:	\$ 218,000
Bylaw Exp. Date:		Northing:	5098871	Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	2002	Cell/Span Width/Dia.:	1.2 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	1.2 m	Upstream:	N
Material/ Type:	CST - PR	Max Height:	1.2 m	Downstrea	N
Crossing Skew:	-00 °	Length:	16.5 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	1.5 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	200	Platform Width:	7.5 m	Safety Curb/	(A) N / N 0.0	m
Operational Status:	2W - OAT	Surface Width:	6.0 m	Sidewalk and Curb	(B) N / S 0.0	m
Surface Type:	G/S	No. of Lanes:	2.0	Roadside Safety:	(A) N NO	
					(B) S NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		
Surface Width:	m	Sidewalk and Curb	/		

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AAADT:	100	AAADT:	110
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	2.00 %	Trucks:	2.0 %
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 214 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	121

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Batrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	5	5	6-10	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	7.5	6.5	ADEQ	Proj Class: 100, 110 (10 YR, 100*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	2.7	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
Maintenance	OTHm	Install code compliant approach guiderail	1-5	0	48,000	16,000	64,000
Maintenance Subtotal:					48,000	16,000	64,000

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:
 Estimated Posting: t
 Evaluated Posting: t t t
 Closure Date/Type:
 Closure Type:
 Monitoring:
 Monitoring Component:

J. DESIGN PARAMETERS

Design Class:
 Design Platform Width:
 Material/Type: 0 -
 Width/Diameter:
 Maximum Height:
 Culvert Length:
 No. of Culverts:
 Depth of Fill:

K. IMPROVEMENT COSTS

Total Construction/Rehab	64,000
Total Inspection	0
TOTAL	64,000
86405 share @100%	64,000

INSPECTION NOTES

Culvert No.: 214

Culvert No. 214, Hemlock Road, Lot 27, Cone VIII/IX, 0.02 km West of Tower Line, Municipality of Powassan:

- Structure is not posted with a load limit.
- 1.2 m+/- single span corrugated steel pipe culvert with approximately 1.5 m of gravel fill and a gravel roadway.
- No traffic protection has been provided over the structure or on the approaches. It is recommended that a code compliant approach guiderail be installed at the structure.
- Gravel roadway is in good condition. Loose gravel at edges of roadway
- Vegetative embankments are in good condition with minor erosion of the northwest and northeast quadrant. Embankments are steeply sloped and well vegetated.
- Corrugated steel pipe culvert is in generally good condition with light corrosion at bottom of barrel. Undermining 200 mm+/- noted at inlet. Deformations due to fill noted at outlet.
- Watercourse is unobstructed with no evidence of scour. No water at time of inspection. Previous notes of Low volume, low flow, South to North.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.

L. HISTORY/ GENERAL

Culvert No.: 214

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 214



Photo 1 Structure from east approach



Photo 2 Structure from west approach



Photo 3 East approach from center of structure



Photo 4 West approach from center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Small spalls on approach wearing surface



Photo 8 Light to moderate corrosion throughout bottom of barrel



Photo 9 Localized severe corrosion with perforations in bottom of barrel



Photo 10 Deformation of north end of barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Purdon Line, Lot 21, Cone X/XI	Culvert No.:	215
Road Name:	Purdon Line	Road Section No.:	
Location:	0.01 km W of Maple Hill Road	MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 625331	Federal Nav. Waterway:	Unknown
Bylaw Exp. Date:	Northing: 5101833	Culvert Value:	\$ 536,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Year Constructed:	1970	Cell/Span Width/Dia.:	6.0 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	6.0 m	Upstream:	C
Material/ Type:	CST - PHE	Max Height:	3.1 m	Downstrea	C
Crossing Skew:	-00 °	Length:	24.9 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.7 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	200	Platform Width:	9.0 m	Safety Curb/	(A) N / N 0.0	m
Operational Status:	2W - OAT	Surface Width:	7.0 m	Sidewalk and Curb	(B) N / S 0.0	m
Surface Type:	HCB	No. of Lanes:	2.0	Roadside Safety:	(A) N NO	
					(B) S NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	60	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	55	AADT:	60
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	2.00 %	Trucks:	2.0 %
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 215 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	66

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P. Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	4	5	6-10	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	ADEQ	
Inlet Component	5	5	6-10	
Outlet Component	5	5	6-10	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	9	6.5	ADEQ	Proj Class: 200, 60 (10 YR, 55*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	3.8	3	ADEQ	Rdside Safety: 0

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
Rehab	clAG	Install Approach Guiderails	NOW	0	48,000	16,000	64,000
Rehab Subtotal:					48,000	16,000	64,000

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:
 Estimated Posting: t
 Evaluated Posting: t t t
 Closure Date/Type:
 Closure Type:
 Monitoring:
 Monitoring Component:

J. DESIGN PARAMETERS

Design Class:
 Design Platform Width:
 Material/Type: 0 -
 Width/Diameter:
 Maximum Height:
 Culvert Length:
 No. of Culverts:
 Depth of Fill:

K. IMPROVEMENT COSTS

Total Construction/Rehab	64,000
Total Inspection	0
TOTAL	64,000
86405 share @100%	64,000

INSPECTION NOTES

Culvert No.: 215

Culvert No. 215, Purdon Line, Lot 21, Concession X/XI, 0.01 km West of Maple Hill Road, Municipality of Powassan:

- Structure is not posted with a load limit.
- 6.0 m± single span corrugated plate steel horizontal elliptical pipe culvert with approximately 0.7 m of gravel fill and a gravel wearing surface.
- No traffic protection has been provided over the structure or on the approaches. It is recommended that a code compliant guiderail be installed at the structure.
- Gravel wearing surface is in good condition.
- Vegetative roadway embankments are in generally good condition with minor erosion of the northeast embankment.
- Corrugated plate steel horizontal elliptical pipe culvert is in generally good condition with light corrosion noted at the invert and localized moderate corrosion. Could not confirm the localized joint leaking, mentioned on previous inspection report. Areas of repair were noted throughout the culvert.
- Steel sheet pile cut-off walls are in generally good condition with outward rotation noted at all quadrants.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Should install guide rail over the structure and on the approaches.
- Should secure cutoff wall as part of regular structure maintenance.
- Perforation noted at outlet on north side of barrel. Dam noted at inlet on south side of barrel.
- Moderate corrosion observed at and below waterline (4 m2, poor).
- Barrel appears to have lifted at outlet, recommend monitoring for continuing settlements or movements.

L. HISTORY/ GENERAL

Culvert No.: 215

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 215

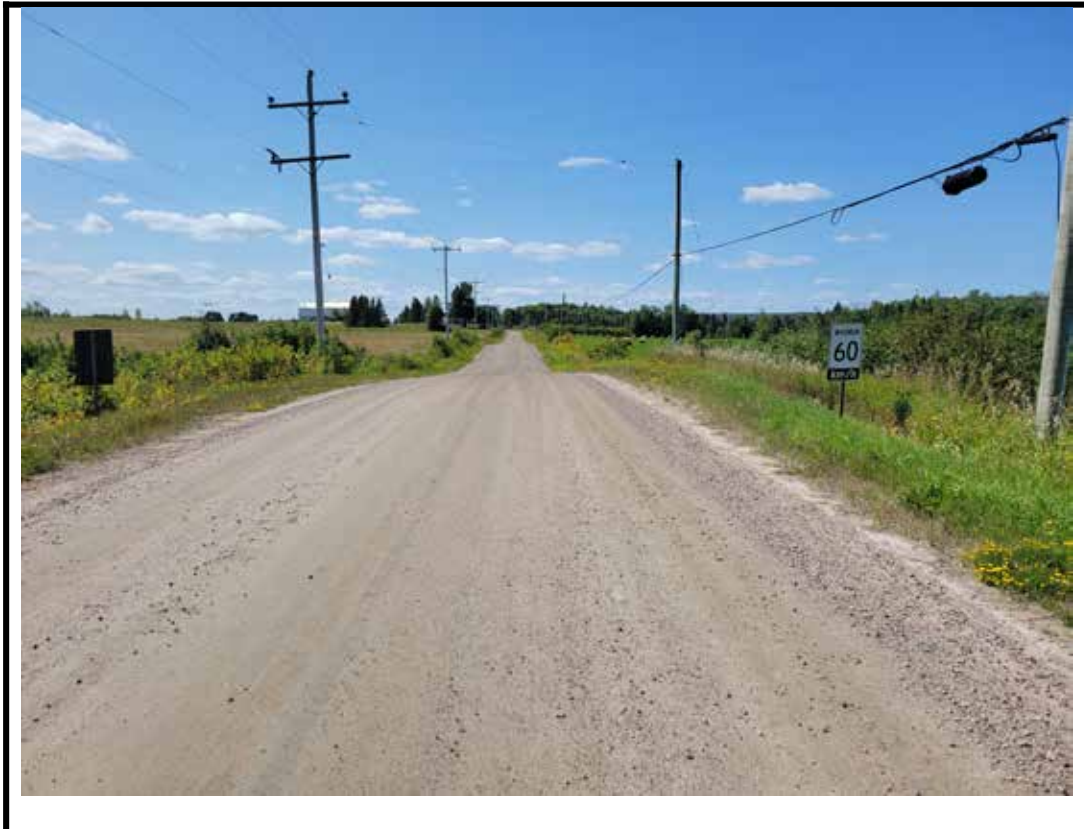


Photo 1 Structure from east approach

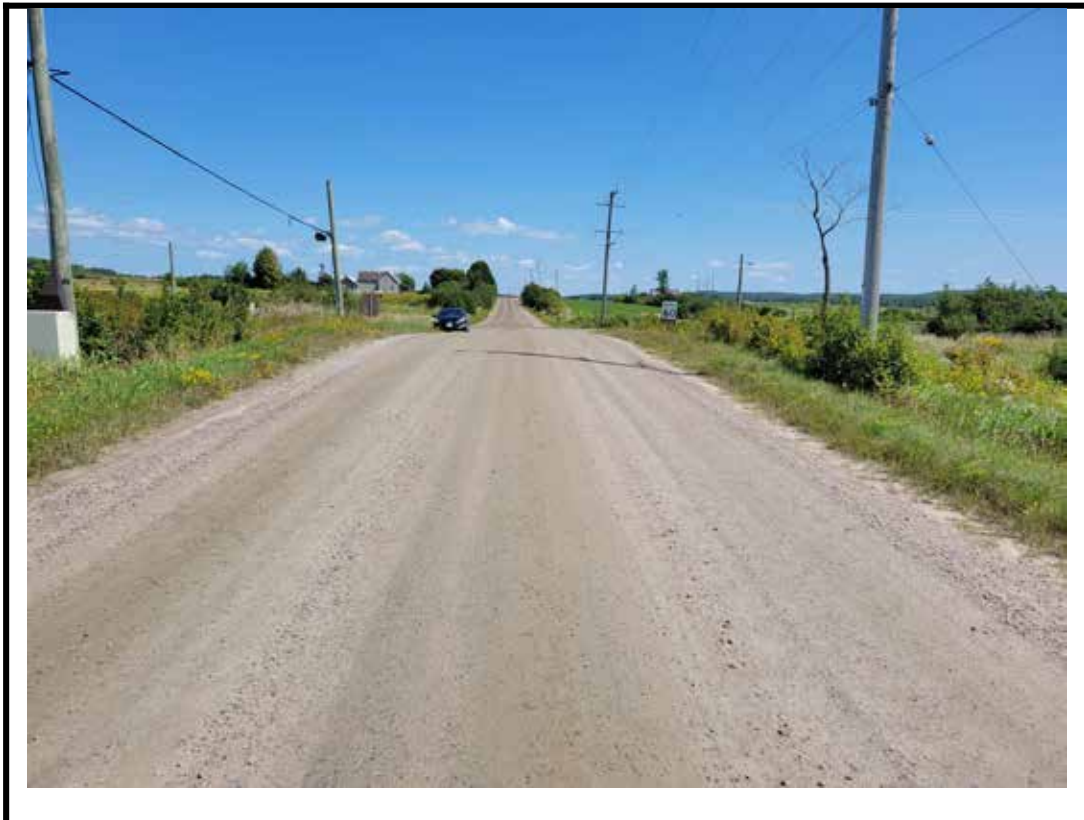


Photo 2 Structure from west approach



Photo 3 East approach from center of structure



Photo 4 West approach from center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 General condition of barrel looking north



Photo 8 Light to localized moderate corrosion below the high water line

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Maple Hill Road, Lot 20/21, Cone XIV			Culvert No.:	216
Road Name:	Maple Hill Road			Road Section No.:	
Location:	1.25 km N of Highway 534			MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t	Crossing Type:	O-WAT, Over Water
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:	Federal Nav. Waterway:	Unknown
Bylaw No.:		Easting:	17 624094	Culvert Value:	\$ 196,000
Bylaw Exp. Date:		Northing:	5104875	Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	1990	Cell/Span Width/Dia.:	1.2 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	1.2 m	Upstream:	N
Material/ Type:	CST - PR	Max Height:	1.1 m	Downstrea	N
Crossing Skew:	R-5 °	Length:	14.7 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.7 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	200	Platform Width:	8.7 m	Safety Curb/	(A) N / N 0.0	m
Operational Status:	2W - OAT	Surface Width:	6.0 m	Sidewalk and Curb	(B) N / W 0.0	m
Surface Type:	G/S	No. of Lanes:	2.0	Roadside Safety:	(A) E NO	
					(B) W NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	130	AADT:	143
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	2.00 %	Trucks:	2.0 %
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 216 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	157

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	4	5	6-10	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	5	6	6-10	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	8.7	6.5	ADEQ	Proj Class: 200, 143 (10 YR, 130*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	1.8	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Cont	Total
Maintenance	OTHm	Install new guiderail	1-5	0	48,000	16,000	64,000
Maintenance Subtotal:					48,000	16,000	64,000

I. ENGINEERING RECOMMENDATIONS			
Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	
Design Platform Width:	
Material/Type:	0 -
Width/Diameter:	
Maximum Height:	
Culvert Length:	
No. of Culverts:	
Depth of Fill:	

K. IMPROVEMENT COSTS		
Total Construction/Rehab		64,000
Total Inspection		0
TOTAL		64,000
86405	share @100%	64,000

INSPECTION NOTES

Culvert No.: 216

Culvert No. 216, Maple Hill Road, Lot 20/21, Concession XIV, 1.25 km North of Highway 534, Municipality of Powassan:

- Structure is not posted with a load limit.
- 2.0 m+/- single span corrugated steel pipe culvert with +/-0.3 m of gravel fill and a gravel wearing surface.
- No traffic protection is provided over the structure or on the approaches. Code compliant approach guiderail should be installed at the structure.
- Gravel roadway is in good condition. Fill over structure appears low. Adequacy of fill cover requirements for barrel should be verified by the Designer. Low fill cover may result in load carrying capacity concerns.
- Vegetative roadway embankments are in good condition with moderate slopes and heavy vegetation.
- Corrugated steel pipe culvert is in generally good condition.
- Watercourse is obstructed with overgrowth of embankments encroaching into the stream at the west end of the barrel. Low volume and low flow, West to East.
- No serious evidence of structural distress.
- Perforation noted at both sides of east end of barrel (3 m², poor).
- Rock protection at ends generally in good condition.

L. HISTORY/ GENERAL

Culvert No.: 216

MUNICIPAL STRUCTURE INSPECTION FORM

BRIDGE OR CULVERT

SITE PHOTOGRAPHS

Site No.: 216



Photo 1 Structure from north approach



Photo 2 Structure from south approach



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure



Photo 5 East elevation



Photo 6 West elevation



Photo 7 Loose gravel on wearing surface

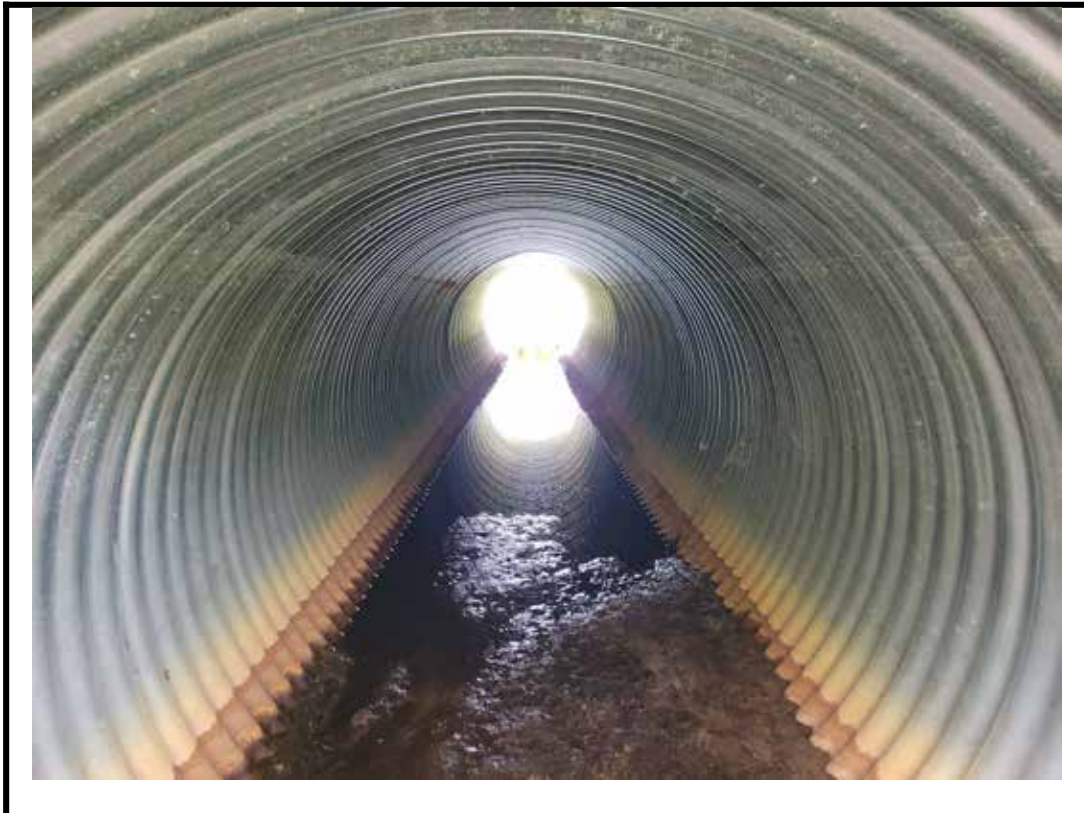


Photo 8 Interior of culvert barrel



Photo 9 Light corrosion on culvert barrel at waterline



Photo 10 Vegetation encroaching into barrel at west end

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	O'Conner Line, Lot 4, Cone IVN			Culvert No.:	217
Road Name:	O'Conner Line			Road Section No.:	
Location:	0.4 km E of Genesee Lake Road			MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t	Crossing Type:	O-WAT, Over Water
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:	Federal Nav. Waterway:	Unknown
Bylaw No.:		Easting:	17 633751	Culvert Value:	\$ 208,000
Bylaw Exp. Date:		Northing:	5098843	Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	1970	Cell/Span Width/Dia.:	2.1 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	2.1 m	Upstream:	N
Material/ Type:	CST - PR	Max Height:	2.1 m	Downstrea	N
Crossing Skew:	L-5 °	Length:	12.0 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.3 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	200	Platform Width:	8.7 m	Safety Curb/	(A) N / N 0.0	m
Operational Status:	2W - OAT	Surface Width:	6.0 m	Sidewalk and Curb	(B) N / S 0.0	m
Surface Type:	G/S	No. of Lanes:	2.0	Roadside Safety:	(A) N NO	
					(B) S NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		
Surface Width:	m	Sidewalk and Curb	/		

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	30	AADT:	33
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
Source:		Trucks:	2.00 %	Trucks:	2.0 %
Culvert 217 Asset Master		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	36

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	2	3	6-10	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	5	6	6-10	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	7	6	ADEQ	Proj Class: 100, 33 (10 YR, 30*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	2.4	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Cont	Total
Const	cREC	Remove existing culvert	NOW	0	35,000	11,000	46,000
Const	cRSL	Replace culvert, same location	NOW	0	130,000	43,000	173,000
			Const	Subtotal:	165,000	54,000	219,000
Const Extra	ccAPP	Approaches	NOW	0	70,000	21,000	91,000
Const Extra	ccENV	Environmental Study	NOW	0	10,000	0	10,000
Const Extra	ccMOB	Mobilization	NOW	0	18,000	6,000	24,000
Const Extra	ccTCP	Traffic Control/Protection	NOW	0	10,000	4,000	14,000
			Const Extra	Subtotal:	108,000	31,000	139,000
Maintenance	OTHm	Install new guiderail	NOW	0	48,000	14,000	62,000
			Maintenance	Subtotal:	48,000	14,000	62,000

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:

Estimated Posting: t

Evaluated Posting: t t t

Closure Date/Type:

Closure Type:

Monitoring:

Monitoring Component:

J. DESIGN PARAMETERS

Design Class:

Design Platform Width:

Material/Type: 0 -

Width/Diameter:

Maximum Height:

Culvert Length:

No. of Culverts:

Depth of Fill:

K. IMPROVEMENT COSTS

Total Construction/Rehab	420,000
Total Inspection	0
TOTAL	420,000
86405 share @100%	420,000

INSPECTION NOTES

Culvert No.: 217

Culvert No. 217, O'Conner Line, Lot 4, Concession IVN, 0.4 km East of Genesee Lake Road, Municipality of Powassan:

- Structure is not posted with a load limit.
- 2.1 m+/- single span corrugated steel round pipe culvert with approximately 0.3 m of gravel fill and a gravel roadway.
- No traffic protection is provided over the structure or on the approaches. It is recommended that a code compliant guiderail be installed at the structure.
- Gravel roadway is in good condition.
- Vegetative embankments are in fair to poor condition with moderate washout over at inlet and outlet.
- Corrugated steel round pipe culvert is in generally fair to poor condition with light to moderate corrosion observed at and below the high water level. Perforations observed in bottom of the barrel at both ends. Minor deformation noted at the outlet, and large damaged section at inlet, large deformation and sag noted at mid span of barrel.
- Gap noted at the seam location.
- High volume and moderate flow with no evidence of scour, South to North.
- Load carrying capacity concern for barrel
- It is recommended that the structure be replaced
- It is recommended that the structure be temporarily supported and monitored until replacement

L. HISTORY/ GENERAL

Culvert No.: 217

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 217

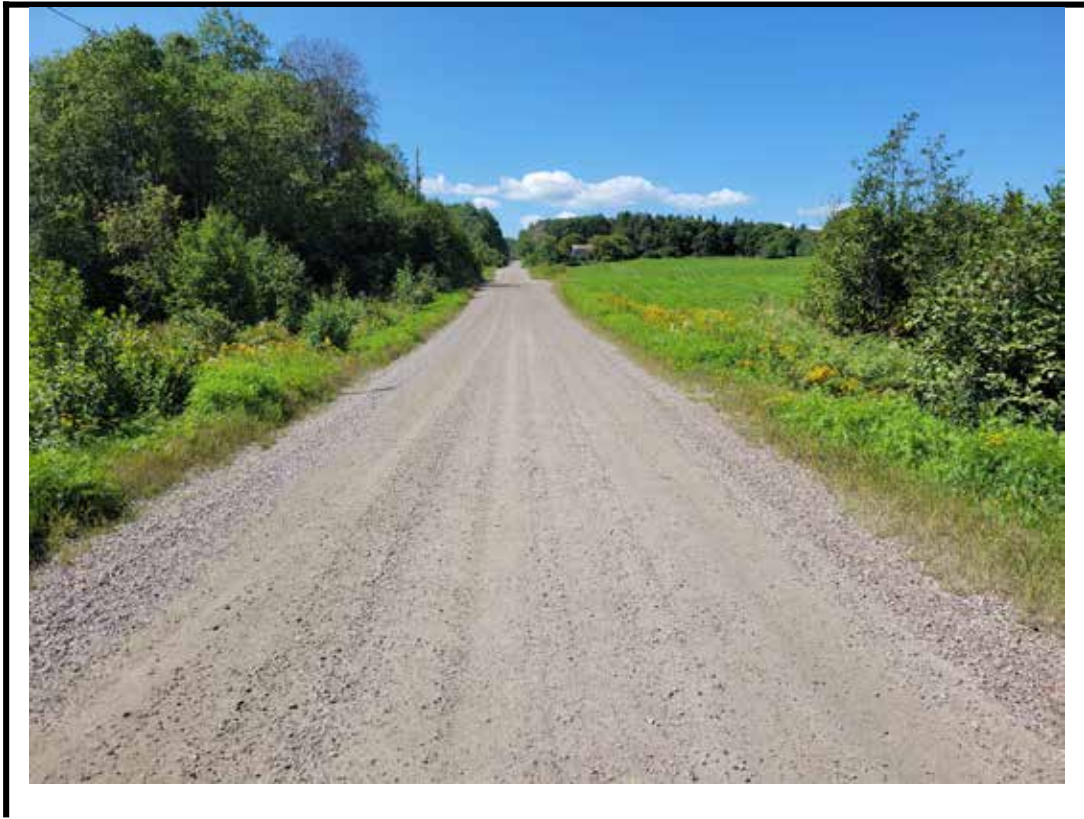


Photo 1 Structure from east approach



Photo 2 Structure from west approach

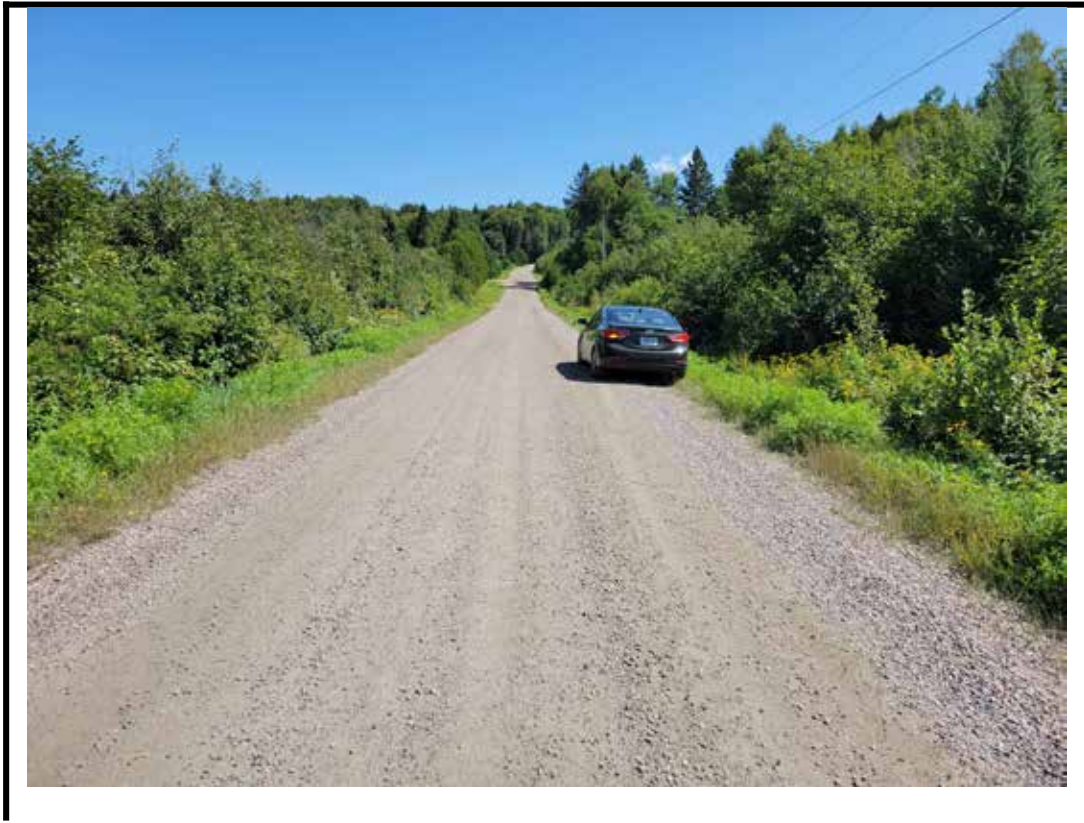


Photo 3 East approach from center of structure



Photo 4 West approach from center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Loose gravel accumulating on edges of roadway



Photo 8 Sag at mid span of culvert barrel



Photo 9 Moderate to severe corrosion of bottom of barrel with perforations at north end



Photo 10 Moderate corrosion below the high water line throughout barrel



Photo 11 Separation of barrel



Photo 12 Deformations of south end of barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Hunt Line, Lot 5, Cone VINII	Culvert No.:	218
Road Name:	Hunt Line	Road Section No.:	
Location:	0.12 km E of Genesee Lake Road	MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 632728	Federal Nav. Waterway:	Unknown
Bylaw Exp. Date:	Northing: 5100562	Culvert Value:	\$ 329,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	1970	Cell/Span Width/Dia.:	3.4 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	3.4 m	Upstream:	C R
Material/ Type:	CPS - PR	Max Height:	3.4 m	Downstrea	C R
Crossing Skew:	-00 °	Length:	18.8 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.7 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	100	Platform Width:	7.4 m	Safety Curb/	(A) N / N 0.0	m
Operational Status:	2W - OAT	Surface Width:	6.0 m	Sidewalk and Curb	(B) N / S 0.0	m
Surface Type:	G/S	No. of Lanes:	2.0	Roadside Safety:	(A) N NO	
					(B) S NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	30	AADT:	33
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	2.00 %	Trucks:	2.2 %
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 218 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	36

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	2	3	NOW	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	ADEQ	
Inlet Component	5	5	6-10	
Outlet Component	5	5	6-10	
Streams/Waterways	5	6	6-10	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	7.4	6	ADEQ	Proj Class: 33 (10 YR, 30*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	4.1	3	ADEQ	Road Class: 0

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Cont	Total
Const	cREC	Remove existing culvert	NOW	0	35,000	11,000	46,000
Const	cRSL	Replace culvert, same location	NOW	0	230,000	76,000	306,000
			Const	Subtotal:	265,000	87,000	352,000
Const Extra	ccAPP	Approaches	NOW	0	70,000	21,000	91,000
Const Extra	ccENV	Environmental Study	NOW	0	10,000	0	10,000
Const Extra	ccMOB	Mobilization	NOW	0	18,000	6,000	24,000
Const Extra	ccTCP	Traffic Control/Protection	NOW	0	10,000	4,000	14,000
			Const Extra	Subtotal:	108,000	31,000	139,000
Maintenance	cOTHm	Maintenance Improvement	NOW	0	0	0	0
			Maintenance	Subtotal:	0	0	0

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

J. DESIGN PARAMETERS

Design Class:	RLLU
Design Platform Width:	7.5
Material/Type:	CSP - PR
Width/Diameter:	3.4
Maximum Height:	3.4
Culvert Length:	20.0
No. of Culverts:	1
Depth of Fill:	0.7

K. IMPROVEMENT COSTS

Total Construction/Rehab	491,000
Total Inspection	0
TOTAL	491,000
86405 share @100%	491,000

INSPECTION NOTES

Culvert No.: 218

Culvert No. 218, Hunt Line, Lot 5, Concession VINII, 0.12 km East of Genesee Lake Road, Municipality of Powassan:

- Structure is not posted with a load limit.
- 3.4 m+/- single span corrugated plate steel round pipe culvert with approximately 0.7 m of earth fill and a gravel roadway.
- No traffic protection has been provided over the structure or on the approaches.
- Gravel roadway is in good condition with some potholes on west approach.
- Vegetated embankments are in good condition moderate erosion at south embankment.
- Electric fence noted along north edge of roadway.
- Limited inspection due to water level. Moderate to severe corrosion and perforations. Additional comments regarding the barrel based on previous inspection report: Corrugated plate steel round pipe culvert is in poor condition with light to severe corrosion and detachment of the west barrel wall for 5m+/- in length. All deformations should be monitored.
- Steel sheet pile retaining walls are in generally poor condition with outward rotation and corrosion.
- Watercourse is unobstructed with no evidence of scour.
- Serious evidence of structural distress. Load carrying capacity concern.
- It is recommended that the culvert be replaced immediately and that a code compliant approach barrier with end treatments be provided at the structure.
- It is recommended that the barrel be temporarily supported and monitored until such time that the culvert can be replaced.

L. HISTORY/ GENERAL

Culvert No.: 218

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 218



Photo 1 Structure from east approach



Photo 2 Structure from west approach

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 218

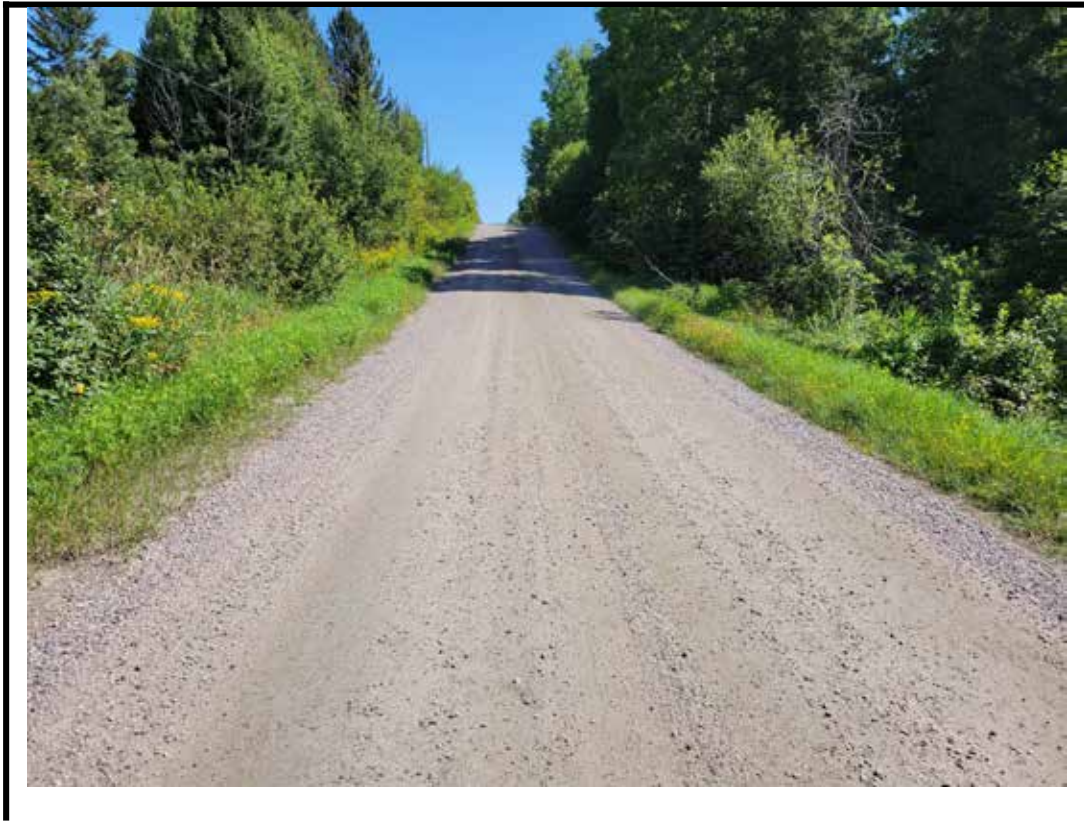


Photo 3 East approach from center of structure



Photo 4 West approach from center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Electric fence present in north shoulder rounding beyond the gravel shoulder



Photo 8 Interior of culvert barrel



Photo 9 Corrosion at high water level



Photo 10 Severe corrosion with perforation and detachment on culvert barrel



Photo 11 Deformation of sheet pile retaining wall

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Genesee Lake Road, Lot 5/6, Cone IX			Culvert No.:	219
Road Name:	Genesee Lake Road			Road Section No.:	
Location:	0.1 km S of Hanselman Line			MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t	Crossing Type:	O-WAT, Over Water
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:	Federal Nav. Waterway:	No
Bylaw No.:		Easting:	17 631412	Culvert Value:	\$ 415,000
Bylaw Exp. Date:		Northing:	5103200	Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	1970	Cell/Span Width/Dia.:	4.0 m	End Treatment:	A B C D
Year Extended:		Total Width/Dia.:	4.0 m	Upstream:	C
Material/ Type:	CPS - PA	Max Height:	3.4 m	Downstrea	C
Crossing Skew:	L-35 °	Length:	25.2 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.3 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	300	Platform Width:	9.0 m	Safety Curb/	(A) N / E 0.0	m
Operational Status:	2W - OAT	Surface Width:	6.0 m	Sidewalk and Curb	(B) N / W 0.0	m
Surface Type:	G/S	No. of Lanes:	2.0	Roadside Safety:	(A) E SC	
					(B) W SC	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	60	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	250	AADT:	275
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	2.00 %	Trucks:	2.0 %
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 219 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	302

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	4	5	1-5	
Foundations	6	6	ADEQ	
Guiderail/Barrier	6	3	1-5	
Inlet Component	5	6	6-10	
Outlet Component	5	6	6-10	
Streams/Waterways	5	6	6-10	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	9	6.5	ADEQ	Proj Class: 300, 275 (10 YR, 250*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	3.7	3	ADEQ	Rdside Safety: 2

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Cont	Total
Replacement	cRSP	Replace Superstructure	1-5	0	415,000	25,000	440,000
			Rehab	Subtotal:		415,000	25,000
					415,000	25,000	440,000

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:

Estimated Posting: t

Evaluated Posting: t t t

Closure Date/Type:

Closure Type:

Monitoring:

Monitoring Component:

J. DESIGN PARAMETERS

Design Class:

Design Platform Width:

Material/Type: 0 -

Width/Diameter:

Maximum Height:

Culvert Length:

No. of Culverts:

Depth of Fill:

K. IMPROVEMENT COSTS

Total Construction/Rehab	440,000
Total Inspection	0
TOTAL	440,000
86405 share @100%	440,000

INSPECTION NOTES

Culvert No.: 219

Culvert No. 219, Genesee Lake Road, Lot 5/6, Concession IX, 0.10 km South of Hanselman Line, Municipality of Powassan:

- Structure is not posted with a load limit.
- 4.0 m+/- single span corrugated plate steel pipe arch culvert with approximately 0.3 m of gravel fill and a gravel wearing surface.
- 3-cable guiderail is in fair condition with loose cables. The cable is end buried in all four quadrants. The guiderail does not meet current requirements. Its recommended that a code compliant approach barrier with end treatments be installed.
- Gravel wearing surface is in good to fair condition with minor bumps and loose gravel throughout.
- Roadway embankments are in good condition.
- Corrugated plate steel pipe arch culvert is in generally fair to poor condition with light corrosion at high water level and localized area of moderate to severe corrosion with perforations noted at the invert. Missing bolts. A deformation was noted in the invert at about the centre of the structure. The north culvert wall has cracks at bolt hole locations at the top of the bottom sharp radius for 1.0 m+/- in length. 70mm+/- distance between cracks (1.0m2 poor).
- Cast-in-place concrete cut off walls are provided at each end of the structure and are in generally good condition with localized light scouring. Localized moderate to severe honeycombing observed.
- Watercourse is unobstructed with no evidence of scour.
- Perforations in barrel may present a load carrying capacity concern of the element.
- Should reinforce culvert at crack locations.
- Steep embankments erosion noted at southeast corner.
- It is recommended that the structure be replacement in 1-5 years

L. HISTORY/ GENERAL

Culvert No.: 219

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 219



Photo 1 Structure from north approach



Photo 2 Structure from south approach



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure



Photo 5 East elevation

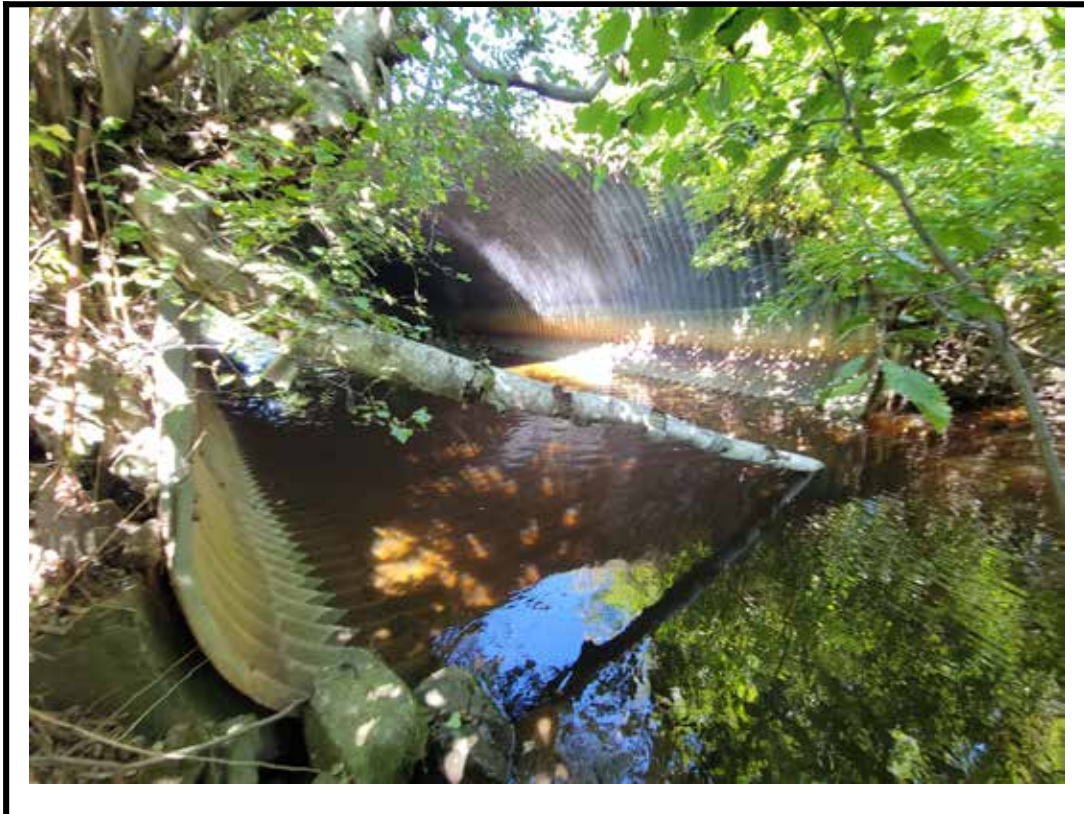


Photo 6 West elevation



Photo 7 Small potholes and loose gravel on wearing surface



Photo 8 Substandard guiderail



Photo 9 Loose guide rail cables

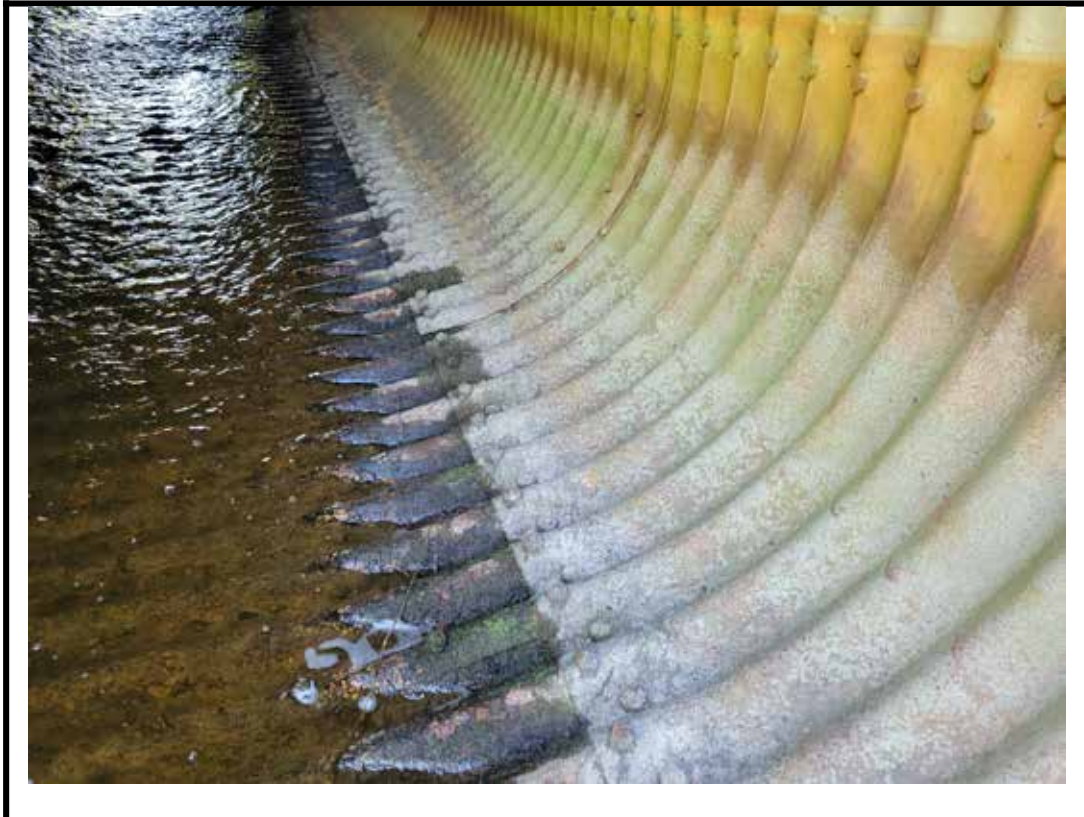


Photo 10 Light to moderate corrosion below the high water line



Photo 11 Interior of culvert barrel



Photo 12 Localized severe corrosion with perforations on bottom of barrel (east end shown)

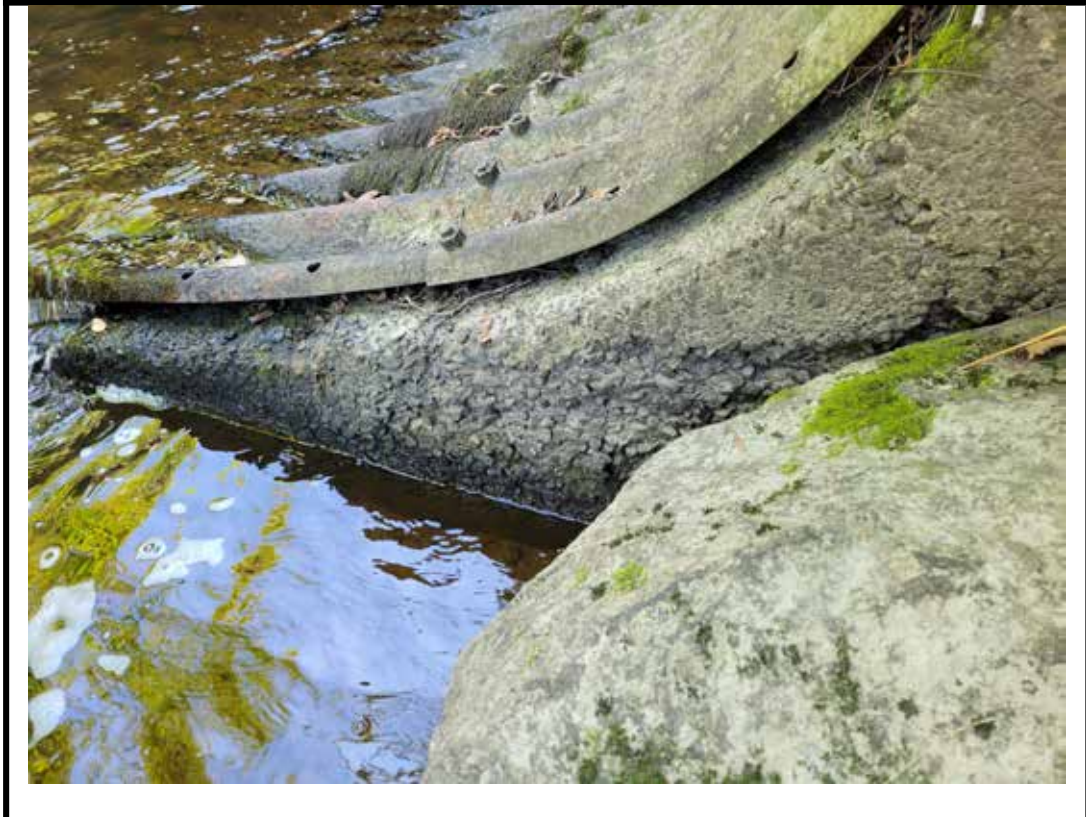


Photo 13 Localized light to moderate disintegration of concrete outlet



Photo 14 Accumulation of branches and debris causing restricted flow in barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Chiswick Line, Lot 5, Cone X/XI	Culvert No.:	220
Road Name:	Chiswick Line	Road Section No.:	
Location:	0.45 km E of Genesee Lake Road	MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 631518	Federal Nav. Waterway:	No
Bylaw Exp. Date:	Northing: 5104620	Culvert Value:	\$ 220,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Year Constructed:	1980	Cell/Span Width/Dia.:	1.6 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	1.6 m	Upstream:	N
Material/ Type:	CST - PA	Max Height:	1.6 m	Downstrea	N
Crossing Skew:	-00 °	Length:	18.2 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.4 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	200	Platform Width:	10.8 m	Safety Curb/	(A) N / N 0.0	m
Operational Status:	2W - OAT	Surface Width:	9.8 m	Sidewalk and Curb	(B) N / S 0.0	m
Surface Type:	LCB	No. of Lanes:	2.0	Roadside Safety:	(A) N NO	
					(B) S NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AA DT:	120	AA DT:	132
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
Source:		Trucks:	2.00 %	Trucks:	2.0 %
Culvert 220 Asset Master		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	145

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Batrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	5	6	6-10	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	10.8	6.5	ADEQ	Proj Class: 200, 132 (10 YR, 120*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	2	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Cont	Total
Maintenance	OTHm	Install new guiderail	1-5	0	48,000	16,000	64,000
Maintenance Subtotal:					48,000	16,000	64,000

I. ENGINEERING RECOMMENDATIONS			
Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	
Design Platform Width:	
Material/Type:	0 -
Width/Diameter:	
Maximum Height:	
Culvert Length:	
No. of Culverts:	
Depth of Fill:	

K. IMPROVEMENT COSTS		
Total Construction/Rehab		64,000
Total Inspection		0
TOTAL		64,000
86405	share @100%	64,000

INSPECTION NOTES

Culvert No.: 220

Culvert No. 220, Chiswick Line, Lot 5, Concession X/XI, 0.45 km East of Genesee Lake Road, Powassan, Municipality of Powassan:

- Structure is not posted with a load limit.
- 1.6 m+/- corrugated steel pipe culvert with approximately 0.4 m of gravel fill and a surface treated wearing surface.
- No traffic protection has been provided over the structure or on the approaches. It is recommended that a code compliant guiderail be installed at the structure.
- Surface treated roadway is in generally good condition with minor edge cracking, localized asphalt polishing, and gravel shoulders.
- Vegetative embankments are in good condition.
- Corrugated steel pipe culvert is in generally good condition with localized minor corrosion of the invert noted. Culvert has been lined with polymer.
- Watercourse has moderate volume, low flow from North to South.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Light corrosion noted at waterline.

L. HISTORY/ GENERAL

Culvert No.: 220

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 220



Photo 1 Structure from east approach



Photo 2 Structure from west approach

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 220



Photo 3 East approach from center of structure



Photo 4 West approach from center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Interior of culvert barrel looking south



Photo 8 Light weathering of interior of barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Chiswick Line, Lot 9, Cone X/XI	Culvert No.:	221
Road Name:	Chiswick Line	Road Section No.:	
Location:	1.35 km W of Genesee Lake Road	MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 629710	Federal Nav. Waterway:	Unknown
Bylaw Exp. Date:	Northing: 5103684	Culvert Value:	\$ 400,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Year Constructed:	1970	Cell/Span Width/Dia.:	4.4 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	4.4 m	Upstream:	N
Material/ Type:	CSP - PA	Max Height:	2.8 m	Downstrea	N
Crossing Skew:	-00 °	Length:	15.4 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.4 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	300	Platform Width:	9.2 m	Safety Curb/	(A) N / W 0.0	m
Operational Status:	2W - OAT	Surface Width:	6.5 m	Sidewalk and Curb	(B) N / S 0.0	m
Surface Type:	HCB	No. of Lanes:	2.0	Roadside Safety:	(A) N SC	
					(B) S SC	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	300	AADT:	330
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	2.00 %	Trucks:	2.0 %
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 221 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	363

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Batrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	3	4	1-5	
Foundations	6	6	ADEQ	
Guiderail/Barrier	5	3	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	9.2	6.5	ADEQ	Proj Class: 300, 330 (10 YR, 300*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	3.2	3	ADEQ	Rdside Safety: 2

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Cont	Total
		Install new guiderail	1-5	0	48,000	16,000	64,000
		Replace Structure	1-5		446,000	(included)	446,000
		Maintenance		Subtotal:	494,000	16,000	510,000

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:
 Estimated Posting: t
 Evaluated Posting: t t t
 Closure Date/Type:
 Closure Type:
 Monitoring:
 Monitoring Component:

J. DESIGN PARAMETERS

Design Class:
 Design Platform Width:
 Material/Type: 0 -
 Width/Diameter:
 Maximum Height:
 Culvert Length:
 No. of Culverts:
 Depth of Fill:

K. IMPROVEMENT COSTS

Total Construction/Rehab	510,000
Total Inspection	0
TOTAL	510,000
86405 share @100%	510,000

INSPECTION NOTES

Culvert No.: 221

Culvert No. 221, Chiswick Line, Lot 9, Concession X/XI, 1,35 km West of Genesee Lake Road, Municipality of Powassan:

- Structure is not posted with a load limit.
- 4.4 m+ \- single span corrugated plate steel pipe arch culvert with approximately 0.4 m of gravel fill and a surface treated wearing surface.
- Steel cable guide rail is provided over the structure and on the approaches and are in generally fair condition. Steel cables are loose. Steel cables are end buried at all four quadrants. Posts exhibit light weathering, checks and splits. Guiderail does not meet current codes and standards. Guiderail should be replaced with a code compliant barrier and end treatments.
- Surface treated roadway is in good condition with medium longitudinal cracks at east approach. Asphalt polishing throughout.
- Gravel shoulders are in good condition with vegetative growth noted.
- Vegetative embankments are in good condition.
- Corrugated plate steel pipe arch culvert is in generally fair to localized poor condition with extensive light to moderate corrosion at the high water level. Minor undermining at the outlet, outlet section appears to slope downstream more steeply than rest of structure. Perforations noted at inlet both sides and mid span.
- Watercourse is unobstructed with no evidence of scour.
- Should tighten steel cable guide rail as part of regular structure maintenance.
- Small perforations noted in culvert (3 m2, poor). Moderate corrosion observed at waterline.
- Top edge of culvert is very close to edge of roadway. Approach guiderail cables are positioned above the north end of the barrel, presenting a vehicular hazard.
- It is recommended that the structure be replaced in the next 1 - 5 years.

L. HISTORY/ GENERAL

Culvert No.: 221

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 221



Photo 1 Structure from east approach



Photo 2 Structure from west approach

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 221

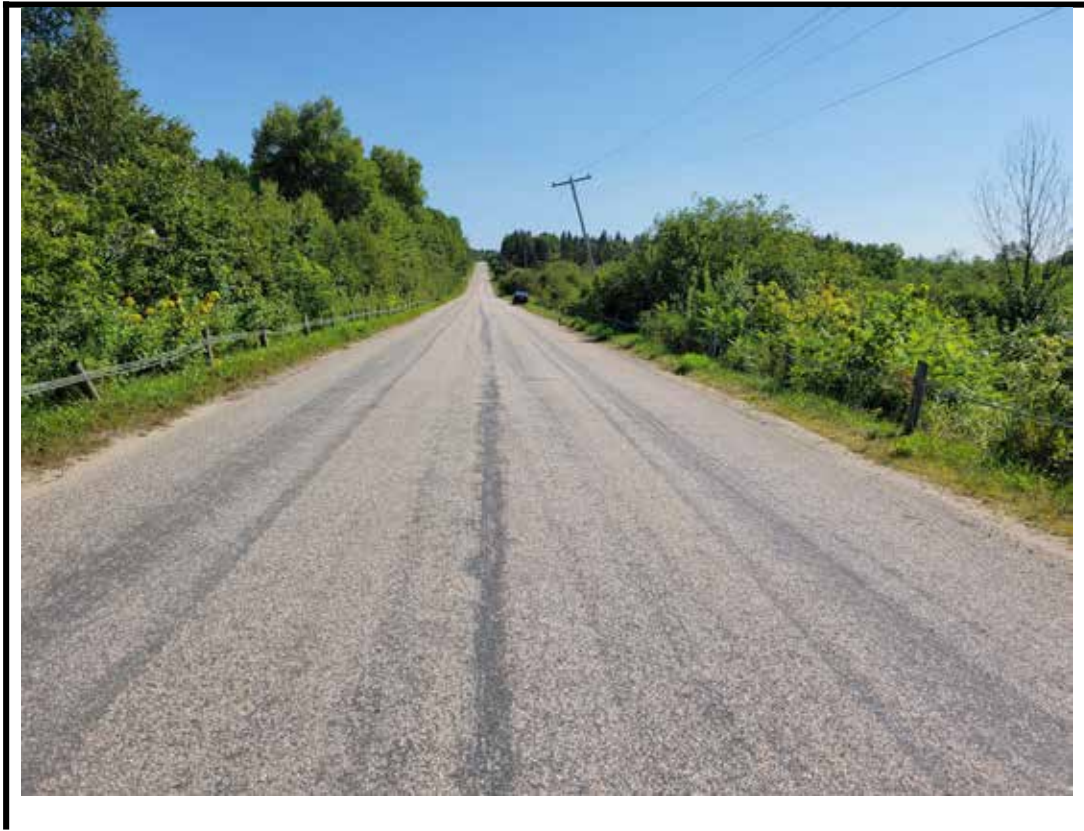


Photo 3 East approach from center of structure



Photo 4 West approach from center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Substandard approach guide with loose cables



Photo 8 Longitudinal cracks along centreline on approach wearing surface



Photo 9 North end of barrel in line with north guide rail



Photo 10 Light to moderate corrosion below the high water line throughout barrel



Photo 11 Localized severe corrosion with perforations in bottom of barrel



Photo 12 Deformation of bottom of the south end of the barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Memorial Park Drive East, Powassan	Culvert No.:	222
Road Name:	Memorial Park Drive East	Road Section No.:	
Location:	0.02 km E of Big Bend Avenue	MTO Site No.:	044-0000-
Roadside Env.:	U	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 627029	Federal Nav. Waterway:	Unknown
Bylaw Exp. Date:	Northing: 5104510	Culvert Value:	\$ 479,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:	0	Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	1960	Cell/Span Width/Dia.:	5.9 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	5.9 m	Upstream:	N
Material/ Type:	CPS - ACH	Max Height:	3.4 m	Downstrea	N
Crossing Skew:	-00 °	Length:	15.5 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.4 m	Foundation Type:	UN - Unknown
		Culvert Floor:	BR		

ROAD OVER CULVERT

Existing Road Class:	LR	Platform Width:	9.4 m	Safety Curb/	(A) N / N 0.2	m
Operational Status:	2W - OAT	Surface Width:	7.0 m	Sidewalk and Curb	(B) N / S 1.5	m
Surface Type:	HCB	No. of Lanes:	2.0	Roadside Safety:	(A) N FB	
					(B) S CP	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:	0	Traffic Barrier:	
Operational Status:	-	Median Type/Width:	0	Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	50	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	500	AADT:	550
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	2.00 %	Trucks:	2.0 %
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 222 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	605

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derik Batrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	5	6	1-5	
Foundations	5	6	ADEQ	
Guiderail/Barrier	4	3	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	9.5	7.5	ADEQ	Road Class: LR
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	3.8	3	ADEQ	Rdside Safety: 2

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Cont	Total
Maintenance	cOTHm	Maintenance Improvement	NOW	0	0	0	0
Maintenance Subtotal:					0	0	0
Rehabilitation Subtotal:					0	0	0

I. ENGINEERING RECOMMENDATIONS			
Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	
Design Platform Width:	0
Material/Type:	0 - 0
Width/Diameter:	
Maximum Height:	
Culvert Length:	
No. of Culverts:	0
Depth of Fill:	

K. IMPROVEMENT COSTS	
Total Construction/Rehab	0
Total Inspection	0
TOTAL	
86405	share @100%
	0

NOTE : - Rehabilitation design drawings have provided by HP Engineering Inc.

INSPECTION NOTES

Culvert No.: 222

Culvert No. 222, Memorial Park Drive East, 0.02 km East of Big Bend Avenue, Powassan, Municipality of Powassan:

- Structure is not posted with a load limit.
- 5.9 m+/- single span open footing arch culvert with approximately 0.4 m of gravel fill and an asphalt paved roadway. The culvert was widened 3.3 m+/- in 1970 with a cast-in-place concrete arch.
- Steel beam guiderail is provided over the structure on the north side and all four approaches. Terminal end treatments are provided at all four quadrants. Steel beam guiderail is in generally good condition with one missing offset block in the northeast quadrant. Concrete parapet wall with steel handrail provided on the south side of the roadway is in generally good condition with narrow vertical cracking noted. Approach way guiderail end treatment are substandard and should be replaced with a code compliant end treatment. Impact damage noted at northwest end (1 m2, poor).
- Concrete curb and gutters are in generally good condition with abrasions, light scaling and narrow stained and unstained cracks.
- Concrete sidewalk is in good condition with abrasions noted along the curb face.
- Asphalt wearing surface is in good condition with localized medium longitudinal cracks and some abrasions.
- Vegetative embankments are in generally in good condition with erosion noted at the Southeast and Southwest embankments.
- Corrugated plate steel arch is in generally in good condition. Repairs performed circa 2023 on barrel. Repairs generally consist of encasing the lower (poor) section of the culvert barrel in concrete.
- Concrete footings are in good condition with minor scaling throughout.
- Concrete extension is in generally in good condition with one minor area of light honeycombing.
- Watercourse is unobstructed with no evidence of scour.
- Should replace offset block as regular structure maintenance.
- Moderate volume with moderate flow noted from south to north at the time of inspection.
- Collision damage noted on northwest end treatment.
- Abrasion noted on approach wearing surface (1 m2, poor).
- Localized moderate to severe scaling noted on curb face (1 m2, poor).

L. HISTORY/ GENERAL

Culvert No.: 222

Repaired circa 2023 – Cast-In-place concrete repair to lower section of barrel wall.

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 222



Photo 1 Structure from east approach



Photo 2 Structure from west approach

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 222



Photo 3 East approach from center of structure

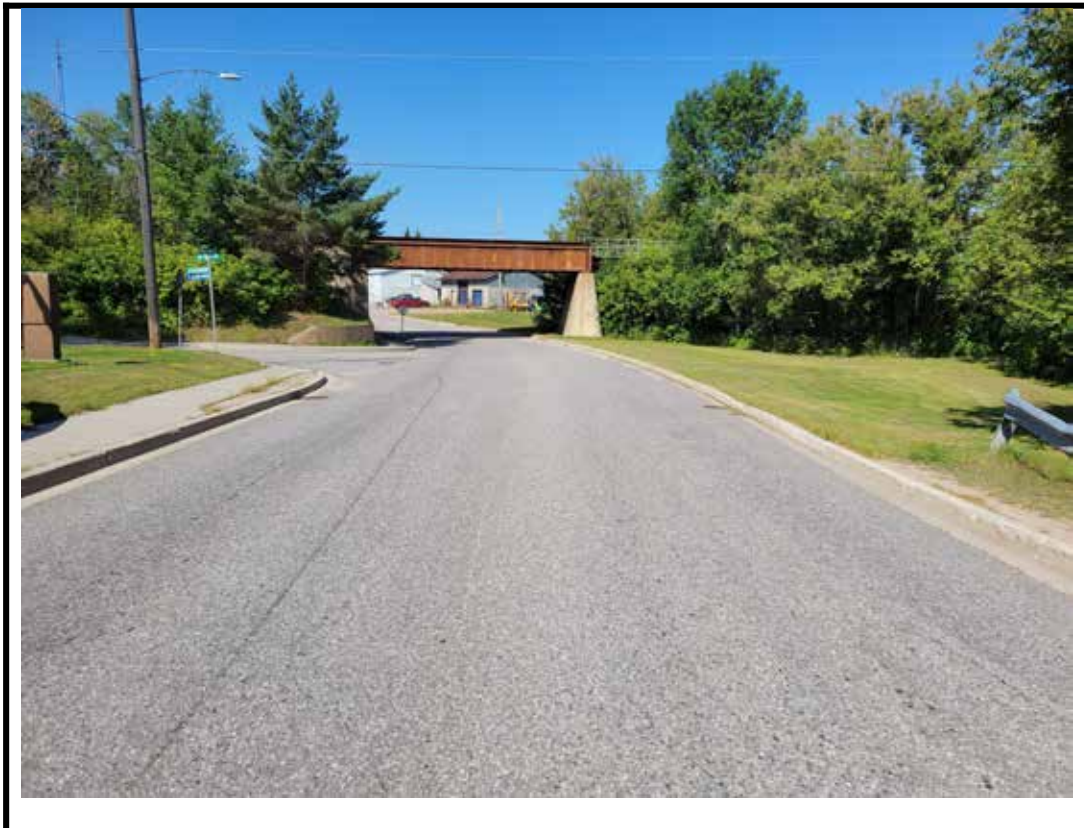


Photo 4 West approach from center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Substandard guiderail end treatment



Photo 8 Impact damage on NW approach guide rail end treatment



Photo 9 Abrasions and light to moderate scaling on concrete curb



Photo 10 Narrow vertical cracks with efflorescence on concrete parapet wall



Photo 11 Concrete repair on bottom section of barrel



Photo 12 Localized light honeycombing on concrete repair at north end of structure



Photo 13 Isolated damp staining between concrete repair and existing exposed footing on west side of barrel



Photo 14 Light rust staining of barrel below the high water line

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Bridge Street, Powassan	Culvert No.:	223
Road Name:	Bridge Street	Road Section No.:	
Location:	0.2 km S of Valley View Drive East	MTO Site No.:	044-0000-
Roadside Env.:	S	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626691	Federal Nav. Waterway:	Unknown
Bylaw Exp. Date:	Northing: 5104421	Culvert Value:	\$ 629,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Year Constructed:	1970	Cell/Span Width/Dia.:	8.8 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	8.8 m	Upstream:	N
Material/ Type:	CSP - ACH	Max Height:	3.2 m	Downstrea	N
Crossing Skew:	L-30 °	Length:	22.0 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.6 m	Foundation Type:	UN - Unknown
		Culvert Floor:	BR		

ROAD OVER CULVERT

Existing Road Class:	LR	Platform Width:	8.0 m	Safety Curb/	(A) N / E 0.0	m
Operational Status:	2W - OAT	Surface Width:	6.1 m	Sidewalk and Curb	(B) N / W 0.0	m
Surface Type:	HCB	No. of Lanes:	2.0	Roadside Safety:	(A) E FB	
					(B) W FB	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AAADT:	210	AAADT:	33
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	2.00 %	Trucks:	2.0 %
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 223 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	254

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	4	6	1-5	
Foundations	5	6	ADEQ	
Guiderail/Barrier	5	6	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	5	6	6-10	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	8	6.5	ADEQ	Road Class: LR
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	3.8	3	ADEQ	Rdside Safety: 2

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Count	Total
Maintenance	cOTHm	Maintenance Improvement	1-5	0	0	0	0
			Maintenance	Subtotal:	0	0	0
Rehab	cEIR	Embankment Improvements/Rehab	6-10	0	10,000	3,000	13,000
Rehab	cRSP	Rehabilitate Superstructure	6-10	0	30,000	9,000	39,000
			Rehab	Subtotal:	40,000	12,000	52,000
Rehab Extra	cMOB	Mobilization	6-10	0	3,000	1,000	4,000
Rehab Extra	crTCP	Traffic Control/Protection	6-10	0	5,000	2,000	7,000
			Rehab Extra	Subtotal:	8,000	3,000	11,000

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:

Estimated Posting: t

Evaluated Posting: t t t

Closure Date/Type:

Closure Type:

Monitoring:

Monitoring Component:

J. DESIGN PARAMETERS

Design Class:

Design Platform Width:

Material/Type: 0 -

Width/Diameter:

Maximum Height:

Culvert Length:

No. of Culverts:

Depth of Fill:

K. IMPROVEMENT COSTS

Total Construction/Rehab	63,000
Total Inspection	0
TOTAL	63,000
86405 share @100%	63,000

INSPECTION NOTES

Culvert No.: 223

Culvert No. 223, Bridge Street, 0.20 km South of Valley View Drive East, Powassan, Municipality of Powassan:

- Structure is not posted with a load limit.
 - 8.8 m+ \- single span open footing corrugated plate steel arch culvert with approximately 0.6 m of earth fill and an asphalt paved roadway.
- Approach guiderail has been replaced since the last inspection. Adequacy of terminal end treatments on southeast and northwest approaches should be verified.
- Vegetative roadway embankments are in good condition with minor erosion in the Southwest and Southeast quadrants. Rock protection on southeast embankment in generally good condition and stable. Concrete precast slabs on northeast embankments appears unstable with a few displaced slabs.
 - Corrugated plate steel pipe is in generally good condition with many nuts missing from the bolts, localized small perforations at mid span, localized light corrosion at high water level and minor deformation observed at ends of barrel. This deformation is due to the embankments crushing the culvert and should be monitored.
 - Exposed concrete footings are in generally good condition with localized areas of light to severe scour and one wide vertical crack. (4.0m2, poor)
 - Watercourse is unobstructed with no evidence of scour with large stone in stream and a fallen tree west of culvert.
 - No serious evidence of structural distress.
 - Structure does not require posting with a load limit.
 - Should reinforce ends of culvert, stabilize roadway embankments, and provide scour protection.
 - Should replace missing culvert nuts, replace deteriorated guide rail posts as normal structure maintenance.
 - Moderate volume with fast flow noted from east to west at the time of inspection.
 - Approaches are generally in good condition.

L. HISTORY/ GENERAL

Culvert No.: 223

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 223



Photo 1 Structure from north approach



Photo 2 Structure from south approach

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 223



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure

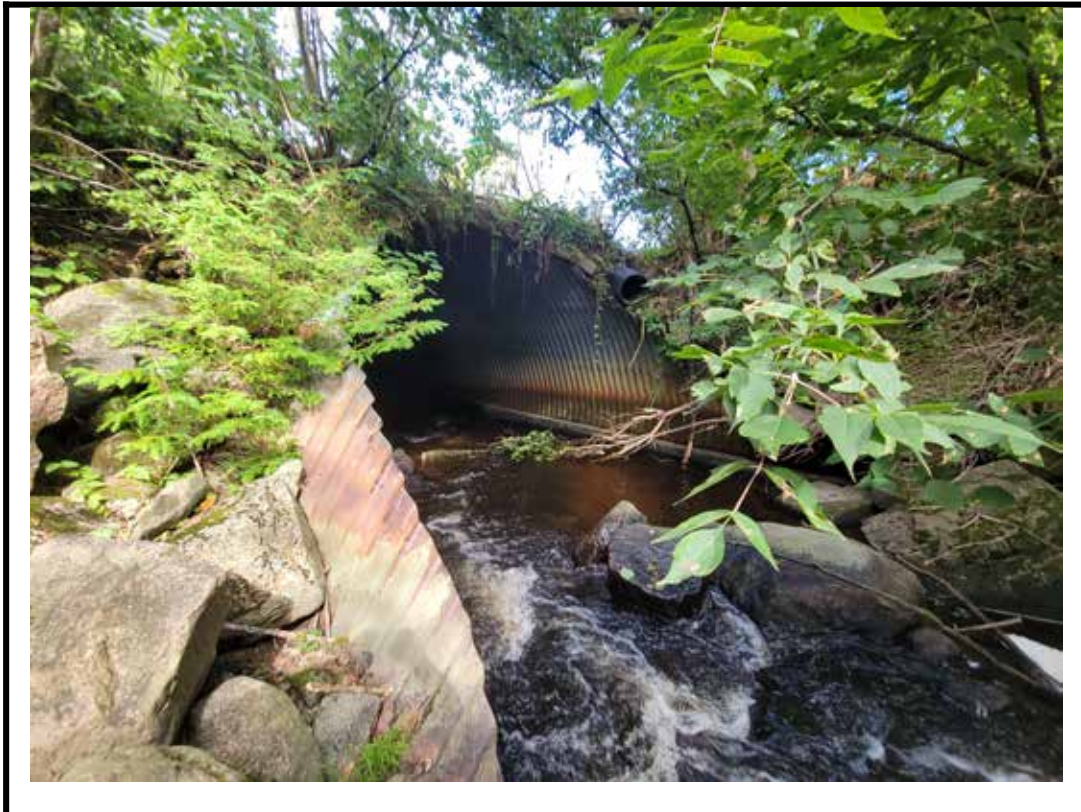


Photo 5 East elevation



Photo 6 West elevation



Photo 7 Substandard guide rail end treatment at NW approach guide rail



Photo 8 Small spalls and light to moderate scaling on exposed concrete footing



Photo 9 Missing nuts on steel plate bolted connections in barrel



Photo 10 Light to localized moderate corrosion of barrel below the high water line



Photo 11 Accumulation of rocks in east end of barrel



Photo 12 Accumulation of branches and debris on NE embankment



Photo 13 Deformation of east end of barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Lindquist Line, Lot 13, Cone XIV/XV	Culvert No.:	224
Road Name:	Lindquist Line	Road Section No.:	
Location:	0.45 km E of Pine Tree Way	MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626630	Federal Nav. Waterway:	Unknown
Bylaw Exp. Date:	Northing: 5106799	Culvert Value:	\$ 222,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	1970	Cell/Span Width/Dia.:	1.1 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	1.1 m	Upstream:	N
Material/ Type:	PL - PR	Max Height:	1.1 m	Downstrea	N
Crossing Skew:	-00 °	Length:	19.3 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.5 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	300	Platform Width:	7.0 m	Safety Curb/	(A) N / N 0.0	m
Operational Status:	2W - OAT	Surface Width:	6.2 m	Sidewalk and Curb	(B) N / S 0.0	m
Surface Type:	LCB	No. of Lanes:	2.0	Roadside Safety:	(A) N OT	
					(B) S OT	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	60	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AAADT:	250	AAADT:	275
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
Source:		Trucks:	2.00 %	Trucks:	2.0 %
Culvert 224 Asset Master		Peak Directional Split:	%	Capacity:	0 vph
		10 year Growth Factor:	1.10	20 Year AADT:	302

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	6	6	ADEQ	
Foundations	6	6	ADEQ	
Guiderail/Barrier	3	3	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	7	6.5	ADEQ	Proj Class: 300, 275 (10 YR, 250*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	1.6	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
Maintenance	OTHm	Install new guiderail	1-5	0	48,000	16,000	64,000
Maintenance Subtotal:					48,000	16,000	64,000

I. ENGINEERING RECOMMENDATIONS			
Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	
Design Platform Width:	
Material/Type:	0 -
Width/Diameter:	
Maximum Height:	
Culvert Length:	
No. of Culverts:	
Depth of Fill:	

K. IMPROVEMENT COSTS		
Total Construction/Rehab		64,000
Total Inspection		0
TOTAL		64,000
86405	share @100%	64,000

INSPECTION NOTES

Culvert No.: 224

Culvert No. 224, Lindquist Line, Lot 13, Concession XIV/XV, 0.45 km East of Pine Tree Way, Powassan, Municipality of Powassan:

- Structure is not posted with a load limit.
- 1.1 m+/- single span corrugated plastic pipe culvert with approximately 0.7 m of earth fill and a surface treated roadway.
- Steel pipe and channel handrails are in generally good condition with heavy corrosion noted at the base of some posts.
- No approach guiderail installed at the structure. A code compliant approach guiderail should be installed at the structure.
- Surface treated roadway is in good condition with alligator and edge cracks along south side.
- Gravel and sand shoulders and roadway embankments are in good condition with minor erosion.
- Rock protection at both ends of the structure are in good condition.
- Barrel appears to be in good condition.
- Existing culvert has been lined with a plastic pipe. Plastic pipe is in good condition.
- Watercourse is unobstructed with no evidence of scour.
- Structure does not require posting with a load limit.
- Low volume, moderate flow from north to south with no obstruction noted in stream at the time of inspection.

L. HISTORY/ GENERAL

Culvert No.: 224

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.:224



Photo 1 Structure from east approach



Photo 2 Structure from west approach



Photo 3 East approach from center of structure



Photo 4 West approach from center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Interior of culvert barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Pine Tree Way, Lot 12/13, Cone XVI	Culvert No.:	225
Road Name:	Pine Tree Way	Road Section No.:	
Location:	1.25 km N of Lindquist Line	MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626310	Federal Nav. Waterway:	No
Bylaw Exp. Date:	Northing: 5107909	Culvert Value:	\$ 323,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	1993	Cell/Span Width/Dia.:	3.4 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	3.4 m	Upstream:	H W
Material/ Type:	CPR - FRR	Max Height:	1.8 m	Downstrea	H W
Crossing Skew:	-00 °	Length:	13.6 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.7 m	Foundation Type:	UN - Unknown
		Culvert Floor:	EA		

ROAD OVER CULVERT

Existing Road Class:	200	Platform Width:	8.6 m	Safety Curb/	(A) N / E 0.0	m
Operational Status:	2W - OAT	Surface Width:	6.8 m	Sidewalk and Curb	(B) N / W 0.0	m
Surface Type:	HCB	No. of Lanes:	2.0	Roadside Safety:	(A) E SC	
					(B) W SC	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	60	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AAADT:	100	AAADT:	110
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	2.00 %	Trucks:	2.0 %
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 225 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	121

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Batrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	5	6	ADEQ	
Foundations	6	6	ADEQ	
Guiderail/Barrier	5	3	1-5	
Inlet Component	6	6	ADEQ	
Outlet Component	6	6	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	8.6	6.5	ADEQ	Proj Class: 200, 110 (10 YR, 100*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	2.5	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Cont	Total
Maintenance	cOTHm	Install new guiderail	1-5	0	48,000	16,000	64,000
Maintenance Subtotal:					48,000	16,000	64,000

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:
 Estimated Posting: t
 Evaluated Posting: t t t
 Closure Date/Type:
 Closure Type:
 Monitoring:
 Monitoring Component:

J. DESIGN PARAMETERS

Design Class:
 Design Platform Width:
 Material/Type: 0 -
 Width/Diameter:
 Maximum Height:
 Culvert Length:
 No. of Culverts:
 Depth of Fill:

K. IMPROVEMENT COSTS

Total Construction/Rehab	64,000
Total Inspection	0
TOTAL	64,000
86405 share @100%	64,000

INSPECTION NOTES

Culvert No.: 225

Culvert No. 225, MTO Site No. 44-318, Pine Tree Way, Lot 12/13, Concession XVI, 1.25 km North of Lindquist Line, Powassan, Municipality of Powassan:

- Structure is not posted with a load limit.
- Structure in generally good condition.

- 3.4 m+ \- single span cast-in-place concrete open footing culvert with approximately 0.7 m of earth fill and an asphalt paved roadway.
- Steel cable guide rails is in generally fair condition with disconnected / loose cable stays noted. Steel cable guide rails are end buried in all four quadrants. A few new timber posts noted. Cable appears to be loose. Approach guiderail does not meet current standards. Approach guiderail should be replaced with a code compliant guiderail.
- Asphalt paved approach wearing surface is in generally fair condition with medium to wide longitudinal and transverse cracking throughout.
- Gravel shoulders are in generally good condition with vegetative growth noted.
- Concrete soffit, abutments, headwalls and wingwalls are in good condition. One narrow vertical crack noted in the East headwall that extends onto the soffit. Concrete patches noted on the abutments and soffit.
- Vegetative roadway embankments are in good condition.
- Watercourse is obstructed with heavy vegetation encroaching into stream at both ends of barrel.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Light scaling noted on east end of abutments and along waterline.
- Sediments build up in stream and in culvert. Embankments are heavily vegetated.
- Hazard signs should be installed at guiderail ends.

L. HISTORY/ GENERAL

Culvert No.: 225



Photo 1 Structure from north approach



Photo 2 Structure from south approach



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure



Photo 5 East elevation



Photo 6 West elevation



Photo 7 3 Cable guide rail with loose cables on approaches



Photo 8 Longitudinal and transverse cracking on north approach wearing surface



Photo 9 Localized severe erosion of shoulder on the west side of the roadway



Photo 10 Patched potholes and wide map cracking on south approach wearing surface



Photo 11 General view of barrel looking west



Photo 12 Localized light to moderate scaling on north barrel wall



Photo 13 Localized light to moderate scaling on south barrel wall



Photo 14 Encroachment on NW and SW embankments into stream at west end of barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Hemlock Road, Lot 26, Cone VIII			Culvert No.:	226
Road Name:	Hemlock Road			Road Section No.:	
Location:	0.5 km S of Tower Line			MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t	Crossing Type:	O-WAT, Over Water
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:	Federal Nav. Waterway:	No
Bylaw No.:		Easting:	17 624224	Culvert Value:	\$ 214,000
Bylaw Exp. Date:		Northing:	5098616	Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation: <NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:	MunicB
Shared With:			Patrol:
Heritage Status:	R		

D. EXISTING CONDITIONS

Year Constructed:	2005	Cell/Span Width/Dia.:	1.8 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	1.8 m	Upstream:	N
Material/ Type:	CST - PR	Max Height:	1.8 m	Downstrea	N
Crossing Skew:	R-10 °	Length:	15.3 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.3 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		
--- ROAD OVER CULVERT ---					
Existing Road Class:	200	Platform Width:	9.6 m	Safety Curb/	(A) N / E 0.0 m
Operational Status:	2W - OAT	Surface Width:	7.6 m	Sidewalk and Curb	(B) N / W 0.0 m
Surface Type:	G/S	No. of Lanes:	2.0	Roadside Safety:	(A) E NO
					(B) W NO
--- ROAD THROUGH CULVERT ---					
Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AADT:	60	AADT:	66
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	%	Trucks:	%
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 226 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	72

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	4	4	6-10	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	9.6	6.5	ADEQ	Proj Class: 200, 66 (10 YR, 60*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	2.1	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/ Const Cost	Eng/Count	Total
Replacement	Repl	Culvert Replacement	6-10	0	215,000	20,000	235,000
Rehab Subtotal:					215,000	15,000	235,000

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:
 Estimated Posting: t
 Evaluated Posting: t t t
 Closure Date/Type:
 Closure Type:
 Monitoring:
 Monitoring Component:

J. DESIGN PARAMETERS

Design Class:
 Design Platform Width:
 Material/Type: 0 -
 Width/Diameter:
 Maximum Height:
 Culvert Length:
 No. of Culverts:
 Depth of Fill:

K. IMPROVEMENT COSTS

Total Construction/Rehab	215,000
Total Inspection	20,000
TOTAL	235,000
86405 share @100%	235,000

INSPECTION NOTES

Culvert No.: 226

Culvert No. 226, Hemlock Road, Lot 26, Cone VIII, 0.5 km South of Tower Line, Municipality of Powassan:

- Structure is not posted with a load limit.
- 1.8 m± single span corrugated sheet steel round pipe culvert with <0.3 m of gravel fill and a gravel wearing surface.
- No traffic protection is provided over the structure or on the approaches. It is recommended that a code compliant approach guiderail be installed at the structure.
- Gravel roadway is in good condition with minor washout at the west edge of the roadway.
- Vegetative embankment is in good condition and steep at structure with light erosion noted at structure.
- Rock protection is in generally fair condition.
- Corrugated sheet steel round pipe culvert is in generally in fair condition with light to moderate corrosion throughout barrel, minor/moderate deformations within barrel, most notably at the West end, and minor separation of barrel plates. Evidence of significant barrel movement and should be monitored until replaced.
- Watercourse is unobstructed with no evidence of scour.
- No serious evidence of structural distress.
- Warrant for load posting should be confirmed based on low height of fill over structure.

L. HISTORY/ GENERAL

Culvert No.: 226

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 226



Photo 1 Structure from north approach



Photo 2 Structure from south approach



Photo 3 North approach from center of structure



Photo 4 South approach from center of structure



Photo 5 East elevation



Photo 6 West elevation



Photo 7 Light corrosion at and above high water level



Photo 8 Joint separation forming inside barrel



Photo 9 Small deformation noted inside barrel at west end



Photo 10 Erosion of embankment at east end of barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	Hemlock Road, Lot 26, Cone VIII	Culvert No.:	227
Road Name:	Hemlock Road	Road Section No.:	
Location:	0.1 km S of Tower Line	MTO Site No.:	044-0000-
Roadside Env.:	R	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 623876	Federal Nav. Waterway:	No
Bylaw Exp. Date:	Northing: 509889	Culvert Value:	\$ 219,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:		Original Board Order Number:	
Railway Company:		Date:	
Railway Subdivision:		Current Board Order Number:	
Subdivision Mileage:		Date:	
Transport Canada Crossing No.:		Seniority:	
Number of Tracks:	0		

C. JURISDICTION

Owner:	86405	Special Designation:	<NSD> - No Special D	Local / Area Municipality (Upper Tier Only)
Owner Share:	100.00 %	Designation 2		Munica
<input type="checkbox"/> Shared?		Adjacent Culvert No.:		MunicB
Shared With:				Patrol:
Heritage Status:	R			

D. EXISTING CONDITIONS

Year Constructed:	2005	Cell/Span Width/Dia.:	1.8 m	End Treatment:	<u>A</u> <u>B</u> <u>C</u> <u>D</u>
Year Extended:		Total Width/Dia.:	1.8 m	Upstream:	N
Material/ Type:	CST - PR	Max Height:	1.8 m	Downstrea	N
Crossing Skew:	-00 °	Length:	15 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.6 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	200	Platform Width:	11.4 m	Safety Curb/	(A) N / E 0.0	m
Operational Status:	2W - OAT	Surface Width:	8.7 m	Sidewalk and Curb	(B) N / W 0.0	m
Surface Type:	G/S	No. of Lanes:	2.0	Roadside Safety:	(A) E NO	
					(B) W NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		m
Surface Width:	m	Sidewalk and Curb	/		m

E. TRAFFIC DATA

Legal Speed Limit:	80	<u>Traffic Count</u>		<u>10 Year Traffic Forecast</u>	
Route Designations		Year:	A-2002-E	Year:	2012
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	AAADT:	60	AAADT:	66
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	DHV Factor:	%	DHV Factor:	%
		DHV:	vph	DHV:	vph
		Trucks:	%	Trucks:	%
Source:		Peak Directional Split:	%	Capacity:	0 vph
Culvert 227 Asset Master		10 year Growth Factor:	1.10	20 Year AADT:	72

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Battrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	5	6	ADEQ	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	1-5	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	11.4	6.5	ADEQ	Proj Class: 200, 66 (10 YR, 60*1.1)
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	2.4	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Cont	Total
Maintenance	OTHm	Install code compliant approach guiderail	1-5	0	48,000	16,000	64,000
Maintenance Subtotal:					48,000	16,000	64,000

I. ENGINEERING RECOMMENDATIONS			
Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

J. DESIGN PARAMETERS	
Design Class:	
Design Platform Width:	
Material/Type:	0 -
Width/Diameter:	
Maximum Height:	
Culvert Length:	
No. of Culverts:	
Depth of Fill:	

K. IMPROVEMENT COSTS		
Total Construction/Rehab		64,000
Total Inspection		0
TOTAL		64,000
86405	share @100%	64,000

INSPECTION NOTES

Culvert No.: 227

Culvert No. 227, Hemlock Road, Lot 26, Cone VIII, 0.10 km South of Tower Line, Municipality of Powassan:

- Structure is not posted with a load limit.
- 1.8 m+/- single span corrugated sheet steel round pipe culvert with approximately 0.6 m of gravel fill and a gravel wearing surface.
- No traffic protection is provided over the structure or on the approaches. It is recommended that a code compliant approach guiderail be installed at the structure.
- Gravel roadway is in good condition.
- Roadway embankments are in good condition, moderate to steep slopes, well vegetated.
- Corrugated sheet steel round pipe culvert is in generally good condition with light to moderate corrosion below the high waterline and minor separation at one of the barrel joints.
- Watercourse is unobstructed with no evidence of scour.
- No serious evidence of structural distress.
- Structure does not require posting with a load limit.
- Slight undermining noted at inlet on west end of barrel.

L. HISTORY/ GENERAL

Culvert No.: 227

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 227

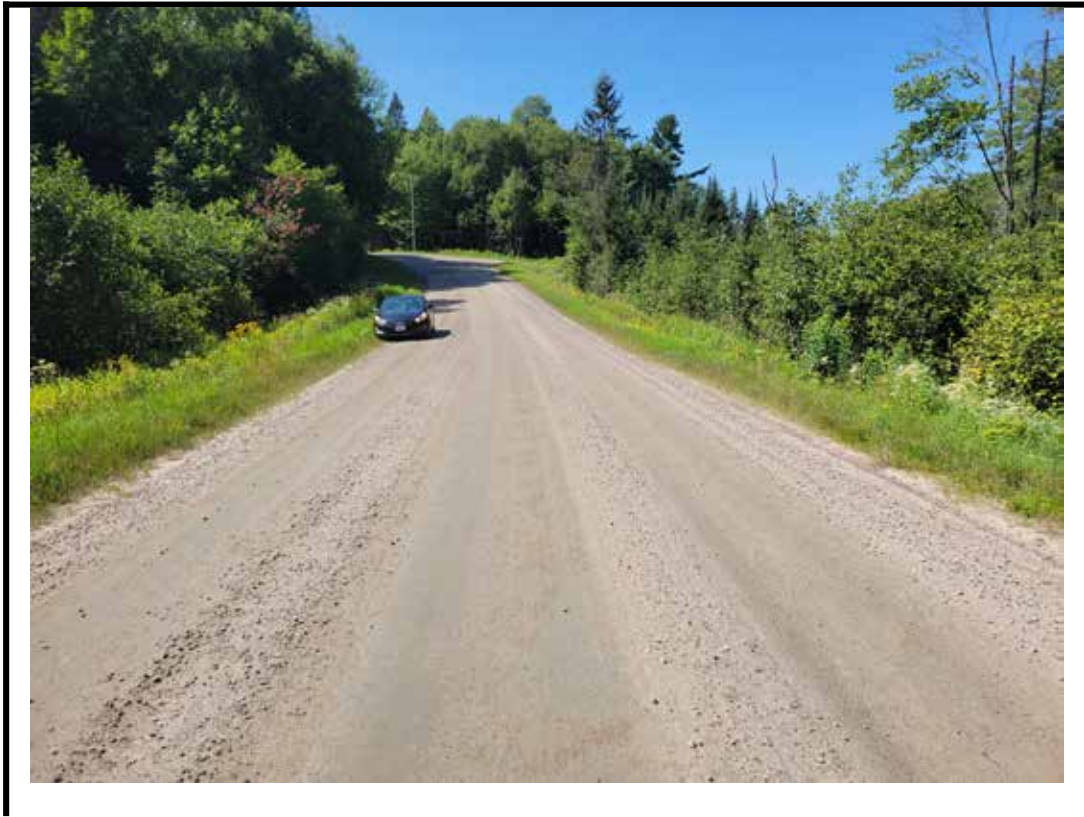


Photo 1 Structure from east approach



Photo 2 Structure from west approach



Photo 3 East approach from center of structure

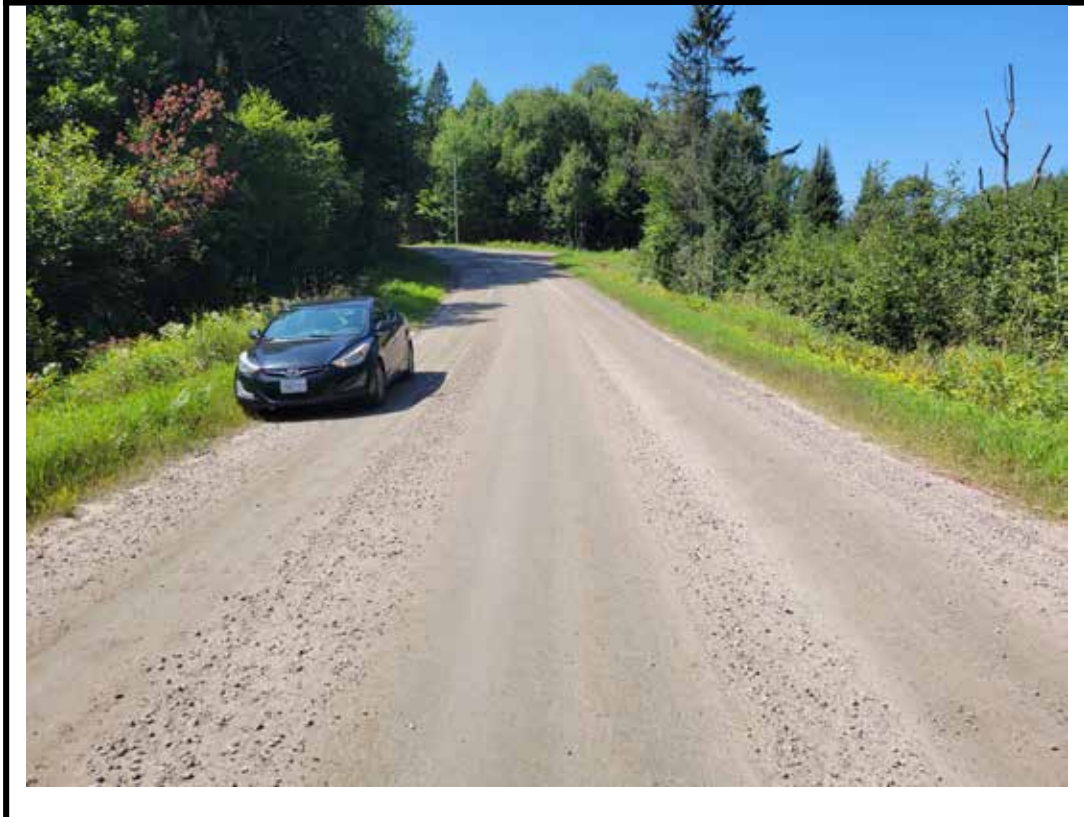


Photo 4 West approach from center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Interior of culvert barrel



Photo 8 Light corrosion observed along waterline



Photo 9 Moderate erosion of embankment at north end of barrel

MUNICIPAL BRIDGE APPRAISAL

A. IDENTIFICATION

Culvert Name:	McCarthy Street	Culvert No.:	228
Road Name:	McCarthy Street	Road Section No.:	
Location:	0.25 km N of Sweezy Street	MTO Site No.:	044-0000-
Roadside Env.:	S	Posting Sign:	t t t
Posting:	t t t	Low Clearnc Sign:	Narrow Structure Sign:
Bylaw No.:	Easting: 17 626520	Crossing Type:	O-WAT, Over Water
Bylaw Exp. Date:	Northing: 5094200	Federal Nav. Waterway:	Unknown
		Culvert Value:	\$ 186,000
		Old ID:	

B. RAILWAY OVERPASS/UNDERPASS

Railway Level Crossing Number:	Original Board Order Number:
Railway Company:	Date:
Railway Subdivision:	Current Board Order Number:
Subdivision Mileage:	Date:
Transport Canada Crossing No.:	Seniority:
Number of Tracks:	

C. JURISDICTION

Owner:	Special Designation: CBL	Local / Area Municipality (Upper Tier Only)
Owner Share: 100.00 %	Designation 2	Munica
<input type="checkbox"/> Shared?	Adjacent Culvert No.:	MunicB
Shared With:		Patrol:
Heritage Status: R		

D. EXISTING CONDITIONS

Year Constructed:	2009	Cell/Span Width/Dia.:	1.5 m	End Treatment:	A B C D
Year Extended:		Total Width/Dia.:	1.5 m	Upstream:	
Material/ Type:	CST - PR	Max Height:	1.5 m	Downstream:	
Crossing Skew:	P-90 °	Length:	11.0 m	Soil Condition:	U
No of Cells/Spans:	1	Type/Depth of Fill: E	0.3 m	Foundation Type:	UN - Unknown
		Culvert Floor:	SC		

ROAD OVER CULVERT

Existing Road Class:	LR	Platform Width:	9.0 m	Safety Curb/	(A) N / N 0.0	m
Operational Status:	2W - OAT	Surface Width:	8.0 m	Sidewalk and Curb	(B) N / S 0.0	m
Surface Type:	G/S	No. of Lanes:	2.0	Roadside Safety:	(A) N NO	
					(B) S NO	

ROAD THROUGH CULVERT

Existing Road Class:		No. of Lanes:		Traffic Barrier:	
Operational Status:	-	Median Type/Width:		Min Vertical Clearance:	m
Opening Width:	m	Safety Curb/	/		
Surface Width:	m	Sidewalk and Curb	/		

E. TRAFFIC DATA

Legal Speed Limit:	50	<u>Traffic Count</u>	<u>10 Year Traffic Forecast</u>
Route Designations		Year:	0
<input type="checkbox"/> Bus	<input type="checkbox"/> Truck Route	Year:	2012
<input type="checkbox"/> School	<input type="checkbox"/> Bike Route	AADT:	
Source:		DHV Factor:	%
Culvert 228 Asset Master		DHV:	vph
		Trucks:	%
		Peak Directional Split:	%
		10 year Growth Factor:	%
		Capacity:	0 vph
		20 Year AADT:	0

F. INSPECTIONS

Date:	08/22/2024	Inspected By:	Derick Batrick, P.Eng.	Approved By:	T. Dwivedi, P.Eng.
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MUNICIPAL BRIDGE APPRAISAL

G. CULVERT NEEDS

Field	MCR	PCR	TON	Comments
Barrel	6	6	ADEQ	
Foundations	6	6	ADEQ	
Guiderail/Barrier	0	0	ADEQ	
Inlet Component	0	0	ADEQ	
Outlet Component	0	0	ADEQ	
Streams/Waterways	6	6	ADEQ	

H. FUNCTIONAL NEEDS

Field	Existing	Min Tolerable	Time of Need	Comments
RO-Platform Width	9	6.5	ADEQ	Road Class: LR
RO-Level of Service	A	E	ADEQ	
RO-Roadside Safety	1.8	3	ADEQ	

Recommended Needs

Impr.Class	Improvement	Description	Time of Need	Year	Base/Const Cost	Eng/Count	Total
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There are no identified improvements in this inspection.

I. ENGINEERING RECOMMENDATIONS

Culvert Drawings:			
Estimated Posting:	t		
Evaluated Posting:	t	t	t
Closure Date/Type:			
Closure Type:			
Monitoring:			
Monitoring Component:			

J. DESIGN PARAMETERS

Design Class:	
Design Platform Width:	
Material/Type:	-
Width/Diameter:	
Maximum Height:	
Culvert Length:	
No. of Culverts:	
Depth of Fill:	

K. IMPROVEMENT COSTS

Total Construction/Rehab	0
Total Inspection	0
TOTAL	0
 86405 share @100%	 0

INSPECTION NOTES

Culvert No.: 228

Culvert No. , McCarthy Street, Entrance to property, 0.25km North of Sweezy Street, Trout Creek, Municipality of Powassan:

- Structure is not posted with a load limit.
- Culvert is a structure parallel to the roadway and services a private residence (No. 407).
- 1.5m+ \- single span corrugated steel round pipe culvert with 0.3m of gravel fill and a gravel wearing surface, Minimum fill requirements to be confirmed.
- No traffic protection is provided over the structure or on the approaches.
- Gravel wearing surface is in good condition, some loss of fill along south edge of wearing surface.
- Corrugated steel pipe culvert is in generally good condition with light corrosion of the invert. Separation noted at the midspan splice location.
- Vegetated roadway embankments are in good condition, some erosion noted at southeast embankment.
- Watercourse is unobstructed with no evidence of scour. It is our understanding that the ditch floods frequently. Low volume, low flow, North to South.
- No serious evidence of structural distress.

L. HISTORY/ GENERAL

Culvert No.: 228

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 228



Photo 1 Structure from East approach



Photo 2 Structure from West approach

MUNICIPAL STRUCTURE INSPECTION FORM

CULVERT

SITE PHOTOGRAPHS

Site No.: 228



Photo 3 East approach from the center of structure



Photo 4 West approach from the center of structure



Photo 5 North elevation



Photo 6 South elevation



Photo 7 Light corrosion observed below the waterline



Photo 8 Interior view of culvert barrel

The Municipality of
Powassan
STAFF REPORT

To: Council
From: K. Bester, Deputy Clerk
Re: Fire Protection Grant
Date: January 7, 2025

For Information Purposes --

Please note that we received confirmation that our application to the above noted grant was successful. B. Mousseau submitted this one prior to his departure. We had applied for \$33,150.00 and were awarded \$16,460.00. Some other local departments also received this amount – see below. Funding will be used for Cancer prevention equipment.

Local Fire Departments receiving funding included:

- **\$32,921** for North Bay Fire Department
- **\$16,460** for Bonfield Township Fire Department
- **\$16,460** for the Callander Fire Department
- **\$16,460** for East Ferris Fire Department
- **\$16,460** for Township of Nipissing Fire Department
- **\$16,460** for the Powassan Fire Department
- **\$8,230** for the Calvin Township Fire Department
- **\$8,230** for the Mattawa Town Fire Department
- **\$8,230** for the Papineau-Cameron Township Fire Department
- **\$3,959** for the Chisholm Township Fire Department

File #2024-03

November 25, 2024

Planning Report – BARNES, 44 Purdon Line, Part Lot 16, Concession 11 (Himsworth); PT LT 25 RCP 320 PT 1 42R4645, EXCEPT PT 14 TO 16 42R12151; S/T RO27765 in the Municipality of Powassan

Introduction – Proposal Description

A Zoning By-law Amendment application has been submitted to rezone the subject lands to permit a second residential dwelling to accommodate farm labour. The proposed amendment will change the zoning from Rural (RU) to Rural Exception-Sixteen (RU-16) to allow an accessory farm dwelling of an approximately 1400 ft² (130 m²).

Location and Lot Description

The subject lands are known municipally as 44 Purdon Line, Powassan and are legally described as PT LT 25 RCP 320 PT 1 42R4645, EXCEPT PT 14 TO 16. 42R12151; S/T RO27765, Municipality of Powassan. The subject lands are approximately 12 ha (28 ac) in size with approximately 167 m (548 ft) of frontage on Purdon Line. The proposed development is also within 50 m of the Provincial Highway 11. The location of the subject lands is shown in [Figure 1](#).

The property has an existing primary residential dwelling, detached garage, barn and dome. A property sketch shown in [Figure 2](#) has been provided by the applicant illustrating the existing development, farming operation and proposed location of the accessory dwelling.

FIGURE 1. GENERAL LOCATION MAP



FIGURE 2. PROPERTY SKETCH



Provincial Planning Statement, 2024

The subject lands are considered Rural Lands where Section 2.6 outlines the permitted uses:

1. *On rural lands located in municipalities, permitted uses are:*
 - a) *the management or use of resources;*
 - b) *resource-based recreational uses (including recreational dwellings not intended as permanent residences);*
 - c) *residential development, including lot creation, where site conditions are suitable for the provision of appropriate sewage and water services;*
 - d) *agricultural uses, agriculture-related uses, on-farm diversified uses and normal farm practices, in accordance with provincial standards;*
 - e) *home occupations and home industries;*
 - f) *cemeteries; and*
 - g) *other rural land uses*

As defined in the PPS 2024, “agricultural uses” include:

...housing for farm workers, when the size and nature of the operation requires additional employment.

The proposed zoning amendment has been reviewed against the applicable policies within the 2024 PPS and is consistent.

Growth Plan for Northern Ontario, 2011

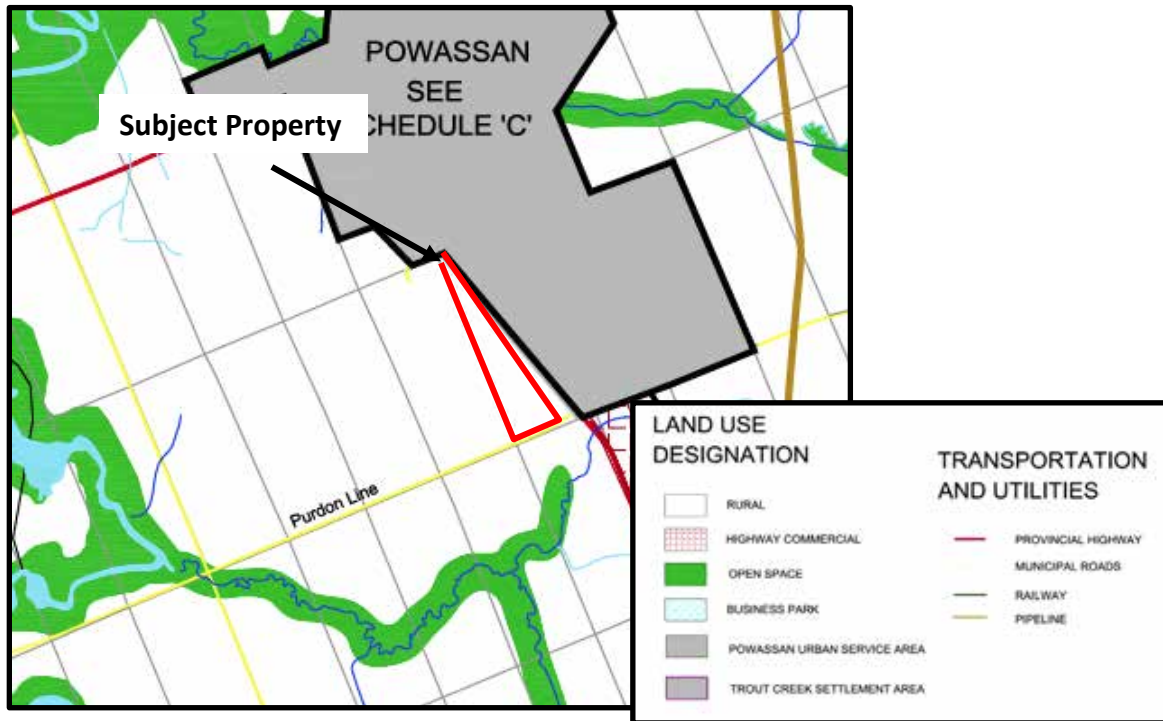
The Growth Plan for Northern Ontario is a 25-year plan that provides guidance to align provincial decision-making and investment for economic and population growth in Northern Ontario. The proposed amendment is consistent with the applicable policies of the Growth Plan.

Municipality of Powassan Official Plan, October 2003

The subject property is in the “Rural Area” designation on Schedule A – Land Use Designations, shown in [Figure 3](#). Schedule B of the Plan also identifies the property as a location of “Primary Sand & Gravel Resource Area.” Section 5.7.1 of the Official Plan provides a wide range of permitted Rural Area uses that:

... include low density residential uses, tourist establishments, open space, resource management activities and agricultural uses.

FIGURE 3. OFFICIAL PLAN RURAL DESIGNATION



The proposed development is within proximity to Provincial Highway 11 and Section 4.15.7 states:

Where the development of a sensitive land use is proposed within proximity to provincial highways and rail lines, compatibility may need to be demonstrated, depending on the type of provincial highway and rail line, and depending on distance.

Additionally, any setbacks or requirements from the Ministry of Transportation may apply. Comment from the MTO will be required to determine if the proposal is within Permit Control Area.

Section 4.18 of the Plan are policies relating to Private Sewage Disposal and Water Systems, where:

No development shall be permitted unless it can be shown to the satisfaction of the Municipality that there is an adequate water supply, sewage disposal system to service the development. In addition, no development shall be permitted unless Council is satisfied that the development will not have an adverse impact on neighbouring wells and sewage disposal systems.

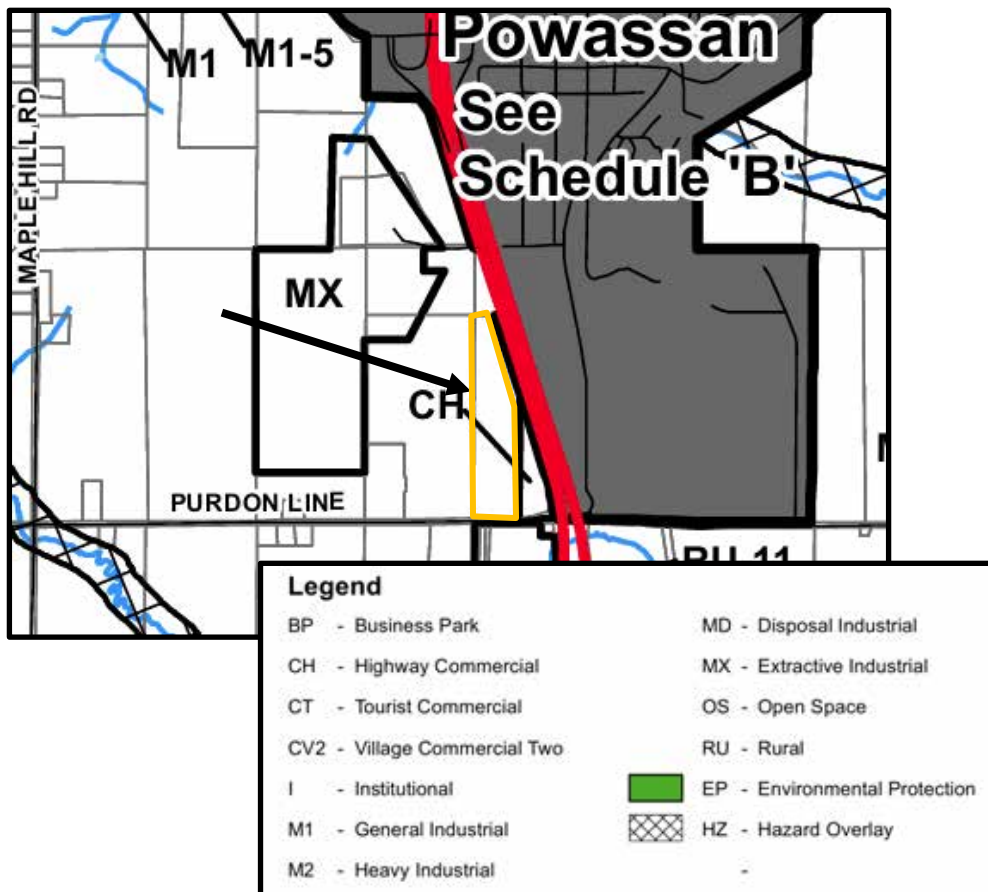
The application and site sketch does not identify proposed water and sewage locations for the new dwelling, and it would be appropriate that no development be permitted until the municipality is satisfied that on-site servicing can be adequately provided.

The accessory dwelling for farm workers is a recognized use in the Rural Area provided water and sewer services can be provided. The proposed amendment has been reviewed against the applicable policies of the Official Plan and is found to conform to the overall intent and policy direction.

Zoning By-law 2003-38

The subject lands are currently zoned Rural on Schedule A of the Zoning By-law and shown in [Figure 4](#).

FIGURE 4. SCHEDULE A: MUNICIPALITY OF POWASSAN ZONING BY-LAW (44 PURDON LINE)



Rural Zone uses in Section 4.4.1 of the Zoning By-law currently permit an “accessory farm dwelling” on existing lots of at least 30 hectares in size. As previously mentioned, the subject property is approximately 12 ha in size and the accessory use would not be permitted.

Additionally, the proposed accessory farm dwelling will be required to meet RU zoning provisions. The application included existing structures, dimensions, existing setbacks and coverage. All existing structures appear to meet zoning setbacks and have a combined area of approximately 1870 m² (± 20138 ft²) or 1.6 % coverage whereas a 25 % maximum coverage is permitted. The additional 130 m² (1400 ft²) of proposed building area represents only 0.1 % of additional coverage.

The proposed Zoning By-law Amendment will rezone the property from Rural (RU) to Rural Exception-Sixteen (RU-16) to permit an accessory farm dwelling on a lot less than 30 ha in size.

Recommendation

The Zoning By-Law amendment is consistent with the PPS 2024 and Northern Growth Plan, conforms with the Powassan Official Plan, complies with all other requirements of the Zoning By-law, and is considered good planning and in the public interest.

Respectfully Submitted,

PLANSCAPE INC.



Ryan Lloyd B.E.S.
Planning Consultant



Rian Allen M.Sc., MCIP, RPP
Planning Consultant



STAFF REPORT

To: Council
From: Treasurer/Director of Corporate Services
Re: Signing Authority Bylaw

RECOMMENDATION:

That the staff report regarding the Signing Authority Bylaw be received; and that the draft Bylaw be approved.

ANALYSIS:

The Municipality of Powassan's current Signing Authority Bylaw was adopted in 2001 and includes reference to several employee positions which are no longer present. With the appointment of our former Deputy Treasurer to the Fire Chief role, the Treasurer is the only employee on staff who is authorized to sign cheques on behalf of the Municipality.

In addition, the Municipality now signs many of its agreements digitally, a practice which, while commonplace and widely accepted, has never officially been endorsed by Bylaw. As staff move to digitize and streamline more internal processes, the use of digital signatures will continue to become more prevalent.

The updated draft Bylaw, as attached, authorizes the Clerk to sign cheques on behalf of the Municipality, and permits electronic signatures on Municipal documentation and agreements.

THE CORPORATION OF THE MUNICIPALITY OF POWASSAN

BYLAW NO. 2025-XX

Being a Bylaw to appoint Signing Officers

WHEREAS Section 8 of the Municipal Act confers broad authority on the Municipality to enable the Municipality to govern its affairs;

AND WHEREAS the Municipality wishes to appoint signing officers;

NOW THEREFORE the Council of the Corporation of the Municipality of Powassan enacts as follows:

1. The Municipality of Powassan appoints the following positions as signing officers for the Corporation: Mayor, Deputy Mayor, Clerk, and Treasurer.
2. All cheques issued by the Municipality shall be signed by one of the Mayor or Deputy Mayor, and one of the Treasurer or Clerk.
3. The signature of any person authorized to sign documents on behalf of the Municipality may be written, engraved, printed, electronically produced, or otherwise mechanically produced.
4. That if the provisions of this Bylaw conflict with any other Bylaw of the Corporation heretofore passed, then the provisions of this Bylaw shall prevail.
5. That Bylaw 2001-15 is hereby repealed.
6. That this Bylaw shall take effect upon its adoption.

READ a FIRST and SECOND time, and considered READ a THIRD and FINAL time and adopted as such in open Council meeting this 21st day of January, 2025, for the immediate wellbeing of the Municipality.

Mayor

Clerk



STAFF REPORT

To: Council
From: Treasurer/Director of Corporate Services
Re: 2025 Budget Meetings

RECOMMENDATION:

That the staff report regarding 2025 budget meeting dates be received; and that Council set dates for two special budget meetings for February and March of 2025.

ANALYSIS:

Staff have been working on developing a first draft 2025 budget for Council consideration. There are a few outstanding items staff are waiting on quotes for, before the draft is ready for presentation.

In order to accommodate this, and allow time for notice to be issued, staff are suggesting the following dates for budget meetings:

- February 20, 2025
- March 10, 2025

As with previous years, it is staff's intention that the budget be adopted by the first regular meeting of April.



STAFF REPORT

To: Council
From: Treasurer/Director of Corporate Services
Re: Blue Box Transition

RECOMMENDATION:

That the staff report regarding the Blue Box Transition be received; and that staff be directed to notify businesses currently receiving curbside recycling collection services that these services will end effective September 16, 2025.

ANALYSIS:

Effective September 16, 2025, the Municipality of Powassan will be transitioning under the amended Blue Box regulation. Under this program, Emterra Environmental Inc. has been identified by Circular Materials as the proponent for these services moving forward.

At this time, details have been scarce about the implications at our landfill site as the Province has been prioritizing municipalities in accordance with their transition dates. As more information emerges, staff will bring this to Council for a decision on our future direction.

However, what has been made clear is that, under the new program, our proponent will be offering collection services to eligible (i.e., residential) sources only. Producers, which include commercial businesses, not-for-profit organizations, places of worship, and trailer parks, are non-eligible sources and will not be offered curbside collection services.

Staff would like to send notices to all affected businesses that, effective our transition date, curbside recycling collection services will terminate. We would aim to do this immediately, to allow as much time as possible for the affected businesses to seek alternative arrangements.



STAFF REPORT

To: Council
From: A. Quinn, Clerk
Re: Proposed Changes to Procedural Bylaw 2023-18

RECOMMENDATION:

That the staff report regarding the proposed changes to Section 5.9 of Procedural Bylaw 2023-18 be received; and that staff be directed to make the changes and follow proper notice procedure as per Section 2.7 of the Bylaw.

ANALYSIS:

At the January 7, 2025, Regular Meeting of Council, staff were directed to provide alternatives for updates to Section 5.9 of the Procedural Bylaw 2023-18, regarding members of Council participating in Council meetings electronically.

Section 5.9 currently reads as follows:

“A Member of Council may participate electronically in a Meeting that is either open or closed to the public should they be unable to participate in person for medical reasons, illness, or in the event of a situation or pandemic in which physical distancing, limited gatherings or quarantine measures are required by local, provincial or federal public health agencies, and in doing so may be counted in determining whether or not a quorum of members is present at any point in time and shall have all the rights of any other Member who is participating in person.”

Based on the discussion and research on how other municipalities conduct Council meetings, staff recommend the following change:

“A member of Council may participate electronically in a Meeting that is either open or closed to the public should they be unable to participate in person for medical reasons, illness, they are traveling, in the event of poor winter road conditions, or in the event of a situation or pandemic in which physical distancing, limited gatherings or quarantine measured are required by local, provincial or federal public health agencies, and in doing so may be counted towards quorum of members and shall have all the rights of any other Member who is participating in person.

5.91 Notwithstanding Section 5.9, Members may participate electronically in no more than five meetings per calendar year.”

Section 5.13 provides details on how and when to notify the Clerk if a Member plans to join a meeting electronically. This would not change.



Resolution no. 2025 - _____

Date: February 4, 2025

Moved by:

Seconded by:

That the Municipality of Powassan supports the application to the Seniors Active Living Centre program for the 2025-26 period and hereby commits to including \$3,000.00 in the 2025 budget, along with \$5,850.00 in in-kind support (use of 250 Clark meeting rooms, the gymnasium and commercial kitchen) for this program period.

Carried

Defeated

Deferred

Lost

Mayor

Recorded Vote: Requested by _____

Name	Yeas	Nays	Name	Yeas	Nays
Councillor Randy Hall			Mayor Peter McIsaac		
Councillor Markus Wand					
Councillor Dave Britton					
Councillor Leo Patey					



STAFF REPORT

To: Council
From: Treasurer/Director of Corporate Services
Re: Tender for Pool Repairs

RECOMMENDATION:

That the staff report regarding the Pool Repairs Tender be received; and that staff be directed to proceed with issuing a tender for this work.

ANALYSIS:

In August of 2024, the Municipality received notification that it had been approved for an Ontario Trillium Foundation grant in the amount of \$170,500 for capital repairs to the community pool. More specifically, the grant was to cover the costs to repair the pool bottom and deck and replace the pumps and filters.

Staff would like to proceed with issuing a tender for this work as soon as possible, to ensure the pool can open on time. Because we are pre-budget, as per the Procurement Bylaw staff are seeking a resolution from Council authorizing the issuance of this tender.

**THE CORPORATION OF THE MUNICIPALITY OF POWASSAN
(BARNES)
BYLAW NO. 2025-03**

Being a Bylaw to amend Bylaw No. 2003-38, as amended, the Zoning Bylaw for the Municipality of Powassan with respect to lands described as PT LT 25 RCP 320 PT 1 42R4645, EXCEPT PT 14 TO 16. 42R12151; S/T RO27765, (Civic Address: 44 Purdon Line), in the Municipality of Powassan.

WHEREAS the Council of the Corporation of the Municipality of Powassan is empowered to pass Bylaws to regulate the use of land pursuant to Section 34 of the Planning Act, 1990;

AND WHEREAS the owners of the subject lands have filed an application with the Municipality of Powassan to amend Bylaw No. 2003-38, as amended;

AND WHEREAS the Council of the Corporation of the Municipality of Powassan deems it advisable to amend ByLaw 2003-38, as amended;

NOW THEREFORE the Council of the Corporation of the Municipality of Powassan enacts as follows:

1. Schedule 'B' to Zoning Bylaw No. 2003-38 as amended, is hereby further amended by re-zoning affected lands described as PT LT 25 RCP 320 PT 1 42R4645, EXCEPT PT 14 TO 16. 42R12151; S/T RO27765, (Civic Address: 44 Purdon Line), in the Municipality of Powassan from Rural (RU) to Rural Exception Sixteen (RU-16) as shown hatched on Schedule 'A-1' attached hereto and forming part of this Bylaw.
2. Section 4.4.3 of Zoning Bylaw No. 2003-38 is hereby further amended by the addition of the following subsection:

4.4.3.16 Rural Exception Sixteen (RU -16) Zone

Notwithstanding the provisions of the Rural (RU) Zone, on lands described as PT LT 25 RCP 320 PT 1 42R4645, EXCEPT PT 14 TO 16. 42R12151; S/T RO27765, (Civic Address: 44 Purdon Line), in the Municipality of Powassan, an accessory farm dwelling shall be permitted.

In all other respects, the provisions of ByLaw 2003-38 shall apply.

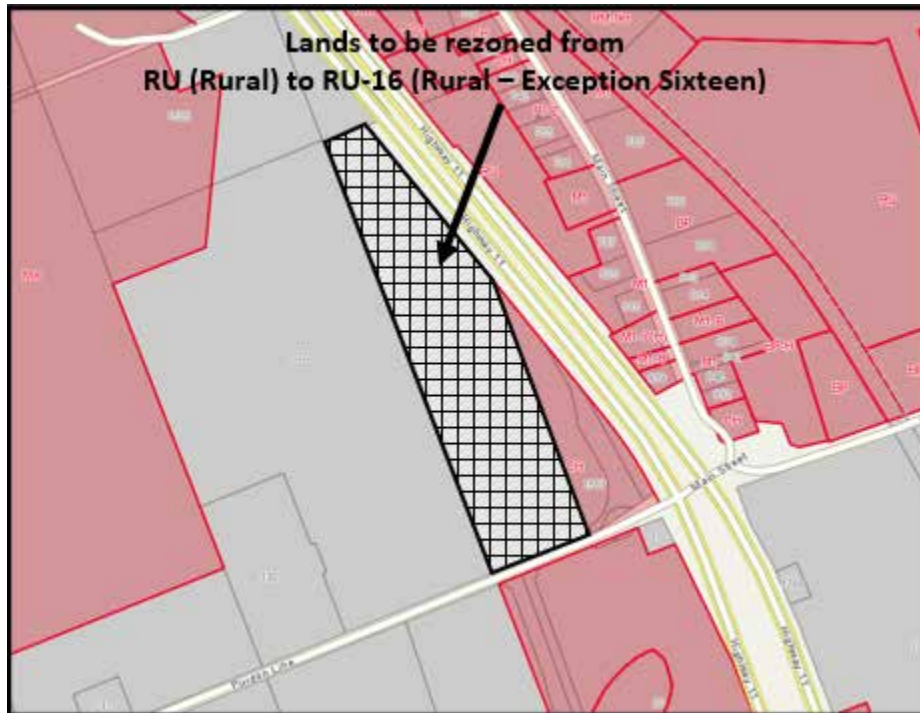
3. This Bylaw shall come into effect upon the date of passage hereof, subject to the provisions of Section 34 (30) and (31) of the Planning Act, 1990.

READ a **FIRST** and **SECOND** time on the 4th day of February 2025 and to be **READ** a **THIRD** and **FINAL** time and considered passed in open Council on the 18th day of February 2025.

Mayor

Clerk

Schedule 'A-1'



THE CORPORATION OF THE MUNICIPALITY OF POWASSAN

BYLAW NO. 2025-04

Being a Bylaw to appoint Signing Officers

WHEREAS Section 8 of the Municipal Act confers broad authority on the Municipality to enable the Municipality to govern its affairs;

AND WHEREAS the Municipality wishes to appoint signing officers;

NOW THEREFORE the Council of the Corporation of the Municipality of Powassan enacts as follows:

1. The Municipality of Powassan appoints the following positions as signing officers for the Corporation: Mayor, Deputy Mayor, Clerk, and Treasurer.
2. All cheques issued by the Municipality shall be signed by one of the Mayor or Deputy Mayor, and one of the Treasurer or Clerk.
3. The signature of any person authorized to sign documents on behalf of the Municipality may be written, engraved, printed, electronically produced, or otherwise mechanically produced.
4. That if the provisions of this Bylaw conflict with any other Bylaw of the Corporation heretofore passed, then the provisions of this Bylaw shall prevail.
5. That Bylaw 2001-15 is hereby repealed.
6. That this Bylaw shall take effect upon its adoption.

READ a FIRST and SECOND time, and considered READ a THIRD and FINAL time and adopted as such in open Council meeting this 4th day of February 2025, for the immediate wellbeing of the Municipality.

Mayor

Clerk

NEXT GENERATION 9-1-1 AUTHORITY SERVICE AGREEMENT

This Agreement is between

a municipality, local service board, first nation, province or other authorized signing authority located at :

(the "9-1-1 Authority")

AND

BELL CANADA, a company incorporated under the laws of Canada, and located at 1 carrefour Alexander Graham Bell, Building A7, Verdun, Quebec H3E 3B3 ("**Bell**")

WHEREAS Next Generation 9-1-1 Service (as defined below) is a service that replaces Enhanced 9-1-1 ("**E9-1-1**") service and is based on Internet Protocol (IP) technologies and supports 9-1-1 Calls natively IP end-to-end;

AND WHEREAS the Canadian Radio-television and Telecommunications Commission ("**CRTC**") determined in Telecom Decision CRTC 2015-531 that Canada's NG9-1-1 system should use the National Emergency Number Association standard ("**NENA i3**") as the baseline reference architecture;

AND WHEREAS in June 2017, the CRTC rendered Telecom Regulatory Policy CRTC 2017-182, which, among other things, directed all Incumbent Local Exchange Carriers ("**ILEC**")s to establish Next Generation 9-1-1 networks by 9-1-1 network service providers;

AND WHEREAS Bell operates and manages a Next Generation 9-1-1 System serving the provinces where it is the ILEC and where requested by a Small Incumbent Local Exchange Carrier ("**SILEC**") to operate as the SILEC's NG9-1-1 network provider, including in the territory in which the 9-1-1 Authority operates.

NOW THEREFORE, for valuable consideration, the receipt and sufficiency of which are acknowledged, the parties agree as follows:

1. DEFINITIONS

In this Agreement, in addition to those terms which are parenthetically defined, capitalized terms shall have the meanings ascribed to them in Schedule "A" (Definitions).

2. SCOPE OF AGREEMENT

- (a) **Agreement:** The 9-1-1 Authority requests and Bell will provide to the 9-1-1 Authority the Next Generation 9-1-1 services (the "**NG9-1-1 Service**") described below and in the schedules attached to, and forming part of, this agreement (each a "**Schedule**") in accordance with the terms and conditions of this agreement. Altogether, the Tariffs (as defined in Section 2(b)), the terms and conditions set out in this agreement, and the applicable Schedules form the "**Agreement**".
- (b) **Tariffed Services and CRTC Approval:** The NG9-1-1 Service is regulated by the CRTC and shall only be provided in compliance with the applicable tariffs including CRTC 7400, Bell Canada National Services Tariff Item 601 – Next Generation 9-1-1 (NG9-1-1) Service (together with all applicable decisions, directions and orders of the CRTC, are referred to herein as the "**Tariffs**"), and the Tariffs, which form part of this Agreement, shall prevail in the event of a conflict with the terms and conditions set out herein.

(c) **Service Description:** The NG9-1-1 Service provides a managed, private, dedicated IP network referred to as the Emergency Services Internet Protocol network (“**ESInet**”). The ESInet provides the transport and interconnectivity for all i3-PSAPs within the Serving Area as well as Originating Service Provider networks supporting 9-1-1 Calls over IP-based networks and devices. For i3-PSAPs, the ESInet is delivered to the PSAP operations premise using Bell’s IP VPN service to the PSAPs authorized by the 9-1-1 Authority. The NG9-1-1 Service also provides a series of applications and service interfaces known as NG9-1-1 Core Services (“**NGCS**”) and may include other third party applications from trusted entities as may be requested by the 9-1-1 Authority and agreed to by Bell and approved by CRTC. Bell provided NG9-1-1 Service features are described in the User-to-Network Interface (“**UNI**”) and in Schedule ‘B’ (NG9-1-1 Network Features). 9-1-1 Authority agrees that Bell is not responsible nor liable for damages arising from 9-1-1 Authority’s use of third party applications in conjunction with the NG9-1-1 Service.

(i) In accordance with CRTC 7400, Bell Canada National Services Tariff Item 601, Bell agrees to:

- A. Provide NG9-1-1 Service to the 9-1-1 Authority within the Serving Area;
- B. Provide ESInet IP connection with redundant and, dependent upon availability, diverse facilities to PSAP locations designated by the 9-1-1 Authority and as listed in Schedule “C” (PSAP Designations & Locations);
- C. Selectively route and enable selective transfer of 9-1-1 Calls to the Primary-PSAP, Secondary-PSAPs and Dispatch Agency according to policy routing rules crafted to the needs of the 9-1-1 Authority, including those described in PSAP Contingency Plans;
- D. Transmit geodetic and/or civic location information, call back number of the 9-1-1 Caller and any additional available data elements as made available by the Originating Network Provider (“**ONP**”);
- E. Receive, aggregate and maintain into a single dataset representative of Bell’s entire serving area, mapping and addressing information provided by the 9-1-1 Authority or to its designee;
- F. Perform Quality Assurance and Quality Control (QA/QC) on the aggregated dataset and provide mapping and addressing discrepancy / errors reporting back to the 9-1-1 Authorities or to their designees;
- G. Maintain a dedicated 24X7 9-1-1 Control Centre to support the NG9-1-1 Service;
- H. Maintain a Basic 9-1-1 Final Routing Alternative involving a third-party call centre, such as those used for nomadic VoIP calls; and
- I. Enable access to location information when provided by-reference by the ONP with the original NG9-1-1 call;
- J. Enable access to the additional data repositories provided by trusted entities as defined by the CRTC.

(ii) The 9-1-1 Authority agrees to:

- A. Designate Primary PSAPs, Secondary PSAPs and Back-Up PSAPs to answer and dispatch 9-1-1 Calls in the Serving Area;
- B. Where not otherwise defined by applicable provincial legislation and absent a provincial body that acts as a GIS data aggregator, create, maintain and update all boundaries, addressing and mapping information according to applicable standards (MSAG and GIS) and perform quality assurance and control on the data prior to submission. If a third party is to provide the GIS data on behalf of the 9-1-1

authority, such party shall be identified in Schedule “G”, and that 9-1-1 specific GIS data layers must be provided directly to Bell in a secure manner without transiting through any shared open platform;

- C. Take responsibility for changes to the 9-1-1 call routing resulting from submitted GIS data.
 - D. Ensure that all designated PSAPs are compliant with specifications and guidelines outlined in Schedule “D” (Specifications & Guidelines);
 - E. Ensure, all PSAPs in the Serving Area are compliant with the deployment criteria listed in Schedule “E” (Deployment Criteria);
 - F. Ensure all PSAPs in the Serving Area have secure 9-1-1 data and systems which security includes physical security, network security, cybersecurity and all other considerations within the PSAPs domains;
 - G. Ensure all PSAPs in the Serving Area have and maintain current contact information and make it available as per the NENA i3 standard;
 - H. Ensure the Primary PSAP accepts specific planned test calls from the public;
 - I. Ensure the Primary PSAP implements a call handling solution that includes a test call interface and automaton as described in NENA i3;
 - J. Resolve mapping and addressing discrepancies / errors reported to the GIS Authorities by Bell in a timely manner or as otherwise specified in the discrepancy report;
 - K. Provide supporting technical and operational documentation as listed in Schedule “D” (Specifications & Guidelines) on the Bell 9-1-1 Flex Portal; and
- (iii) The NG9-1-1 Authority acknowledges and agrees that NG9-1-1 Service resiliency, reliability and security depends upon the following:
- A. The type and capabilities of the Originating Service Provider and the technology from which 9-1-1 Calls originate;
 - B. The accuracy of the data provided by the various NG9-1-1 stakeholders including the 9-1-1 Authority, PSAP and Originating Service Providers and other trusted entities;
 - C. The use of encryption and appropriate security protocols as described in Schedule E of this Agreement and as may be further developed over time;
 - D. The availability of entrance diversity configuration, and physical attributes including the distance between entry points and power diversity of the PSAP Location, and agrees that ensuring the foregoing elements are the best available will improve its experience with the NG9-1-1 Service.
- (iv) Bell and 9-1-1 Authority agree that the implementation of Next Generation 9-1-1 Service within the Serving Area shall be carried out pursuant to the User-to-Network Interface (UNI) Technical Specification Document and the requirements established by the CRTC, and the Parties agree to update this Agreement as the CRTC requirements evolve.

- (v) The NG9-1-1 Service allows for many new feature possibilities with regards to types of data that can be transmitted. The availability of these features may require upgrades to software and or hardware.
 - (vi) The NG9-1-1 Service will require security updates on an ongoing basis. To ensure the security of the NG9-1-1 Service, the NG9-1-1 Authority commits to ensure the PSAPs selected to serve its inhabitants, apply security updates (including any security patches) promptly. In the event of a PSAP failure to apply security updates Bell may, in its sole discretion, remove the PSAP from Bell's ESInet.
 - (vii) In the event a PSAP is removed from Bell's ESInet, 9-1-1 Calls destined for the PSAP will be rerouted in accordance with the PSAP's defined Policy Routing Rules.
- (d) **Bell Providers:** Bell may perform its obligations under this Agreement through its affiliates (as defined in the *Canada Business Corporations Act*) (an "**Affiliate**"), agents, suppliers or subcontractors (the "**Bell Providers**"), but Bell shall not be relieved of its obligations by using the Bell Providers.

3. FEES

The CRTC approved Tariffs set out certain rates, fees, and charges and capital, development or installation costs (if any) (the "**Fees**") applicable to the NG9-1-1 Services. The 9-1-1 Authority shall pay Fees that are specified in the Tariffs. For services related to the NG9-1-1 Services but not specified or included in the Tariffs, such as expenses related to additional sites or circuits the 9-1-1 Authority may require beyond those provided for by the Tariff, the 9-1-1 Authority shall pay the fees as agreed to by the Parties. The 9-1-1 Authority shall also pay applicable taxes levied or assessed by taxing authorities or imposed by third-party providers in the rendering of services required by the 9-1-1 Authority, if any, (collectively "**Taxes**"). The 9-1-1 Authority shall pay Fees and Taxes within 30 days of the invoice date. Fees and Taxes are subject to a late payment charge ("**Late Payment Charge**") at the rate specified in the invoice, which rate may vary from time to time, calculated from the invoice date, if Fees and Taxes are not paid within 30 days of the invoice date. For clarity, a 9-1-1 authority may arrange for their designated PSAP to pay applicable Fees and Taxes on their behalf and request that invoices for services rendered with respect to the NG9-1-1 services be sent directly to the designated PSAP.

4. TERM AND TERMINATION

- (a) **Term:** The term of this Agreement (the "**Initial Term**") will begin on the date it is signed by the 9-1-1 Authority (the "**Effective Date**") and it will expire or terminate after ten (10) years unless otherwise terminated under the terms of this Agreement.
- (b) **Renewal Term(s):** If permitted under the relevant Tariffs, upon expiry of the Initial Term the Agreement shall be automatically renewed for successive periods of five (5) years each unless one party gives to the other at least six (6) months written notice of termination prior to the end of the initial term or any renewal period (in each case, a "**Renewal Term**"). The Initial Term and any Renewal Term(s) are collectively referred to as the "**Term**".
- (c) **Termination or Suspension of a Service:** Bell may immediately suspend the entirety or a portion of the NG9-1-1 Service where Bell has reasonable cause to believe that the 9-1-1 Authority's traffic is compromised or otherwise poses a risk to the NG9-1-1 Service. For any reason other than the integrity of NG9-1-1 Service, the 9-1-1 Authority may terminate the NG9-1-1 Service, or Bell may terminate or suspend the NG9-1-1 Service, in accordance with the terms of the relevant Tariffs with six (6) months prior written notice.

5. LIMITATION OF LIABILITY

- (a) Bell's liability for the performance of its obligations pursuant to this Agreement shall be subject to and governed by Bell's Tariffs.

- (b) The 9-1-1 Authority and Bell shall, during the Term, maintain sufficient insurance to cover their respective obligations under this Agreement and shall provide evidence of same to the other party or, if either the 9-1-1 Authority or Bell is self-insured, provide to the other party evidence that is satisfactory to that party that the 9-1-1 Authority and/or Bell, as the case may be, is and will be, at all relevant times, in a position to face successfully its monetary obligations stemming from liability under this Agreement.

6. **CONFIDENTIAL INFORMATION**

- (a) "**Confidential Information**" means any data, documentation or other information of a proprietary or confidential nature of a party, or its Affiliates, or which is treated as confidential by a party or its Affiliates, whether or not identified as being confidential or proprietary, which is disclosed or made available to the other party in connection with the negotiation, preparation or performance of this Agreement. The design, installation, delivery or implementation of the Services, including pricing information, service levels and network design specifications shall constitute Confidential Information of Bell. Confidential Information excludes the 9-1-1 Authority's name, address and listed telephone number and any data, documentation or other information which is (i) in the public domain, (ii) known to the receiving party prior to receipt thereof from the disclosing party, or (iii) available to the receiving party on a non-confidential basis from a source other than the disclosing party, if that source or its source is not in breach of any obligations of confidentiality to the disclosing party; or (iv) the receiving party can show to have been developed independently by the receiving party without using the Confidential Information of the disclosing party. The receiving party agrees to take such care to protect the confidentiality of the Confidential Information as would be taken by a reasonable party to protect its own Confidential Information from disclosure subject to the exceptions set out below.
- (b) Except as: (i) permitted or required by law, regulation or lawful request or to carry out its obligations; and (ii) required to receive or provide the Services under this Agreement, as applicable, the receiving party agrees not to use or disclose the Confidential Information without disclosing party's prior written consent. For clarity, any information exchanged between Bell and the 9-1-1 Authority, their employees, servants, agents and/or co-contractors pertaining to the design, the development, the implementation, the operation and the maintenance of the NG9-1-1 Service is confidential, and shall be provided only to such persons who have a need to know for the purposes of this Agreement.
- (c) The 9-1-1 Authority consents to Bell disclosing 9-1-1 Authority information to the CRTC as required for the CRTC to approve any regulatory filings or CRTC requests for information related to the Services. Additionally, 9-1-1 information that is available with a 9-1-1 Call is provided on a confidential basis pursuant to CRTC 7400, Bell Canada National Services Tariff Item 601 as an exception to Item 10 Article 11 of the Bell Canada General Tariff and shall be used for the sole purpose of answering and dispatching 9-1-1 Calls
- (d) In the event that Bell is provided with access to the 9-1-1 Authority's End Users' information ("**End User Data**"), 9-1-1 Authority shall ensure that it has all the requisite consents for Bell to use such End User Data in the manner contemplated under this Agreement. The 9-1-1 Authority acknowledges and agrees that in the event that the 9-1-1 Authority provides Bell with access to End User Data where Bell is not required to have such access, Bell shall not be liable for any loss, unauthorized access to, or any other act or omission in relation to the End User Data.
- (e) The 9-1-1 Authority and Bell agree to abide by all applicable legislation with respect to the protection of privacy in effect from time to time.
- (f) The 9-1-1 Authority shall ensure their PSAPs comply with the terms of this Section 6. Bell shall only share Confidential Information pertaining to this Agreement with the PSAPs identified in Schedule "C" (PSAP Designations & Locations).

7. **FORCE MAJEURE**

- (a) If there is a default or delay in a party's performance of its obligations under this Agreement (except for the obligation to make any payments under this Agreement), and the default or delay is caused by circumstances beyond the reasonable control of that party including fire, flood, earthquake, elements of nature, acts of God,

epidemic, pandemic, explosion, power failure, third party caused damage to network infrastructure (e.g., a cable cut), war, terrorism, cyber terrorism/warfare, revolution, civil commotion, acts of public enemies, law, order, regulation, ordinance or requirement of any government or legal body having jurisdiction, or labour unrest such as strikes, slowdowns, picketing or boycotts (each an “**Event of Force Majeure**”), then that party shall not be liable for that default or delay, and shall be excused from further performance of the affected obligations on a daybyday basis, if that party uses commercially reasonable efforts to expeditiously remove the causes of such default or delay in its performance.

- (b) Bell and the 9-1-1 Authority agree that in the Event of a Force Majeure the parties will co-operate and make all reasonable efforts to provide a temporary replacement service until the NG9-1-1 Service is restored. The costs required to provide temporary replacement service shall be borne as between Bell and the 9-1-1 Authority in accordance with the Parties’ respective obligations as described in Sections 2(c)(i) & (ii) of this Agreement.

8. **GENERAL PROVISIONS**

- (a) **No Resale:** The 9-1-1 Authority shall not resell or remarket any Service for commercial purposes under the terms and conditions of this Agreement.
- (b) **Entire Agreement and Amendment:** This Agreement is the entire agreement between the 9-1-1 Authority and Bell with respect to the subject matter, and supersedes all prior agreements, understandings, commitments, undertakings, proposals, representations, negotiations and discussions on the subject matter, whether written or oral. There are no, and Bell shall not be liable for, conditions, agreements, representations, warranties or other provisions, express or implied (including through course of dealing), collateral or otherwise, relating to the subject matter of this Agreement, which induced either party to enter into this Agreement or on which either party places any reliance, other than those set forth in this Agreement. This Agreement shall not be amended other than by an instrument in writing signed by both parties and stating that the parties intend to amend this Agreement.
- (c) **Assignment:**
- (i) This Agreement shall bind and enure to the benefit of Bell and the 9-1-1 Authority and their respective successors and permitted assigns. Neither party may assign this Agreement in whole or in part, including any Schedule, without the prior written consent of the other party, not to be unreasonably withheld. However, without the other party’s consent, subject to Paragraph (ii) below, a party may assign all or part of its benefits, rights or obligations under this Agreement to an Affiliate or to an entity in connection with any transaction or series of transactions pursuant to which all or a substantial part of the assigning party’s business is assigned to or otherwise results in forming all or part of the business of such entity (including a present or future affiliate, whether by way of reorganization, consolidation, amalgamation, arrangement, merger, transfer, sale, change in control or otherwise, and, provided such entity, as assignee, agrees to be bound by this Agreement and assumes the obligations assigned under this Agreement pursuant to this Subsection, on and after the effective date of such assignment.
 - (ii) Bell’s prior written consent shall be required in the event of a proposed assignment by 9-1-1 Authority if, in Bell’s determination, the 9-1-1 Authority’s proposed assignee is deemed to be (A) not credit worthy; (B) a competitor of Bell; or (C) non-compliant with any eligibility criteria for the Services. Bell may also assign any receivable that arises under this Agreement, any right to receive payment related to that receivable and any interest in that receivable or right to receive payment.
- (d) **Governing Law:** This Agreement shall be governed by and interpreted according to the laws of Ontario unless the 9-1-1 Authority’s head office is situated in Quebec. If the 9-1-1 Authority’s head office is situated in Quebec, this Agreement shall be governed by and interpreted according to the laws of Quebec. The applicable governing law shall be determined as noted above without regard to any conflicts of law rules that might apply the laws of any other jurisdiction. The parties attorn to the exclusive jurisdiction of the courts of Toronto unless the 9-1-1 Authority’s head office is situated in Quebec, in which case the Parties attorn to the exclusive jurisdiction of the courts of Montreal in respect of all matters arising out of or in connection with this Agreement except CRTC

regulatory matters. For CRTC regulatory matters the parties attorn to the exclusive jurisdiction of the federal courts or tribunals of Canada.

- (e) **Interpretation:** In this Agreement, the headings are for convenience of reference only and shall not affect its construction or interpretation. If there is any conflict between the terms of the main body of this Agreement and a Tariff, if applicable to the Service in dispute, the terms of the applicable Tariff shall govern. If there is any conflict between the terms of the main body of this Agreement and the Schedules, the terms of the main body of the Agreement shall govern unless otherwise expressly provided in writing in a Schedule.
- (f) **Waivers:** No waiver of any provision of this Agreement shall bind a party unless consented to in writing by that party. No waiver of any provision of this Agreement shall be a waiver of any other provisions, nor shall any waiver be a continuing waiver, unless otherwise expressly provided in the waiver.
- (g) **Notice:** All notices and consents provided for shall be given in writing and delivered by personal delivery, prepaid first class registered or certified mail, by facsimile, by regular mail or e-mail. Notices delivered by facsimile shall be considered to have been received upon the sender obtaining a bona fide confirmation of such delivery. Notices delivered by e-mail shall include the following, and shall only be effective if the recipient provides by e-mail a confirmation of delivery and the date of acceptance of the delivery: (i) sender's name, address, telephone number, fax number and e-mail address; (ii) date and time of the transmission; and (iii) the name and telephone number of a person to contact in the event of transmission problems. Delivery of notices after 4:00 p.m. at the address being served constitutes delivery the following day. Notices delivered by regular mail shall be deemed received on the fifth day after the notice has been mailed. The address for notice shall be:

For the **9-1-1 Authority**,

; and

For **Bell**,

c/o 9-1-1 Service Team
930 d'Aiguillon, B320
Quebec, G1R 5M9

Email: signatures.911@bell.ca

With a copy to,

c/o Corporate Secretary
1 Carrefour Alexander Graham Bell, Building A, 4th Floor
Verdun, Québec H3E 3B3.

Facsimile: (514) 766-8161

The 9-1-1 Authority shall notify Bell of a change in its billing address and any change in its corporate name or any business or trade name used in connection with the Services.

- (h) **Severability:** If any provision of this Agreement is found by a court of competent jurisdiction to be invalid, illegal or unenforceable, the other provisions of this Agreement shall not be affected or impaired, and the offending provision shall automatically be modified to the least extent necessary in order to be valid, legal and enforceable.

- (i) **Survival:** The following Sections of this Agreement shall survive termination or expiration of this Agreement: Sections 3 (Fees), 4(c) (Termination or Suspension of a Service), 5 (Limitation of Liability), 6 (Confidential Information), and this Section 8 (General Provisions).
- (j) **Counterparts:** This Agreement may be signed in one or more counterparts (including through electronic signatures), each of which shall be considered an original and all of which, taken together, shall constitute one and the same instrument.
- (k) **Language:** The parties have requested that this Agreement and all correspondence and all documentation relating to this Agreement be written in the English language. Les parties aux présentes ont exigé que la présente entente, de même que toute la correspondance et la documentation relative à cette entente, soient rédigées en langue anglaise.
- (l) **No Partnership and Third-Party Beneficiaries:** Bell is an independent contractor of the 9-1-1 Authority. The Agreement shall not be construed to and does not create a relationship of agency, partnership, employment or joint venture. Nothing in this Agreement, express or implied, shall or is intended to confer on any other person, firm or enterprise, any rights, benefits, remedies, obligations or liabilities of this Agreement, other than the parties, their respective successors or permitted assigns.

<p>_____</p> <p>SIGNATURE: _____</p> <p>NAME: _____</p> <p>TITLE: _____</p> <p>I am authorized to bind the 9-1-1 Authority to the terms and conditions of this Service Schedule.</p> <p>DATE: _____</p>	<p>BELL CANADA</p> <p>SIGNATURE: _____</p> <p>NAME: _____</p> <p>TITLE: _____</p> <p>I am authorized to bind Bell Canada to the terms and conditions of this Service Schedule.</p> <p>DATE: _____</p>
<p>SIGNATURE: _____</p> <p>NAME: _____</p> <p>TITLE: _____</p> <p>I am authorized to bind the 9-1-1 Authority to the terms and conditions of this Service Schedule.</p> <p>DATE: _____</p>	

Schedule "A"

DEFINITIONS

In this Agreement, in addition to those terms which are parenthetically defined, capitalized terms shall have the meanings ascribed to them in this Schedule "A" and where not otherwise defined in this Agreement, as ascribed in the current Network Interconnection (UNI) Document.

"9-1-1 Authority" means the municipality, local service board, first nation, province or any other authorized signing authority responsible for 9-1-1 service operations pursuant to the CRTC 7400 Bell Canada National Services Tariff Item 601 – Next Generation 9-1-1 (NG9-1-1) Service, and defined as the 9-1-1 Authority party to this Agreement;

"9-1-1 Call" means a request for public safety assistance signalled by a 9-1-1 Caller using a device and communications service supporting 9-1-1 dialling, and delivered through the NG9-1-1 Service, regardless of the media (e.g., voice, video, text, other) used to make that request;

"9-1-1 Caller" means end user dialing 9-1-1;

"9-1-1 Control Centre" means a dedicated 9-1-1 24/7 support, maintenance and surveillance centre;

"Agreement" has the meaning ascribed to it in Section 2(a);

"Back-Up PSAP" or **"Back-Up Public Safety Answering Point"** means the back-up PSAP as identified by the 9-1-1 Authority in Schedule "C";

"Basic 9-1-1 Final Routing Alternative" means the designated last resort routing destination involving a third-party call centre, such as those used for nomadic VoIP calls;

"Bell 9-1-1 Flex Portal" means a secure Web site accessible from the public Internet for Customers to access information pertaining to its NG9-1-1 Services.

"CEE" means Customer Edge Equipment and refers to the peering equipment provided by the customer, facing the Bell Customer Edge router;

"CRTC" or **"Canadian Radio-Television and Telecommunications Commission"** has the meaning ascribed to it in the preamble to this Agreement;

"Effective Date" has the meaning ascribed to it in Section 4(a);

"End User Data" has the meaning ascribed to it in Section 6(d);

"Event of Force Majeure" has the meaning ascribed to it in Section 7(a);

"ESInet" has the meaning ascribed to it in Section 2(c)(i);

"GIS Authority" means a body that has control over and the power to make decisions about the source addressing and GIS data which is responsible for providing aggregated GIS/addressing data on behalf of the 9-1-1 Authority to the NG9-1-1 Service Provider for the purpose of NG9-1-1 Service;

"GIS Data Provider" means an entity that assigns addresses, creates, collects, maintains and shares spatial datasets. It may include addressing authorities (e.g. local, provincial and territorial governments, First Nations), 9-1-1 Authorities, and data aggregators;

"GIS" and **"Geographic Information System"** Means a system for capturing, storing, displaying, analyzing and managing data and associated attributes which are spatially referenced;

“**i3-PSAP**” means a Public Safety Answering Point (PSAP) conformant to the NENA i3 standard (NENA-STA-010), which is capable of receiving IP-based signaling and media for delivery of emergency calls;

“**Initial Term**” has the meaning ascribed to it in Section 4(a);

“**ILEC**” and “**Incumbent Local Exchange Carrier**” means the existing telephone companies, prior to the introduction of local competition;

“**Late Payment Charges**” has the meaning ascribed in Section 3;

“**Local Registration Authority**” have the meaning ascribed to them in CRTC Decision 2019-353;

“**MSAG**” or “**Master Street Address Guide**” means the database that contains street names and house number ranges within their associated communities defining Emergency Service Zones (ESZs) and their associated Emergency Service Numbers (ESNs) to enable proper selective routing and selective transfer of 9-1-1 calls in the legacy E9-1-1 environment;

“**NENA i3**” has the meaning ascribed to it in the preamble of the Agreement;

“**NG9-1-1**” means a secure, IP-based, open-standards based system comprised of hardware, software, data, and operational policies and procedures that (1) provides standardized interfaces from emergency call and message services to support emergency communications, (2) processes all types of emergency calls, including voice, text, data, and multimedia information, (3) acquires and integrates additional emergency call data useful to call routing and handling, (4) delivers the emergency calls, messages and data to the appropriate PSAP and other appropriate emergency entities based on the location of the caller, (5) supports data, video, and other communications needs for coordinated incident response and management and (6) interoperates with services and networks used by first responders to facilitate emergency response;

“**NG9-1-1 Network Provider**” means the CRTC mandated ILEC providing the ESInet/NGCS;

“**NG9-1-1 Service**” has the meaning ascribed to it in Section 2(c)(i);

“**NGCS**” and “**Next Generation 9-1-1 Core Services**” means the base set of services needed to process a 9-1-1 call on an ESInet. NGCS includes the Emergency Service Routing Proxy (ESRP), Emergency Call Routing Function (ECRF), Location Validation Function (LVF), Border Control Function (BCF), Bridge, Policy Store, Logging Services and typical IP services such as Domain Name System (DNS). The term NGCS includes the services and not the network on which they operate (i.e., the ESInet);

“**Offnet Agency**” means an agency outside of the NG9-1-1 network, such as a poison control centre or an hospital, which may be designated by the 9-1-1 Authority to be able to receive PSTN calls transferred by a designated PSAP;

“**ONP**” and “**Originating Network Provider**” means a CRTC-approved trusted entity service provider that allows its subscribers to originate 9-1-1 dialled voice or non-voice calls from the public to PSAPs, including but not limited to wireline, wireless, and fixed/native voice over internet protocol (VoIP) services.

“**PRR**” and “**Policy Routing Rule**” means the criteria which determines how 9-1-1 Calls are routed under stated conditions such as when a target PSAP is unable to take 9-1-1 Calls;

“**PSAP**” or “**Public Safety Answering Point**” means an entity responsible for receiving 9-1-1 Calls and processing those 9-1-1 Calls according to a specific operational policy - a Primary Public Safety Point, Secondary Public Safety Point, and Back-Up Public Safety Point as identified by the 9-1-1 Authority in Schedule “C” (PSAP Designations & Locations);

“**PSAP Contingency Plans**” means a plan in case of a disaster;

“**PSAP Credentialing Agency**” and “**PCA**” have the meaning ascribed to them in CRTC Decision 2019-353;

“**PSAP Locations**” means the locations of the PSAPs as identified in Schedule “C” (PSAP Designations & Locations);

“**P-PSAP**” or “**Primary Public Safety Answering Point**” means a communication centre which is the first point of contact for 9-1-1 Calls as identified by the 9-1-1 Authority in Schedule “C” (PSAP Designations & Locations);

“**Renewal Term**” has the meaning ascribed to it in Section 4(b);

“**S-PSAP**” or “**Secondary Public Safety Answering Point**” means a communication centre to which 9-1-1 Calls are transferred from a P-PSAP, typically the fire, police or ambulance agency responsible for dispatching emergency personnel as identified by the 9-1-1 Authority in Schedule “C” (PSAP Designations & Locations);

“**Schedule**” has the meaning ascribed to it in Section 2(a);

“**Serving Area**” means the geographic area, as determined by the 9-1-1 Authority from which 9-1-1 Calls will be directed to a particular P-PSAP;

“**Subscriber**” means an entity that contracted with a service provider for the provision of a voice telecommunications service;

“**Selective Routing**” means the process by which 9-1-1 Calls are routed to the appropriate PSAP or other designated destination, based on the 9-1-1 Caller’s location information, and may also be impacted by other factors, such as time of day, call type, etc. Location may be provided in a specified format such as an MSAG-valid civic address or in the form of geo coordinates (longitude and latitude);

“**Taxes**” has the meaning ascribed to it in Section 3;

“**Term**” has the meaning ascribed to it in Section 4(b); and

“**User-to-Network Interface (UNI) Technical Specifications Document**” means the authoritative document which sets the technical specifications an i3-PSAP must comply with.

Schedule “B”

NG9-1-1 FEATURES

The NG9-1-1 Service offers features as provided in CRTC 7400, Bell Canada National Services Tariff Item 601.

If a PSAP chooses to forgo utilizing one or more of the NG9-1-1 Service features provided by the NG9-1-1 Service network provider as described in the UNI, the PSAP does so at its own risk and assume all liabilities including prolonged restoration times in the event of an outage.

Schedule "C"

PSAP DESIGNATIONS & LOCATIONS

PSAP Type	Name	Location (full address)	Connected to ESInet (Y/N)
Primary PSAP (*1 & *2)	ORILLIA OPP	1 HURTUBISE ORILLIA	Y
Secondary PSAP Police (*1 & *2)	ORILLIA OPP	1 HURTUBISE ORILLIA	Y
Secondary PSAP Fire (*1 & *2)	PARRY SOUND AMBULANCE COMMUNICATION SERVICE FIRE	6 ALBERT ST PARRY SOUND	Y
Secondary PSAP Ambulance (*1 & *2)	NORTH BAY AMBULANCE	43 FERRIS DRIVE NORTH BAY	Y
Additional Offnet Agency if required (*1 & *2& *3) i.e. Poison control			N
Designated Provincial or Territorial default i3 PSAPs (*4)			N

Notes:

*1 – 9-1-1 Authority shall ensure all PSAPs connected to ESInet meet the NG9-1-1 requirements.

*2 – 9-1-1 Authority shall ensure that if a PSAP changes during the Term, the replacement is aware of the 9-1-1 Authority obligations re: PSAPs under this Agreement, and Bell is notified of the change.

*3 – "Offnet" Agencies are not connected to the ESInet over an IP-UNI and call transfers to such agencies are the responsibility of the PSAP's Call Handling System

*4 – This PSAP is only required if there is a PSAP designated as a safety net for a specific Province or Territory.

Schedule 'D'

SPECIFICATIONS & GUIDELINES

The specifications, templates and guidelines for the NG9-1-1 Service are found at <https://911flex.bell.ca/Login.html>, under the title "NG9-1-1 Onboarding Documentation".

Schedule "E"

DEPLOYMENT CRITERIA

PSAPs utilizing networks to process and deliver NG9-1-1 Calls outside of the ESInet do so at their own risk and assume all liabilities including prolonged restoration times in the event of an outage.

In order to ensure reliability, resiliency and security of the NG9-1-1 Service, the 9-1-1 Authority shall ensure that all of the PSAPs meet the following mandatory requirements without which the PSAPs will not be permitted to interconnect with the production NG9-1-1 network:

1. IP VPN ESInet Interconnection

All i3-PSAP types, Primary and Secondary, are entitled to a single Back-Up location.

All IP VPN ESInet demarcation locations (Primary, Secondary and Back-Up PSAPs) are provided with two (2) redundant data paths and must make use of both. PSAPs must make use of all available in-house diversity (cable entrance, power, etc.).

ESInet physical demarcation locations must be geographically located within the Bell Canada NG9-1-1 Serving region.

PSAPs are expressly forbidden to establish private VPN tunnels over the ESInet, through the provided IP VPN circuits.

2. ESInet Interconnection of Non-designated PSAP facilities

For those PSAP sites not listed in Schedule "C", if the 9-1-1 Authority requires additional circuits, these arrangements may be provided by Bell for a fee;

3. PSAP CEE Interconnection Requirement

- a. All PSAPs shall employ a NENA i3 compliant Border Control Function ("**BCF**") as defined in the Bell NG9-1-1 UNI technical specification as a mandatory condition of interconnection with the NG9-1-1 network. The BCF must be comprised of a minimum of both a firewall and session border controller function. The BCF must be deployed in a manner which prevents single points of failure.
- b. PSAPs shall ensure their local network infrastructure (i.e., Local Area Network [LAN] and/or private Wide Area Network [WAN]) is sized appropriately to support the bandwidth of all NG9-1-1 traffic as calculated and provisioned by the NG9-1-1 Network Provider, in addition to their own in-house network requirements;

4. i3 Call Handling CODEC requirement

All PSAPs shall implement the mandatory list of CODECs as defined in Telecom Decision CRTC 2019-353 (<https://crtc.gc.ca/eng/archive/2019/2019-353.htm>) and make necessary changes as updates become approved by CRTC.

5. IP Network protocol support

All PSAPs shall deploy Dual Stack as the method for simultaneous use of IPv4 & IPv6 address spaces, or to individually perform Network Address Translation - Protocol Translation ("**NAT-PT**") for their Network Domain as defined in the Bell NG9-1-1 UNI technical specification. This is a mandatory condition to interconnect to the NG9-1-1 Service Network;

6. End-to-End Encryption

All PSAPs shall support encryption of traffic from and towards the ESInet as defined in the Bell NG9-1-1 UNI technical specification;

7. QoS Support

All PSAPs shall implement the QoS requirements as defined in the Bell NG9-1-1 UNI technical specification;

8. PSAP Credentialing Agency – NG9-1-1 Network Provider service

All PSAPs shall utilize the Bell PSAP Credentialing Agency service. PSAPs shall identify to Bell as part of the onboarding process the individual or group responsible for acting as the Local Registration Authority (“**LRA**”). The LRA agreement and the roles and responsibilities can be found at <https://911flex.bell.ca/Login.html>, under the title “NG9-1-1 Onboarding Documentation”. There is no expectation that the NG9-1-1 Authority will sign the LRA agreement itself but the NG9-1-1 Authority will ensure that the selected PSAPs will execute such agreement.

9. Contingency Routing

PSAPs shall communicate all 9-1-1 contingency arrangements to Bell including agreements and arrangements with other agencies in order to design and implement Policy Routing Rules accordingly. PSAP’s defined Policy Routing Rules must contain at a minimum one Policy Routing Rule specifying a partner third party PSAP to act as backup in the event the PSAP is not able to respond to 9-1-1 Calls. In the event PSAP fails to specify a partner third party PSAP to act as backup or such specified partner third party PSAP fails to respond to the PSAP’s 9-1-1 Calls, PSAP shall indemnify and hold Bell harmless from and against any liabilities, claims, losses, costs, damages and expenses, arising from such failure.

10. Domain Name Service (DNS) – NG9-1-1 Network Provider service

PSAPs must utilize the Bell NGCS-based DNS service to ensure resiliency of DNS functions and seamless PCA functionality.

The 9-1-1 Authority is requested to encourage PSAPs to utilize the following NGCS provided functions to further enhance network reliability, resiliency and security of the NG9-1-1 Service:

1. Network Time Protocol (NTP) – NG9-1-1 Network Provider Service

PSAPs are encouraged to utilize the Bell NGCS-based NTP service to ensure accurate time synchronization with all ESInet interconnected elements and as an additional time source within their Local Area Network (LAN).

Schedule "G"

NG9-1-1 GIS REQUIREMENTS

Municipality, County or Other Government Entity name	GIS Data Provider or *Provincial/ Territorial Designated Data Aggregator name	Provincial \ Territorial Legislation (Y/N)

- ❖ In the absence of Provincial or Territorial legislation defining a Data Aggregator body, by default the NG9-1-1 Network Provider will be the defined GIS and addressing Data Aggregator ([Telecom Decision CRTC 2020-150 | CRTC](#))

File 224503-05

January 20, 2025

Fred Schmeltz
Operation and Facilities Manager
Municipality of Powassan
250 Clark St.
Powassan, Ontario P0H 1Z0
fshmeltz@powassan.net

Re: Trout Creek Community Centre, 181 Main St. W, Trout Creek
Detailed Structural Investigation

Dear Fred:

Based on the recommendations of our 2024 Building Assessment (refer to 2024 Powassan Building Assessments - Trout Creek Community Centre by Tatham Engineering dated June 20, 2024), we have conducted a follow-up detailed structural investigation and localized analysis at the Trout Creek Community Centre.

Based on the recommendations of our 2024 Assessment, the detailed investigation focused on the following items:

1. Condition of interior wood columns around the rink area and retrofit bolted bearing plates (observation number 3.1.1 in 2024 report).
2. Condition of exterior wood columns around the rink area (observation number 3.1.1 in 2024 report).
3. Code compliance of previously installed structural modifications. (observation number 3.1.2 in 2024 report).

We visited the Trout Creek Community Centre on September 10, 2024 to collect detailed measurements of the structure supporting the roof at the rink area, and coordinated excavation (completed by Town staff) to conduct a visual review of the below-grade conditions at a representative interior and exterior columns on September 19, 2024. We also collected visual documentation (i.e. photographs) at areas of concern for direct comparison with the two previous assessment reports (by TSH Engineers, Architect, Planners in 2007 and by Tulloch Engineering in 2020) as this background not made available to us until after our site visit during the 2024 assessment.

The observations and comments provided are limited to the portions of the structure that were visible and accessible at the time of our investigations (i.e. footings that were excavated). Reasonable efforts were made to select columns that were accessible yet indicative of the conditions of the remaining columns.

FINDINGS

In the 2024 assessment, our visual observations indicated possible deterioration or insufficient support for the roof over the rink area. Visual indicators included cracking of the slab-on-grade, differential settlement surrounding the wood columns, visible sag in the roofline (also indicated in 2007 and 2020 reports), and the presence of retrofit bolted bearing plates at each of the interior columns.

We coordinated excavation around a representative interior column (at the northwest exit from the rink building) and a representative exterior column (near the southeast exit from the rink building) to determine the below-grade conditions of the structure. We retained a Geotechnical Engineer (Soil Engineers Ltd.) to attend the site during the excavation to provide insight on the soil conditions at the building foundations. The geotechnical report is appended here for reference.

We accessed a representative area of the roof framing by removing a small area of the reflective ceiling barrier at the south end of the rink and confirmed on site the roof framing over the arena consists of wood-plated roof trusses spanning approximately 80'-0" between the interior wood beams on either side of the ice surface, and wood joists spanning the remaining approximately 10'-0" between the interior and exterior beams.

As our observations at various stages of the assessment have included indications of excess moisture and a mould/mildew smell in the building, we also recommended the Town conduct a mould investigation to ensure the space is safe for public use. We understand the Town coordinated the testing by Thomas Contracting and the results indicated the airborne mould spores were not elevated to a concerning level and the source of the odour may be dead and rotting animal(s). The mould testing summary/report is appended here for reference.

We assume the original structure was designed and constructed in accordance with the Ontario Building Code or according to general practices at that time (circa 1970s) and therefore have not completed analysis of the structure as a whole, however we completed localized structural analysis of the following:

- Interior and exterior wood columns at the arena.
- Pad footing sizes for interior and exterior columns at the arena.
- Floor framing support at the enclosed exit ramp at the west side of the lobby.
- Roof joist and beam framing at the northwest entrance canopy.
- Roof joist and beam framing at the west arena exit canopy.

Our analysis was based on the following considerations:

- Ground Snow Load of 80 psf from time of original construction in accordance with the data for Trout Creek in the 1975 Ontario Building Code.



- Ground Snow Load of 2.7 kPa (56 psf) from the current (2024) Ontario Building Code.
- Community Centres are designated as High Importance facilities by the Ontario Building Code as they are likely to be used as shelters in an emergency situation.

The findings summarized below include visual observations during the subgrade investigation and results of localized analysis.

Interior Wood Columns

During the above-noted investigations, our findings at the interior wood columns surrounding the rink were as follows:

- The wood columns are in direct contact with soil beneath the concrete slab-on-grade floor and have suffered significant localized decay as a result. Settlement of these columns due to decay is evident (refer to Photograph 1).
- The wood columns are encased in concrete piers which extend to a 3'-0" x 3'-0" concrete pad footing terminating approximately 6'-0" below the top of slab elevation (refer to Photograph 2).
- A full-depth foundation wall on strip footings extends below the concrete curb surrounding the rink, however it is not connected to the piers at each column (refer to Photograph 2).
- The subgrade at the underside of the footings is capable of supporting a maximum bearing pressure of 150 kPa (SLS) (refer to geotechnical report, attached).
- The retrofit, bolted steel plates at each column provide some support to supplement the capacity lost to decay (refer to Photographs 3 and 4), however they are not sufficient to support the full roof snow loading as prescribed by the Ontario Building Code.
- Settlement of the columns is not uniform, and in localized areas where the settlement is most prominent, the overhead wood structure (beams, angle bracing, horizontal bracing) has been displaced and is at risk of failing (refer to Photograph 5).

Exterior Wood Columns

During the above-noted investigations, our findings at the exterior wood columns within the wall assembly surrounding the rink were as follows:

- Wall columns are exposed to exterior grade/moisture at the outside face of the building and have suffered varying levels of decay as a result (refer to Photograph 6).
- In the worst areas of decay, a section of the original columns has been replaced with pressure-treated blocking (no record of this work is available) (refer to Photograph 7).



Previous Structural Modifications

Given the current condition of the building and the proposed monitoring program for control of snow loading below, we analysed the exterior structural additions (access ramp and roof canopies on the west side of the arena) under a series of conditions. These include analysis under 1975 OBC loading; under current (2024) OBC loading; with and without snow drifting considerations; and with and without high importance category considerations. Analysis under these conditions was based on the assumption the Town could perform temporary snow (drift) removal on these areas as required and could divert emergency shelter away from this building as required. Based on this series of analyses, our findings were as follows:

- The access ramp does not meet the required geometry for accessibility in accordance with the Ontario Building Code (OBC).
- The access ramp framing is not adequate to support the loading prescribed by the OBC.
- The roof canopy framing at the northwest lobby entrance is not adequate to support the design snow loading in accordance with the OBC (note, the joist framing is sufficient based on the limited factors described above, however the supporting beams do not meet the required load capacity).
- The roof canopy framing at the west arena entrance is not adequate to support the design snow loading in accordance with the OBC (note, the joist framing is sufficient based on the limiting factors described above, however the supporting beams do not meet the required load capacity).

RECOMMENDATIONS

General

We made several recommendations in an interim memo (224503-5 dated October 11, 2024) which have since been carried out on an emergency basis to protect life-safety within the arena structure until the end of the 2024-25 season. These include the mould investigation noted above, as well as remedial work for temporary structural support and implementation of a monitoring program as described below.

Remedial Work

To reduce loading to the severely deteriorated interior columns and undersized retrofit brackets, we recommended installation of a series of temporary posts around the interior perimeter of the arena in accordance with attached drawings S.1 and S.2. This work was completed in December 2024 in accordance with our design and is sufficient, in combination with ongoing monitoring as noted below, to support the interior beams at the perimeter of the rink for the duration of the 2024-25 season.

The exterior canopies are to be removed or blocked off from public access on a permanent basis or until remedial work can be completed at the beams, at which time these areas shall be subject to the same maintenance and monitoring requirements as the arena roof.



Maintenance and Monitoring

In addition to the remedial work at the interior of the building, we've recommended a monitoring and maintenance program to proactively identify any additional movement or settlement at the affected framing, to monitor roof loading and to mitigate risk. The monitoring program has been established as follows:

- A total of five of the new interior shoring posts around the arena have been marked for plumb/level checks (refer to Photograph 8). These locations are to be checked daily by Town staff using a 2' or 4' level as a first-indicator of any movement. If an out-of-plumb reading is noted at any post, Tatham is to be contacted for review.
- Monitoring lines have been established at a representative sample (six) of the existing interior columns (refer to Photographs 9 and 10). These setups at the top of the columns are designed to indicate differential movement between the column and the beam structure above. These are also to be checked on a daily walkthrough by Town staff for any movement. If movement away from the baseline is observed, Tatham is to be contacted for review.
- The OBC design ground snow load for Trout Creek is representative of approximately 3'-0" of average snow. Drifted or compacted snow can weigh significantly more than average, and the building is not in a condition to withstand higher snow load. Therefore, following any snowfall of 12" or more (at ground level), the arena is to be closed to the public until a structural review can be completed by Tatham.
- At the exterior of the arena building, snow shall be kept clear of the building siding at ground level to prevent further moisture exposure and deterioration at the exterior columns.
- Tatham shall complete structural reviews monthly to monitor for indications of movement, settlement, or further deterioration.
- Snow removal may be required following major snow events if the facility is to be re-opened to the public, at the discretion of Tatham following site review.
- The facility shall not be used as an emergency shelter during inclement weather in its current condition.

The remedial measures implemented to protect life safety are sufficient to support the arena roof structure to the end of the 2024-25 winter (snow-loading) season, and through the non-winter months in 2025, provided no progression of concerns are identified through the monitoring program. This remediation is not intended to be a long-term solution and is not sufficient to consider the building in compliance with the Ontario Building Code. To maintain the structure in a safe state of repair for the long term would involve removal of all concrete surrounding the rink to access all interior and perimeter columns for concrete repair at the supporting piers, and replacement of all wood columns. This is in addition to the





Photograph 1: Deterioration below slab - interior column



Photograph 2: Concrete pier adjacent foundation wall - interior





Photograph 3: Retrofit bolted steel plates - interior column



Photograph 4: Retrofit bolted steel plate bearing - interior column





Photograph 5: Settlement effects at overhead structure



Photograph 6: Deterioration at original column - exterior





Photograph 7: Blocking at deteriorated column - exterior



Photograph 8: Marked post and level check at representative monitoring location





Photograph 9: Representative monitoring between column and adjacent structure



Photograph 10: Basic monitoring line at representative column location



Appendix A: Drawings & External Reports

From: Grant Johnson <asbestos@vianet.ca>
Sent: October 23, 2024 12:53 PM
To: Fred Schmeltz <fschmeltz@powassan.net>
Subject: Re: Quotation No. 2024078 - Trout Creek Community Centre

Hi Fred,

Received the lab results (attached) for the mould air testing we conducted at the Trout Creek Community Centre.

Results reveal that there is no elevated levels of airborne mould spores within the 2 tested areas (Area #1 and Area # 2) of the Centre.

As per our conversation onsite, it is our opinion that the noticeable odor is emanating from the fan room off the lobby area.

This odor is similar to a dead and rotting animal(s) and is stronger when the fan unit is running.

Our recommendations is to clean/disinfect all duct work (including intake duct) as well as the fan unit itself and the fan room in question.

Thanks,

Grant Johnson
Manager Environmental Services
Thomas Contracting
(705) 499-8006

This e-mail may contain PRIVILEGED and CONFIDENTIAL information and is intended only for the use of the specific individual(s) to which it is addressed. Any unauthorized use, dissemination or copying of the content is strictly prohibited. If you are not the intended recipient and have received this e-mail in error, please notify the sender by email and delete this email and any attachment(s) immediately.

(ISO/IEC 17025:2017 Accredited Laboratory...)

Laboratory Analytical Results

CONTACT NAME: Grant Johnson	TYPE OF SAMPLES: Air: Allergenco	PROJECT NAME: Trout Creek Community Centre Mould Testing
COMPANY: Thomas Contracting	NO. OF SAMPLES: 3	PROJECT NO: TC-201660
ADDRESS: 212 A Birchgrove DR. East Callander, ON POH 1H0	DATE COLLECTED: 2024/10/18 DATE RECEIVED: 2024/10/22 DATE ANALYSED: 2024/10/22	LAB REFERENCE: MBL20381ANA ANALYSED BY: Jackson Kung'u, PhD.
PHONE: 705 499-8006	DATE REPORTED: 2024/10/23	REVIEWED BY: Georget Shamoon, PhD.

Method of Analysis: Based on ASTM D7391 - 09 Standard Test Method for Categorization and Quantification of Airborne Fungal Structures

Analysis is performed according to the SOP-MBL-M-3- Analysis of Fungi in Air Samples by Direct Microscopic Examination (DME). The slide impacted with air sample is placed on a drop of lactophenol cotton blue on a clean microscope slide and subsequently scanned at X 100 or X 200 magnification to give the analyst an overview of sample deposition and the diversity of the spores present on the slide. The slide is then analysed at X400 or X600 magnification by counting and identifying spores in at least 20% of the sample deposition area. Spores occurring in chains are counted individually. Raw counts are converted to spores/m³ of air. Spores lacking distinguishing characteristics are reported as "Unidentified spores". Where the analyst is able to identify the group to which the spores belong but not the mould they belong to, the spores may be recorded as "Unidentified Basidiospores or Unidentified Ascospores". Spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are difficult to distinguish and are reported as *Aspergillus/Penicillium*.

A scale of 0 to 5+ is used to rate abundance of non-fungal material (debris), with 5+ indicating the largest amount. Large amounts of debris may obscure small spores. Therefore, counts from samples with 5+ non-fungal material may be treated as undercounts. Except for blanks, samples with no detected spores are recorded as "less than the method detection limit" (MDL). Results are not corrected for blanks.

Summary Results/Interpretation or Comments (where applicable):

Please see results on page 2.

(ISO/IEC 17025:2017 Accredited Laboratory...)

Laboratory Analytical Results

CONTACT NAME: Grant Johnson **PROJECT NO:** TC-201660 **LAB REFERENCE:** MBL20381ANA
COMPANY: Thomas Contracting **TYPE OF SAMPLES:** Air: Allergenco **ANALYST:** Jackson Kung'u, PhD.

Client's Sample No:	6163791			6163442			6163694														
Lab Sample ID:	MBL20381ANA-1			MBL20381ANA-2			MBL20381ANA-3														
Sample Description	Area #1			Area #2			Area #3														
Other Sample ID No.	6163791			6163442			6163694														
Total Air Volume (L)	150			150			150														
Sample Area Analysed (%)	25			25			25														
Fungal spores identified	raw ct.	%	ct./m ³	raw ct.	%	ct./m ³	raw ct.	%	ct./m ³	raw ct.	%	ct./m ³	raw ct.	%	ct./m ³	raw ct.	%	ct./m ³	raw ct.	%	ct./m ³
<i>Alternaria sp.</i>							2	1	53												
Ascospores (undifferentiated)				1	3	26	7	2	184												
<i>Aspergillus/Penicillium sp.</i>	18	43	473	9	26	237	10	3	263												
Basidiospores (undifferentiated)	6	14	158	13	37	342	91	25	2393												
<i>Chaetomium sp.</i>																					
<i>Cladosporium sp.</i>	11	26	289	10	29	263	192	53	5050												
<i>Coprinus sp.</i>	1	2	26				2	1	53												
<i>Curvularia sp.</i>																					
Drechslera/Bipolaris group																					
<i>Epicoccum sp.</i>	4	10	105	2	6	53	42	12	1105												
<i>Fusarium sp.</i>																					
<i>Ganoderma sp.</i>							1	0	26												
Helicospores																					
<i>Pithomyces sp.</i>																					
Rusts/Smuts/Myxomycetes	2	5	53				3	1	79												
<i>Stachybotrys sp.</i>																					
<i>Ulocladium sp.</i>																					
Other unidentified spores							11	3	289												
Pollen																					
Fungal fragments Counts																					
Debris Rating (0-5+)	2+			2+			3+														
Spores/sample	166			138			1424														
TOTAL SPORES/M³			1,105			921			9,495												
MDL (SPORES/M³)			26			26			26												

Notes: 1. Samples analysed at X600 magnification

2. MDL = Lower Method Detection Limit

3. raw ct. = raw spore count

4. Ct./m³ = spore counts per cubic meter of air

5. The result(s) relate only to the sample(s) tested.

6. This test report shall not be reproduced except in full, without written approval of Mold & Bacteria Consulting Laboratories (MBL) Inc.

References

1. ASTM Designation: D 7391-09. Standard Test Method for Categorization and Quantification of Airborne Fungal Structures in an Inertial Impaction Sample by Optical Microscopy.
2. Illustrated Genera of Imperfect Fungi. Barnett H.L and B. Hunter Barry. Burgess Publishing Company. Edition 3. 1972. ISBN 8087-0266-1
3. Sampling and Identifying Allergenic Pollens and Molds. An Illustrated Identification Manual for Air Samples. Edited by E. Grant Smith. Blewstone Press. San Antonio, Texas. 2000. ISBN 0-930961-02-1
4. The Air Spora. A Manual for Catching and Identifying Airborne Biological Particles. Edited by Maureen E. Lacey and J. S West. 2006. ISBN-13 978-0-378-30252



Soil Engineers Ltd.

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FAX: (705) 721-7864	FAX: (905) 542-2769	FAX: (905) 725-1315	FAX: (416) 754-8516	FAX: (705) 884-8522	FAX: (905) 725-1315	FAX: (905) 542-2769

November 5, 2024

Reference No. 2409-C087

Tatham Engineering
8 Barron Drive
Bracebridge, Ontario
P1L 0H3

Attention: Ms. Madeleine Smith, P.Eng.

**Re: Founding Level Inspection
Trout Creek Community Centre
181 Main St. W
Trout Creek, Ontario**

Dear Ms,

As requested, we visited the site on September 19, 2024 to inspect a test pit dug adjacent to an interior pier footing for an assessment of the subsurface conditions and to determine the engineering properties of the disclosed soils. Our findings are presented herein.

The field work consisted of a test pit dug by an excavator to the underside of footing elevation approximately 1.8 +/- m below the finished floor elevation.

The inspected founding level subgrade consists of sound natural soil comprised of dense silty sand.

As a guide a Maximum Allowable Soil Bearing Pressure of 150 kPa (SLS) 250 kPa (ULS) can be used for the building renovations.

We trust this report is explicit; however, should any queries arise, please do not hesitate to contact us.

Yours very truly,
SOIL ENGINEERS LTD.

Mika Fager, Geo. Tech.
Branch Manager - Muskoka | Partner

This letter/report/certification was prepared by Soil Engineers Ltd. for the account of the captioned clients and may be relied upon by regulatory agencies. The material in it reflects the writer's best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this letter/report/certification, or any reliance on or decisions to be made based upon it, are the responsibility of such third parties. Soil Engineers Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this letter/report/certification.

GENERAL NOTES

1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS PREPARED BY ALL CONSULTANTS PRIOR TO CONSTRUCTION. REPORT DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
2. ALL DIMENSIONS ARE IN FEET AND INCHES EXCEPT AS NOTED.
3. THE CONTRACTOR SHALL REVIEW ALL DRAWINGS AND CONTRACT DOCUMENTS PRIOR TO AND DURING CONSTRUCTION TO ENSURE THAT THE ASSUMPTIONS MADE IN THE DRAWINGS REFLECT THE REQUIREMENTS OF CONSTRUCTION AND FIELD CONDITIONS ENCOUNTERED. WHERE DISCREPANCIES ARISE OR THE CONTRACTOR FINDS AN ERROR OR OMISSION RELATING TO THE CONTRACT, THE CONTRACTOR SHALL PROMPTLY REPORT IT TO THE ENGINEER AND SHALL NOT PROCEED WITH THE ACTIVITY AFFECTED UNTIL RECEIVING DIRECTION FROM THE ENGINEER.
4. THE DRAWINGS SHOW THE COMPLETED STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY ON THE JOB SITE AND FOR DESIGN, INSTALLATION AND SUPERVISION OF ALL TEMPORARY BRACING AND FALSEWORK TO SUIT THE CONSTRUCTION METHODS AND TO SUPPORT THE SUPERIMPOSED CONSTRUCTION LOADS. DESIGN AND FIELD REVIEW OF ALL TEMPORARY WORKS TO BE CARRIED OUT BY A PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR, LICENSED AND INSURED IN THE PROVINCE OF ONTARIO.
5. ALL WORK AND MATERIALS SHALL CONFORM TO REQUIREMENTS SET OUT IN THE 2012 ONTARIO BUILDING CODE.
6. ALL CODES AND STANDARDS REFERENCED SHALL BE THE LATEST EDITION REFERENCED BY THE 2012 ONTARIO BUILDING CODE (DIV. B, 1.3.1.2).
7. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT OF ONTARIO.
8. ALL DESIGN LOADS NOTED ON DRAWINGS ARE SPECIFIED LOADS (UNFACTORED) TO BE USED FOR ULS (FACTORED) DESIGN, UNLESS OTHERWISE NOTED:
A) ROOF DEAD LOAD = 20 psf

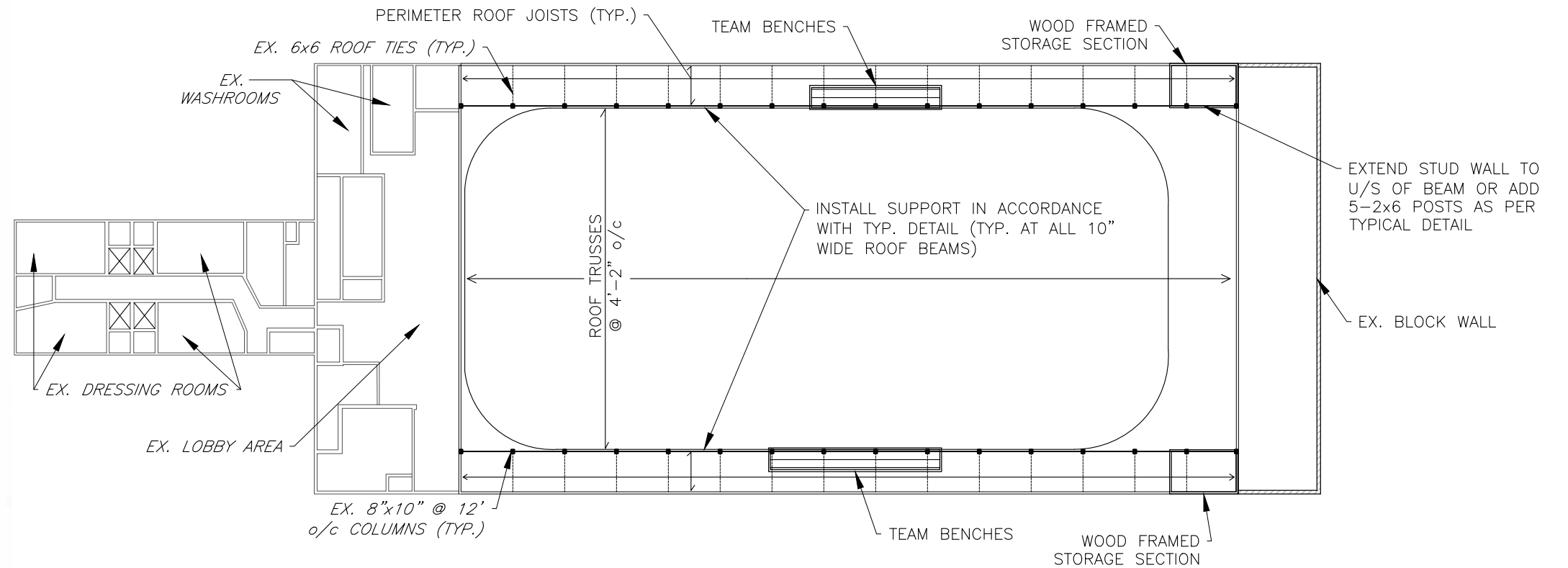
CLIMATIC DATA (TROUT CREEK):
SNOW:
S_s = 56 psf
S_r = 8.4 psf
9. DO NOT CUT OR DRILL ANY OPENINGS IN STRUCTURAL MEMBERS WITHOUT WRITTEN PERMISSION FROM THE STRUCTURAL CONSULTANT UNLESS SPECIFICALLY NOTED ON THE STRUCTURAL DRAWINGS.

WOOD FRAMING

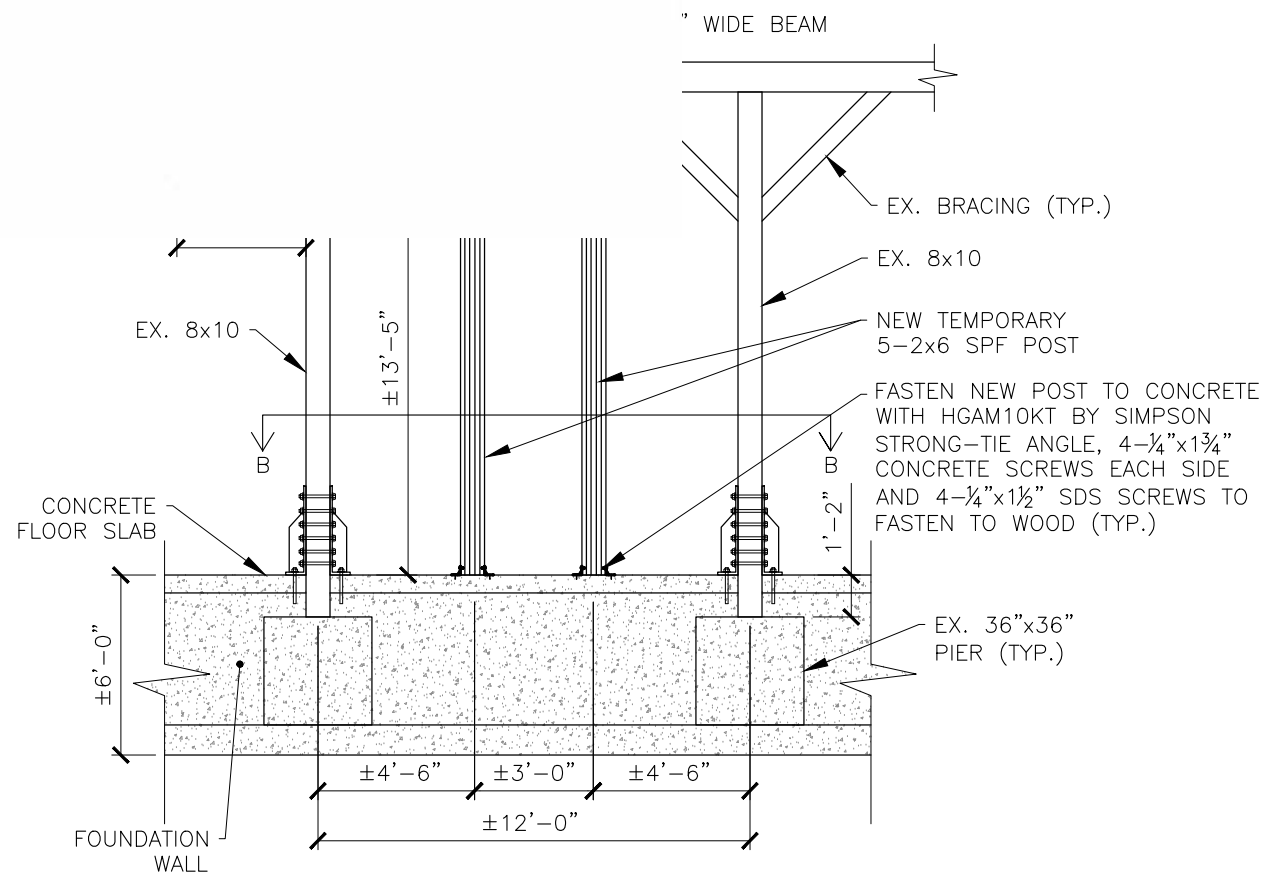
1. WOOD AND ENGINEERED LUMBER COMPONENTS SHALL BE DESIGNED, FABRICATED, AND INSTALLED IN ACCORDANCE WITH CAN/CSA-086 AND THE ONTARIO BUILDING CODE (OBC) PART 9.
2. ALL LUMBER SHALL BE NO. 1/2 GRADE SPF IN ACCORDANCE WITH CSA 086, UNLESS NOTED OTHERWISE.
3. DO NOT CUT, DRILL OR NOTCH TIMBER MEMBERS WITHOUT ENGINEER'S APPROVAL.
4. ROUGH CARPENTRY SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF OBC PART 9, UNLESS NOTED OTHERWISE.
5. ALL LUMBER FASTENING SHALL BE IN ACCORDANCE WITH OBC PART 9 OR MANUFACTURER'S SPECIFICATIONS, UNLESS NOTED OTHERWISE. ALL NAILS, SPIKES, AND STAPLES SHALL BE IN ACCORDANCE WITH OBC 2012, 9.23.3.
6. ALL BOLTS AND ACCOMPANYING HARDWARE SHALL BE IN ACCORDANCE WITH ASTM A307 - GRADE A, UNLESS NOTED OTHERWISE.
7. SPECIFIED CONNECTORS SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE. SUBSTITUTIONS SHALL BE SUBMITTED FOR ENGINEERS APPROVAL PRIOR TO CONSTRUCTION.
8. ALL PROPRIETARY CONNECTORS AND FIXINGS ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
9. NON-TREATED WOOD IN CONTACT WITH CONCRETE OR STONE SHALL BE PROTECTED BY SILL GASKET OR 6 MIL POLY.
10. PRE-DRILL ALL LAG BOLT HOLES PRIOR TO INSTALLING BOLTS.
11. BUILT-UP POSTS SHALL BE NAILED TOGETHER @ 6" o/c, STA



CO
181
SCALE

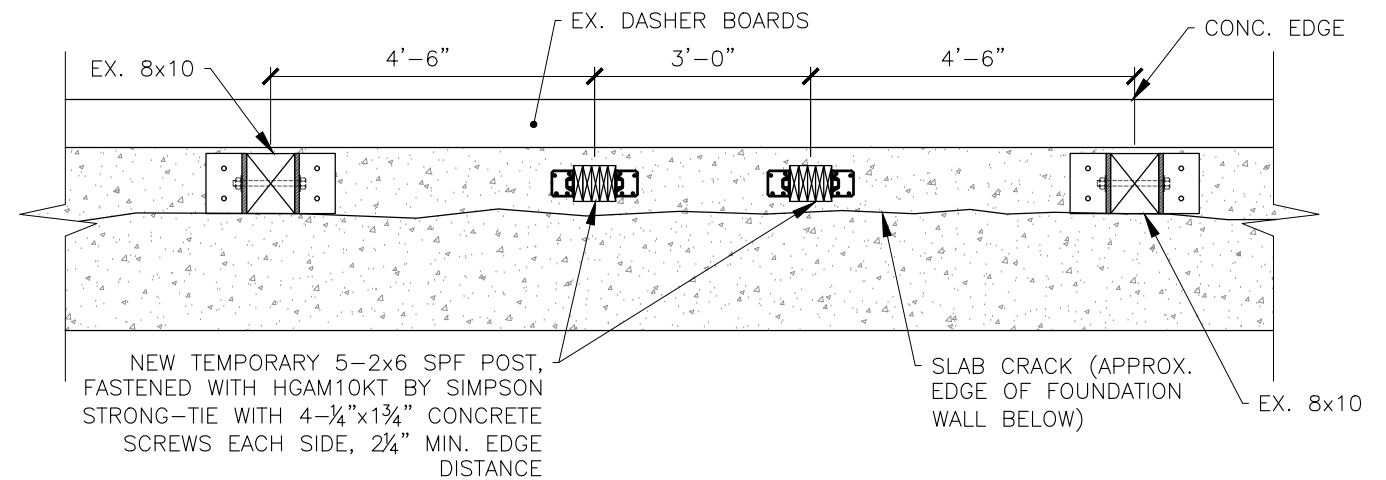


OVERALL FRAMING PLAN
SCALE: $\frac{1}{32}'' = 1'-0''$



A1 TEMPORARY SUPPORT TYPICAL SECTION
S.2 SCALE: $\frac{3}{16}'' = 1'-0''$

NOTE:
WHERE COLUMN SPACING IS PROHIBITED BY EXISTING CONDITIONS (I.E. RINK ACCESS)
CONTACT ENGINEER AND ADJUST SPACING AS REQUIRED.



B-B TEMPORARY SUPPORT TYPICAL PLAN VIEW
S.2 SCALE: $\frac{3}{8}'' = 1'-0''$



**TROUT CREEK
COMMUNITY CENTRE**
181 MAIN ST, W POWASSAN ON

DWG. No.
S.2
SCALE: AS NOTED | DATE: NOV/2024 | JOB NO. 224503-5



Resolution no. 2025 - _____

Date: January 21, 2025

Moved by:

Seconded by:

BE IT RESOLVED that the Council of the Municipality of Powassan approves the application to the Northern Ontario Heritage Fund Corporation (NOHFC) for the Community Events Stream for the 2025 Powassan Maple Syrup Festival / Week in the funding amount of \$12,443.00; and,

FURTHER that the Council of the Municipality of Powassan confirms commitment to cover the Municipality’s contribution towards the project in the amount of \$16,432.00 which will come from Vendor fees and Donations and the Municipality will cover any project cost overruns should they occur; and,

FURTHER that the Municipality enters into an agreement with NOHFC regarding the 2025 Powassan Maple Syrup Festival/Week.

Carried

Defeated

Deferred

Lost

Mayor

Recorded Vote: Requested by _____

Name	Yeas	Nays	Name	Yeas	Nays
Councillor Randy Hall			Mayor Peter McIsaac		
Councillor Markus Wand					
Councillor Dave Britton					
Councillor Leo Patey					



The Corporation of the
City of North Bay
200 McIntyre Street East,
P.O. Box 360
North Bay, Ontario
Canada P1B 8H8
Tel: (705) 474-0400

January 7, 2025

Municipality of Powassan
P.O. Box 250
466 Main Street
Powassan ON
POH 1Z0

Re: Participation in the City of North Bay’s Household Hazardous Waste Program

The City of North Bay is once again inviting surrounding municipalities to participate in the City’s Household Hazardous Waste Program.

North Bay City Council has agreed to accept household hazardous waste from participating municipalities that share in the operating and disposal costs. The cost per municipality is \$4 per dwelling based on the most up to date census.

The cost for the residents of the Municipality of Powassan to safely dispose their hazardous waste at the North Bay HHWD is as follows:

Total Dwellings	1381
Cost Per Dwelling	\$4
Total Cost	\$5,524

Please contact me to confirm if the Municipality of Powassan will be continuing to use the North Bay Household Hazardous Waste Depot.

Sincerely,

Victoria Thomas
Environmental Control Officer
705-474-0400 ext. 5221
victoria.thomas@northbay.ca

January 20, 2025

Treasurer Brayden Robinson and Council
The Corporation of the Municipality of Powassan
250 Clark St.
Powassan, ON P0H 1Z0

Re: 2024 Annual/Summary Report for the Powassan Drinking Water System

Dear Brayden Robinson and Council:

Ontario's Drinking-Water Systems Regulation (O. Reg. 170/03), made under the *Safe Drinking Water Act in 2002*, requires that the owner of a drinking water system prepare an Annual Report and an Annual Summary Report of the operation of the system and the quality of its water.

Annual Report

The annual report must cover the period of January 1st to December 31st in a year and must be prepared not later than February 28th of the following year. Pursuant to the legislative requirements, enclosed for your records is the 2024 Annual Report for the Powassan Drinking Water System.

In accordance with Section 11 (6), the annual report must:

- (a) contain a brief description of the drinking-water system, including a list of water treatment chemicals used by the system during the period covered by the report;
- (b) summarize any reports made to the Ministry under subsection 18 (1) of the Act or section 16-4 of Schedule 16 during the period covered by the report;
- (c) summarize the results of tests required under the Regulation, or an approval or order, including an OWRA order, during the period covered by the report and, if tests required under this Regulation in respect of a parameter were not required during that period, summarize the most recent results of tests of that parameter;
- (d) describe any corrective actions taken under Schedule 17 or 18 during the period covered by the report;
- (e) describe any major expenses incurred during the period covered by the report to install, repair or replace required equipment; and
- (f) if the case of a large municipal residential system or a small municipal residential system, include a statement of where a report prepared under Schedule 22 will be available for inspection under subsection 12 (4) O. Reg. 170/03, s. 11 (6).

In addition, Section 11 (7) gives the direction that a copy of an annual report for the system is given, without charge, to every person who requests a copy and be made available for inspection by any member of the public during normal business hours. The reports should be made available at the office of the municipality, or at a location that is accessible to the users of the water system.

Summary Report

The annual summary report must cover the period of January 1st to December 31st in a year and must be prepared not later than March 31st of the following year. Pursuant to the legislative requirements, enclosed for your records is the 2024 Annual Summary for the Powassan Drinking Water System.

As required in *Schedule 22, Summary Reports for Municipalities*, the annual summary must:

- (2) (a) list the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report; and
 - (b) for each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.
- (3) The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:
 1. A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
 2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water licence, or if the system is receiving all of its water from another system under an agreement pursuant to subsection 5 (4), to the flow rates specified in the written agreement.

In addition, Section 12 (1) – 4 – gives the direction that a copy of the annual summary for the system is given, without charge, to every person who requests a copy and be made available for inspection by any member of the public during normal business hours. The reports should be made available at the office of the municipality, or at a location that is accessible to the users of the water system.

These reports were prepared by the Ontario Clean Water Agency on behalf of the Municipality of Powassan and are based on information kept on record by OCWA at the Powassan WTP. The reports cover the period January 1st to December 31st 2024.

Please note that any Provincial Officers Orders or non-compliance issues that you have received directly from the MECP should be reviewed. Where non-compliance with the Order or Issue is evident and it is not included in the attached 2024 Annual/Summary Report, then we recommend that this information be added to the report.

After your review and inclusion of any additional information, this report is to be provided to the Council members representing the Municipality of Powassan before March 31, 2025. Please ensure this distribution.

Yours truly,
Ontario Clean Water Agency

Monique Malette
Process and Compliance Technician

Copy to: Erin Spires, Drinking Water Inspector, Ministry of the Environment, Conservation and Parks

Powassan Drinking Water System

2024 ANNUAL/SUMMARY REPORT



Prepared by the Ontario Clean Water Agency
on behalf of the Municipality of Powassan



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INTRODUCTION

Municipalities throughout Ontario have been required to comply with Ontario Regulation 170/03 made under the Safe Drinking Water Act (SDWA) since June 2003. The Act was enacted following recommendations made by Commissioner O'Conner after the Walkerton Inquiry. The Act's purpose is to protect human health through the control and regulation of drinking water systems. O. Reg. 170/03 regulates drinking water testing, use of licensed laboratories, treatment requirements and reporting requirements.

Section 11 of Regulation 170/03 requires the owner to produce an Annual Report. This report must include the following:

1. Description of system & chemical(s) used
2. Summary of any adverse water quality reports and corrective actions
3. Summary of all required testing
4. Description of any major expenses incurred to install, repair or replace equipment

This annual report must be completed by February 28th of each year.

Section 22 of the regulation also requires a Summary Report which must be presented & accepted by Council by March 31st of each year for the preceding calendar year.

The report must list the requirements of the Act, its regulations, the system's Drinking Water Works Permit (DWWP), Municipal Drinking Water Licence (MDWL), Certificate of Approval (if applicable), and any Provincial Officer Order the system failed to meet during the reporting period. The report must also specify the duration of the failure, and for each failure referred to, describe the measures that were taken to correct the failure.

The Safe Drinking Water Act (2002) and the drinking water regulations can be viewed at the following website: <http://www.e-laws.gov.on.ca>.

To enable the Owner to assess the rated capacity of their system to meet existing and future planned water uses, the following information is also required in the report.

1. A summary of the quantities and flow rates of water supplied during the reporting period, including the monthly average and the maximum daily flows,
2. A comparison of the summary to the rated capacity and flow rates approved in the systems approval, drinking water works permit or municipal drinking water licence or a written agreement if the system is receiving all its water from another system under an agreement.

The reports have been prepared by the Ontario Clean Water Agency (OCWA) on behalf of the Owner and presented to council as the 2024 Annual/Summary Report.



Powassan Drinking Water System

Section 11

2024 ANNUAL REPORT



Section 11 - ANNUAL REPORT

1.0 Introduction

Drinking-Water System Name: POWASSAN DRINKING WATER SYSTEM
Drinking-Water System No.: 220000576
Drinking-Water System Owner: The Corporation of the Municipality of Powassan
Drinking-Water System Category: Large Municipal, Residential System
Period being reported: January 1, 2024 to December 31, 2024

Does your Drinking Water System serve more than 10,000 people? No

Is your annual report available to the public at no charge on a web site on the Internet? No

Location where Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Powassan Municipal Office
250 Clark St.
Powassan Ontario

Drinking Water Systems that receive drinking water from the Powassan Drinking Water System

The Powassan Drinking Water System (DWS) provides all drinking water to the community of Powassan.

The Annual Report was not provided to any other Drinking Water System Owners.

The Ontario Clean Water Agency prepared the 2024 Annual/Summary Report for the Powassan DWS and provided a copy to the system owner; the Municipality of Powassan. The Powassan DWS is a stand-alone system that does not receive water from or send water to another system.

Notification to system users that the Annual Report is available for viewing is accomplished through:

- A notice via an annual community newsletter that is sent to every resident and via a notification included on the municipal utility billing.
- System analysis and reports available in the water System Information Binder available for the public to review at the municipal office.



2.0 Powassan Drinking Water System (DWS No. 220000576)

The Powassan DWS is owned by the Corporation of the Municipality of Powassan and consists of a Class 1 water treatment subsystem and a Class 1 water distribution subsystem. The Ontario Clean Water Agency (OCWA) is designated the Overall Responsible Operator for both the water supply and water distribution facilities.

Raw Water Supply

The Municipality of Powassan municipal water system is a ground water system supplied by two (2) municipal drilled wells. The well operating pressures are controlled by pressure reducing valves in the adjacent pump house and are compatible with the top water level (TWL) of the in-ground reservoir of 310 meters (m) above sea level (A.S.L.) (elevation 1017 feet A.S.L.)

Well #1, constructed in 1981 and upgraded in 2003, consists of a 150 millimeter (mm) diameter steel casing, 23.1 m deep drilled production well including 3.8 m of screen across a coarse sand and gravel from approximately 23.1 m to 19.2 m, Well Pump No.1 is a 19 kilowatt (kW), 3 phase, 60 Hertz (Hz), 575 Volt, 25 horsepower (HP) Grundfos Submersible Pump Model 230s250-8B with the capacity of 15.2 litres per second (L/s) or 1,313 cubic meters per day (m³/d) at a total dynamic head (TDH) of 92.2 m. The well is capped, and a monitoring well is located 5 m south of well #1, which is protected by a vertical 0.45 m diameter corrugated steel pipe around the well casing and standing 1.2 m above the ground. Well No. 1 is operated at 15.2 L/s at an operating pressure of 650 kilopascals (kPa). Well #1 is located about 75 m South of Well #2.

Well #2, constructed in 1983, consists of a 300 mm diameter screened well, screened across a sand and gravel interval from approximately 11.0 to 18.5 m, pump is 22.4 kW, 3 phase, 60 Hertz, 575 Volt, Well Pump no. 2 is a 22.4 kW, 3 phase, 60 Hertz, 575 Volt, 30 HP Grundfos Submersible Pump (installed new in 2002), Model 230s300-9 with the capacity of 15.2 L/s or 1,313 m³/d at a TDH of 92.2 m. The well casing was raised 2 m in 2003 and furnished with a pit less adapter and locked down insect proof vented cap. A 0.15 m diameter test well is located approximately 3 m east of well #2. Well No. 2 is operated at 15.2 L/s at an operating pressure of 650 kPa. Well #2 is situated about 30 metres from Genesee Creek within the Genesee Creek floodplain.

Water Treatment

The water treatment facility was originally constructed in 1981 and upgraded in 2003 to meet new regulatory requirements. In April 2009 a newly constructed 1278 m³ in ground water storage reservoir was put into service to replace the aged 900 m³ (1955) steel standpipe. The treatment process at the Powassan Well Supply is comprised of primary and secondary disinfection by dosing with sodium hypochlorite. The pump house building contains the process piping, flow meters and treated water sample points, the sodium hypochlorite disinfection feed system, process monitoring instrumentation, standby pumping system controls, electrical system and all associated appurtenances. A 49 m length of 600 mm serpentine pipe is installed below grade at the well/pump house to provide a minimum 15 minutes of disinfection contact time determined at maximum design flow and before the first consumer. The disinfection system is comprised of two sodium hypochlorite metering pumps, with a maximum capacity of 3.13 litres per hour (L/hr) at 690 kPa, with manual switchover controls, and two 160 litre (L) storage tanks (one duty & one standby) with secondary spill containment.



Water Storage and Pumping Capabilities

An in-ground reservoir constructed in 2008-09 is located approximately 60 m east from Big Bend Avenue at the end of McRae Drive was brought on-line in April 2009. The reservoir is an interconnected dual cell reservoir; each sized approximately 9.3 m x 13 m x 5.5 m water depth with a total capacity of 1,278 m³. Each cell is equipped with an inlet/outlet level sensor and a 300 mm diameter emergency overflow pipe; a 3.8 m x 4 m in-ground valve chamber. A prefabricated rechlorination building is located on top of the valve chamber and houses one (1) 100 L sodium hypochlorite storage tank with secondary containment and two (2) chemical metering pumps (duty and standby) each rated at 1.4 L/hr available to inject sodium hypochlorite into the reservoir outlet line (on demand) when required. An on-line chlorine residual analyzer is provided to sample water from the reservoir outlet line. The reservoir is operated and controlled based on water demand/pressure in the distribution system.

Emergency Power

Standby power in the event of a power interruption is supplied by a 65 kW/81 thousand volt amps (KVA), 347/600/3PH/60 Hz, diesel generator set with an automatic transfer switch in an external pad mounted weatherproof acoustical enclosure equipped with a double walled fuel tank in the sub base.

Distribution System

The Powassan DWS is categorized as a Large Municipal Residential Drinking Water System and serves an estimated population of 1000 residents. The distribution system consists of approximately 10.8 kilometers (km) of water mains made up of cast iron and polyvinyl chloride (PVC) piping ranging in size from 100 mm to 200 mm in diameter. Approximately 2.1 km of 250 mm diameter water main is installed in conjunction with the in-ground storage reservoir. The distribution system undergoes routine flushing twice a year, in the spring and in the fall.

3.0 List of Water Treatment Chemicals Used Over the Reporting Period

The following chemicals were used in the treatment process at the Powassan Water Treatment Plant.

- Sodium hypochlorite – Disinfection

4.0 Significant Expenses Incurred in the Drinking Water System

OCWA is committed to maintaining the assets of the drinking water system and maintains a program of scheduled inspection and maintenance activities using a computerized Work Management System (WMS). OCWA implemented a new Workplace Management System (Maximo) in 2015, which better maintains and optimizes facility assets. All routine maintenance activities conducted at the water treatment plant were accomplished in 2024.

Significant expenses incurred in the drinking water system include:

- New spare chlorine analyzer installed with alarming
- Removed a mess of electrical wires that served no use
- Assisted with new 1" service line
- Replaced wellhouse generator battery

5.0 Drinking Water System Highlights

- The Ministry of the Environment, Conservation and Parks (MECP) performed their last annual inspection on January 30, 2024. The inspection included a physical assessment of the Powassan Water Treatment Plant and a document review. Two non compliance were identified and resolved. The system received a risk rating of 7.47%, with a final inspection rating of 92.53%.
- SAI Global conducted an off-site external 12-month surveillance audit of the Powassan Drinking Water System’s Quality and Environmental Management System (QEMS). The system and processes associated with the QEMS were evaluated on May 7, 2024 to ensure implementation of the Operational Plan and procedures and conformance to the Drinking Water Quality Management Standard version 2.0. There was one Opportunity for Improvement identified. Re-accreditation achieved on June 9, 2022.

6.0 Details on Notices of Adverse Test Results and Other Problems Reported to & Submitted to the Spills Action Center

Based on information kept on record by OCWA, zero (0) adverse water quality incidents (AWQI) were reported to the MOE’s Spills Action Centre (MOE SAC) in 2024.

7.0 Microbiological Testing Performed During the Reporting Period

Summary of Microbiological Data

Sample Type	# of Samples	Range of <i>E. coli</i> Results (min to max)	Range of Total Coliform Results (min to max)	# of HPC Samples	Range of HPC Results (min to max)
Raw (Well No. 1)	53	0 to 0	0 to 0	0	N/A
Raw (Well No. 2)	53	0 to 0	0 to 0	0	N/A
Treated	53	0 to 0	0 to 0	53	0 to 9
Distribution	159	0 to 0	0 to 0	53	0 to 20

Maximum Allowable Concentration (MAC) for *E. coli* = 0 Counts/100 mL

MAC for Total Coliforms = 0 Counts/100 mL

“<” denotes less than the laboratory’s method detection limit.

NDOGHPC – No Data: Overgrown with HPC.

Notes: One microbiological sample is collected and tested each week from the raw (each well) and treated water supply. A total of three microbiological samples are collected and tested each week from the Powassan distribution system.

Refer to *Appendix A* for a monthly summary of microbiological test results.



8.0 Operational Testing Performed During the Reporting Period

Summary of Raw Water Turbidity Data

Parameter	# of Samples	Range of Results (min to max)	Unit of Measure
Turbidity (Well No. 1)	53	0.01 to 0.16	NTU
Turbidity (Well No. 2)	53	0.01 to 0.14	

Continuous Monitoring in the Treatment Process

Parameter	# of Samples	Range of Results (min to max)	Unit of Measure	Standard
Free Chlorine	8760	0.77 to 5.16	mg/L	CT*

Notes: For continuous monitors 8760 is used as the number of samples.

CT is the concentration of chlorine in the water times the time of contact that the chlorine has with the water. It is used to demonstrate the level of disinfection treatment in the water. CT calculations are performed for the Powassan water plant if the free chlorine residual level drops below 0.45 mg/L to ensure primary disinfection is achieved. The Water Treatment Plant is equipped with an automatic plant shutdown at 0.80 mg/L, with no delay.

Summary of Chlorine Residual Data in the Distribution System

Parameter	No. of Samples	Range of Results (min to max)	Unit of Measure	Standard
Free Chlorine	368	1.07 to 2.19	mg/L	0.05

Note: A total of seven operational checks for chlorine residual in the distribution system are collected each week. Four (4) samples are tested one day and three (3) on a second day. The sample sets are collected at least 48-hours apart and samples collected on the same day are from different locations.

Refer to *Appendix B* for a monthly summary of the above operational data.

Summary of Nitrate & Nitrite Data (sampled at the water treatment plant)

Date of Sample	Nitrate Result Value	Nitrite Result Value	Unit of Measure	Exceedance
January 8	0.873	< 0.003	mg/L	No
April 9	1.08	< 0.003	mg/L	No
July 16	1.19	< 0.003	mg/L	No
October 16	1.16	< 0.003	mg/L	No

Maximum Allowable Concentration (MAC) for Nitrate = 10 mg/L

MAC for Nitrite = 1 mg/L

Summary of Total Trihalomethane Data (sampled in the distribution system)

Date of Sample	Result Value	Unit of Measure	Running Average	Exceedance
January 17	5.5	ug/L	Q1 = 6.98	No
April 11	1.8		Q2 = 7.10	
July 11	1.8		Q3 = 5.28	
October 11	1.7		Q4 = 2.70	

Maximum Allowable Concentration (MAC) for Total Trihalomethanes = 100 ug/L (Four Quarter Running Average)

Summary of Total Haloacetic Acids Data (sampled in the distribution system)

Date of Sample	Result Value	Unit of Measure	Running Average	Exceedance
January 17	<5.3	ug/L	Q1 = <5.3	No
April 11	<5.3		Q2 = <5.3	
July 11	<5.3		Q3 = <5.3	
October 11	<5.3		Q4 = <5.3	

Maximum Allowable Concentration (MAC) for Total Haloacetic Acids = 80 ug/L (Four Quarter Running Average)

Summary of Most Recent Lead Data under Schedule 15.1

(applicable to the following drinking water systems; large municipal residential systems, small, municipal residential systems, and non-municipal year-round residential systems)

The Powassan DWS was eligible to follow the “Exemption from Plumbing Sampling” as described in section 15.1-5(9) and 15.1-5(10) of Schedule 15.1 of Ontario Regulation 170/03. The exemption applies to a drinking water system if, in two consecutive periods at reduced sampling, not more than 10% of all samples from plumbing exceed the maximum allowable concentration (MAC) of 10 ug/L for lead. As such, the system was required to test for total alkalinity and pH in one distribution sample collected during the periods of December 15 to April 15 (winter period) and June 15 to October 15 (summer period). This testing is required in every 12-month period with lead testing in every third 12-month period. Two rounds of lead, alkalinity and pH testing were carried out on April 15th and October 3rd of 2024. Results are summarized in the table below.

Summary of Lead, pH & Alkalinity Data (sampled in the distribution system)

Date of Sample	# of Samples	Sample Location	Lead (ug/L)	Field pH	Alkalinity (mg/L)
April 15	1	Hydrant at Lot# 4 on Industrial Park Dr.	N/A	6.75	93
April 15	1	Hydrant at 30 Valleyview Dr. E.	N/A	6.75	81
Oct. 3	1	Hydrant at Main & Memorial	N/A	6.94	94
Oct. 3	1	Hydrant at Joseph and Memorial St	N/A	7.03	105

Most Recent Schedule 23 Inorganic Data Tested at the Water Treatment Plant

Parameter	Result Value	Unit of Measure	Standard	Exceedance
Antimony	<MDL 0.6	ug/L	6	No
Arsenic	<MDL 0.2	ug/L	10	No
Barium	170	ug/L	1000	No
Boron	12	ug/L	5000	No
Cadmium	0.003	ug/L	5	No
Chromium	0.92	ug/L	50	No
Mercury	<MDL 0.01	ug/L	1	No
Selenium	0.11	ug/L	50	No
Uranium	0.742	ug/L	20	No

Note: Sample required every 36 months (sample date = Jan. 17, 2024). Next sampling scheduled for January 2027.



Most Recent Schedule 24 Organic Data Tested at the Water Treatment Plant

Treated Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
1,1-Dichloroethylene (ug/L)-TW2	2024/01/17	< MDL 0.33	14	No	No
1,2-Dichlorobenzene (ug/L)-TW2	2024/01/17	< MDL 0.41	200	No	No
1,2-Dichloroethane (ug/L)-TW2	2024/01/17	< MDL 0.35	5	No	No
1,4-Dichlorobenzene (ug/L)-TW2	2024/01/17	< MDL 0.36	5	No	No
2,3,4,6-Tetrachlorophenol (ug/L)-TW2	2024/01/17	< MDL 0.2	100	No	No
2,4,6-Trichlorophenol (ug/L)-TW2	2024/01/17	< MDL 0.25	5	No	No
2,4-Dichlorophenol (ug/L)-TW2	2024/01/17	< MDL 0.15	900	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L)-TW2	2024/01/17	< MDL 0.19	100	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L)-TW2	2024/01/17	< MDL 0.12	100	No	No
Alachlor (ug/L) -TW2	2024/01/17	< MDL 0.02	5	No	No
Atrazine + N-dealkylated metabolites (ug/L)-TW2	2024/01/17	< MDL 0.01	5	No	No
Azinphos-methyl (ug/L)-TW2	2024/01/17	< MDL 0.05	20	No	No
Benzene (ug/L)-TW2	2024/01/17	< MDL 0.32	1	No	No
Benzo(a)pyrene (ug/L)-TW2	2024/01/17	< MDL 0.004	0.01	No	No
Bromoxynil (ug/L)-TW2	2024/01/17	< MDL 0.33	5	No	No
Carbaryl (ug/L)-TW2	2024/01/17	< MDL 0.05	90	No	No
Carbofuran (ug/L) -TW2	2024/01/17	< MDL 0.01	90	No	No
Carbon Tetrachloride (ug/L) -TW2	2024/01/17	< MDL 0.17	2	No	No
Chlorpyrifos (ug/L) -TW2	2024/01/17	< MDL 0.02	90	No	No
Diazinon (ug/L)-TW2	2024/01/17	< MDL 0.02	20	No	No
Dicamba (ug/L)-TW2	2024/01/17	< MDL 0.2	120	No	No
Dichloromethane (Methylene Chloride) (ug/L)-TW2	2024/01/17	< MDL 0.35	50	No	No
Diclofop-methyl (ug/L)-TW2	2024/01/17	< MDL 0.4	9	No	No
Dimethoate (ug/L)-TW2	2024/01/17	< MDL 0.06	20	No	No
Diquat (ug/L)-TW2	2024/01/17	< MDL 1	70	No	No
Diuron (ug/L)-TW2	2024/01/17	< MDL 0.03	150	No	No
Glyphosate (ug/L)-TW2	2024/01/17	< MDL 1	280	No	No
Malathion (ug/L)-TW2	2024/01/17	< MDL 0.02	190	No	No
Metolachlor (ug/L)-TW2	2024/01/17	< MDL 0.01	50	No	No
Metribuzin (ug/L)-TW2	2024/01/17	< MDL 0.02	80	No	No
Monochlorobenzene (Chlorobenzene) (ug/L)-TW2	2024/01/17	< MDL 0.3	80	No	No
Paraquat (ug/L)-TW2	2024/01/17	< MDL 1	10	No	No
PCB (ug/L)-TW2	2024/01/17	< MDL 0.04	3	No	No
Pentachlorophenol (ug/L)-TW2	2024/01/17	< MDL 0.15	60	No	No
Phorate (ug/L)-TW2	2024/01/17	< MDL 0.01	2	No	No
Picloram (ug/L)-TW2	2024/01/17	< MDL 1	190	No	No
Prometryne (ug/L)-TW2	2024/01/17	< MDL 0.03	1	No	No
Simazine (ug/L)-TW2	2024/01/17	< MDL 0.01	10	No	No
Terbufos (ug/L)-TW2	2024/01/17	< MDL 0.01	1	No	No
Tetrachloroethylene (ug/L)-TW2	2024/01/17	< MDL 0.35	10	No	No
Triallate (ug/L) -TW2	2024/01/17	< MDL 0.01	230	No	No
Trichloroethylene (ug/L)-TW2	2024/01/17	< MDL 0.44	5	No	No
Trifluralin (ug/L)-TW2	2024/01/17	< MDL 0.02	45	No	No
Vinyl Chloride (ug/L)-TW2	2024/01/17	< MDL 0.17	1	No	No
HAA Total (ug/L) Annual Average-DW	2024/01/01	5.3	80	No	No
Trihalomethane: Total (ug/L) Annual Average-DW	2024/01/01	1.5225	100	No	No

Note: Sample required every 36 months (sample date = Jan. 17, 2024). Next sampling scheduled for January 2027.

Inorganic or Organic Test Results that Exceeded Half the Standard Prescribed in Schedule 2 of the Ontario Drinking Water Quality Standards.



No inorganic or organic parameter(s) listed in Schedule 23 and 24 of Ontario Regulation 170/03 exceeded half the standard found in Schedule 2 of the Ontario Drinking Water Standard (O. Reg. 169/03) during the reporting period.

Most Recent Sodium Data Sampled at the Water Treatment Plant

Date of Sample	# of Samples	Result Value	Unit of Measure	Standard	Exceedance
January 24, 2022	1	11.9	mg/L	20	No
February 27, 2017	1	9.35	mg/L	20	No

Note: Sample required every 60 months. Next sampling scheduled for January 2027.

Most Recent Fluoride Data Sampled at the Water Treatment Plant

Date of Sample	# of Samples	Result Value	Unit of Measure	Standard	Exceedance
January 17, 2024	1	0.22	mg/L	1.5	No

Note: Sample required every 60 months. Next sampling scheduled for January 2029.

Summary of Additional Testing Performed in Accordance with a Legal Instrument.

No additional sampling and testing was required for the Powassan DWS during the 2024 reporting period.



Powassan Drinking Water System

Schedule 22

2024 SUMMARY REPORT

FOR MUNICIPALITIES



Schedule 22 - SUMMARY REPORTS FOR MUNICIPALITIES

1.0 Introduction

Drinking-Water System Name:	POWASSAN DRINKING WATER SYSTEM
Municipal Drinking Water Licence (MDWL) No.:	266-101-3 (issued April 9, 2021)
Drinking Water Work Permit (DWWP) No.:	266-201-3 (issued April 9, 2021)
Permit to Take Water (PTTW) No.:	7867-CDEJHF (issued April 14, 2022)
Period being reported:	January 1, 2024 to December 31, 2024

2.0 Requirements the System Failed to Meet

According to information kept on record by OCWA, the Powassan Drinking Water System has complied with all the requirements set out in the system’s MDWL, its DWWP, the Act and its Regulations. With the exceptions noted below.

The last MECP inspection report dated February 10, 2024 identified two non-compliance/best practice items.

According to information kept on record by OCWA; there was zero non-compliance issues during 2024.

3.0 Summary of Quantities and Flow Rates

Flow Monitoring

MDWL No. 266-101 requires the owner to install a sufficient number of flow measuring devices to permit the continuous measurement and recording of:

- the flow rate and daily volume of treated water that flows from the treatment subsystem the distribution system, and
- the flow rate and daily volume of water that flows into the treatment subsystem.

The flow monitoring equipment identified in the MDWL is present and operating as required. The flow meter is calibrated on an annual basis as specified in the manufacturers’ instructions.

Water Usage

The following water usage tables summarize the quantities and flow rates of water taken and produced during the 2024 reporting period, including total monthly volumes, average monthly volumes, maximum monthly volumes, and maximum flow rates.



Raw Water

2024 - Monthly Summary of Water Takings from the Source (Well #1)

Regulated by Permit to Take Water (PTTW) #7867-CDEJHF, issued April 14, 2022

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date
Total Volume (m ³)	7154	6763	7495	8212	7177	6776	7183	7524	6849	6793	7102	7064	86092
Average Volume (m ³ /d)	231	233	242	274	232	226	232	243	228	219	237	228	235
Maximum Volume (m ³ /d)	302	340	376	367	411	369	353	299	343	329	333	281	411
PTTW - Maximum Allowable Volume (m ³ /day)	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313
Maximum Flow Rate (L/min)	875	878	873	874	878	871	873	869	877	876	876	872	878
PTTW - Maximum Allowable Flow Rate (L/min)	912	912	912	912	912	912	912	912	912	912	912	912	912

2024 - Monthly Summary of Water Takings from the Source (Well #2)

Regulated by Permit to Take Water (PTTW) #7867-CDEJHF, issued April 14, 2022

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date
Total Volume (m ³)	7317	6794	7553	6749	5817	6564	6433	6868	6717	6997	6611	6637	81056
Average Volume (m ³ /d)	236	234	244	225	188	219	208	222	224	226	220	214	222
Maximum Volume (m ³ /d)	342	331	282	307	252	296	273	291	297	440	319	343	440
PTTW - Maximum Allowable Volume (m ³ /day)	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313
Maximum Flow Rate (L/min)	881	886	884	889	892	884	888	883	888	891	893	889	893
PTTW - Maximum Allowable Flow Rate (L/min)	912	912	912	912	912	912	912	912	912	912	912	912	912

Table A - Raw Water Usage

2024 - Monthly Summary of Combined Water Takings from the Source (Well#1 and Well #2)

Regulated by Permit to Take Water (PTTW) #7867-CDEJHF, issued April 14, 2022

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date
Total Volume (m ³)	12786	11916	13368	13096	11816	11818	11947	12612	12111	12167	12072	12153	147862
Average Volume (m ³ /d)	412	411	431	437	381	394	385	407	404	392	402	392	404
Maximum Volume (m ³ /d)	496	455	489	536	476	505	455	560	460	448	438	424	560
PTTW - Maximum Allowable Volume (m ³ /day)	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313

The system’s Permit to Take Water #7346-8VFJKR, allows the Municipality to withdraw water at the following rates:

Well No. 1: 1313.28 m³/day / 912 L/minute

Well No. 2: 1313.28 m³/day / 912 L/minute

Total Combined Daily Volume: 1313.28 m³/day

The system’s Permit to Take Water #7346-8VFJKR allows the municipality to withdraw a maximum volume of 1313.28 cubic meters from each well each day with a maximum of 1313.28 cubic meters per day combined. A review of the raw water flow data indicates that the system never exceeded this allowable limit having a maximum volume of 560 m³ in August 2024. The Permit also allows a maximum flow rate of 912 L/minute. At no point during the

reporting period did the system exceed this rate having a maximum recorded flow of 893 L/minute in November 2024.

Treated Water

Table B - Treated Water Usage

2024 - Monthly Summary of Treated Water Supplied to the Distribution System

Regulated by Municipal Drinking Water Licence (MDWL) #266-101 - Issue 3, issued April 9, 2021

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date
Total Volume (m ³)	12786	11916	13368	13096	11816	11818	11947	12612	12111	12167	12072	12153	147862
Average Volume (m ³ /d)	412	411	431	437	381	394	385	407	404	392	402	392	404
Maximum Volume (m ³ /d)	496	455	489	536	476	505	455	560	460	448	438	424	560
MDWL - Rated Capacity (m ³ /day)	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313

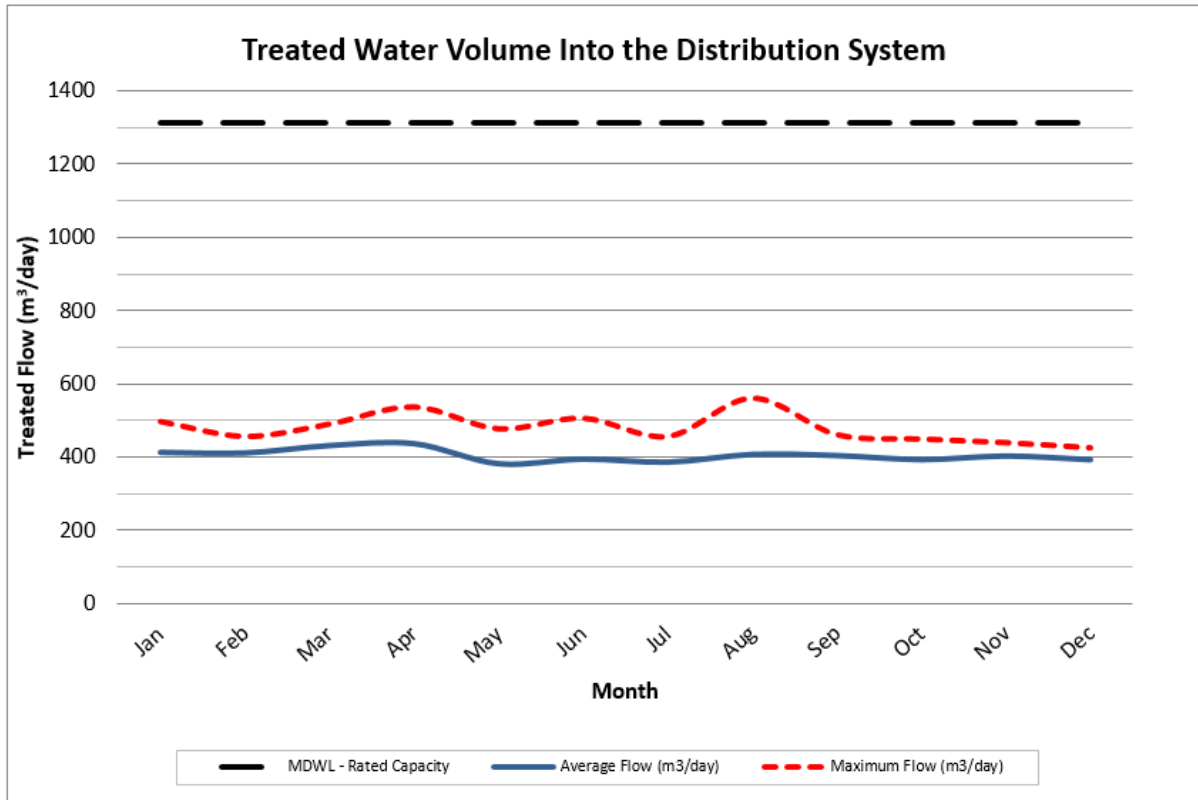
Schedule C, Section 1.1 of MDWL No. 266-101 states that the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed a maximum flow rate of 1313 m³/day. The Powassan DWS complied with this limit having a recorded maximum volume of 560 m³ in August 2024, which is 42.65% of the rated capacity.

Figure 1 compares the average and maximum flow rates into the distribution system to the rated capacity of the system identified in the MDWL. This information enables the Owner to assess the system’s existing and future planned water usage needs.

Comparison of the Flow Summary to the Systems Licence & Permit

Rated Capacity of the Plant (MDWL)	1313 m ³ /day	
Average Daily Flow for 2024	404 m ³ /day	30.77% of the rated capacity
Maximum Daily Flow for 2024	560 m ³ /day	42.65% of the rated capacity
Total Treated Water Produced in 2024	147,862 m ³	

The Powassan Water Treatment Plant is rated to produce 1313 cubic meters of water per day as specified in the system’s Municipal Drinking Water Licence. The average daily flow was 404 m³ per day, which is 30.77% of the rated capacity. This information clearly shows that the plant is well within its rated capacity and is able to meet current demands of consumers.



CONCLUSION

In 2024, the Powassan DWS provided safe and reliable drinking water to the community of Powassan. The system complied with the regulatory requirements of the Safe Drinking Water Act and its Regulations and met the terms and conditions outlined in its site specific drinking water works permit and municipal drinking water licence with two exceptions noted above.



APPENDIX A

Monthly Summary of Microbiological
Test Results

Customized Monthly Report

From 01/01/2024 to 12/31/2024

Facility Name: POWASSAN DRINKING WATER SYSTEM
Receiver:

Facility Org Number: 6033
Facility Owner: Municipality Of Powassan
Service Population:

Works: 220000576
Facility Classification: Class 1 Water Treatment
Total Design Capacity: 1313 m3/day



														2024			
Distribution	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Total	Avg	Max	Min	
E. Coli - cfu/100mL																	
Count	15.00	12.00	12.00	15.00	12.00	12.00	15.00	12.00	12.00	15.00	12.00	15.00	159.00				
Lab Count	15.00	12.00	12.00	15.00	12.00	12.00	15.00	12.00	12.00	15.00	12.00	15.00	159.00				
Lab Month.Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00		
Lab Month.Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			
Lab Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	
HPC - cfu/mL																	
Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
Lab Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
Lab Month.Max	1.00	1.00	3.00	0.00	9.00	2.00	9.00	3.00	4.00	20.00	1.00	4.00			20.00		
Lab Month.Mean	0.40	0.25	1.00	0.00	2.50	0.75	4.20	2.00	1.25	5.20	0.50	1.00		1.64			
Lab Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00				0.00	
Total Coliform: TC - cfu/100mL																	
Count	15.00	12.00	12.00	15.00	12.00	12.00	15.00	12.00	12.00	15.00	12.00	15.00	159.00				
Lab Count	15.00	12.00	12.00	15.00	12.00	12.00	15.00	12.00	12.00	15.00	12.00	15.00	159.00				
Lab Month.Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00		
Lab Month.Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			
Lab Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	
														2024			
Raw Well 1	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Total	Avg	Max	Min	
E. Coli: EC - cfu/100mL																	
Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
Lab Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
Lab Month.Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00		
Lab Month.Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			
Lab Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	
Total Coliform: TC - cfu/100mL																	
Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
Lab Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
Lab Month.Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00		
Lab Month.Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			
Lab Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	

Customized Monthly Report

From 01/01/2024 to 12/31/2024

Facility Name: POWASSAN DRINKING WATER SYSTEM
Receiver:

Facility Org Number: 6033
Facility Owner: Municipality: Municipality Of Powassan
Service Population:

Works: 220000576
Facility Classification: Class 1 Water Treatment
Total Design Capacity: 1313 m3/day



														2024			
Raw Well 2	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Total	Avg	Max	Min	
E. Coli: EC - cfu/100mL																	
Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
Lab Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
Lab Month.Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00		
Lab Month.Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			
Lab Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	
Total Coliform: TC - cfu/100mL																	
Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
Lab Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
Lab Month.Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00		
Lab Month.Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			
Lab Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	
														2024			
TW1	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Total	Avg	Max	Min	
E. Coli: EC - cfu/100mL																	
Count	3.00	2.00	1.00	3.00	3.00	2.00	2.00	2.00	1.00	3.00	1.00	4.00	27.00				
Lab Count	3.00	2.00	1.00	3.00	3.00	2.00	2.00	2.00	1.00	3.00	1.00	4.00	27.00				
Lab Month.Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00		
Lab Month.Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			
Lab Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	
HPC - cfu/mL																	
Count	3.00	2.00	1.00	3.00	3.00	2.00	2.00	2.00	1.00	3.00	1.00	4.00	27.00				
Lab Count	3.00	2.00	1.00	3.00	3.00	2.00	2.00	2.00	1.00	3.00	1.00	4.00	27.00				
Lab Month.Max	0.00	0.00	0.00	0.00	0.00	0.00	1.00	9.00	1.00	0.00	0.00	0.00			9.00		
Lab Month.Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.50	4.50	1.00	0.00	0.00	0.00		0.41			
Lab Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00				0.00	
Total Coliform: TC - cfu/100mL																	
Count	3.00	2.00	1.00	3.00	3.00	2.00	2.00	2.00	1.00	3.00	1.00	4.00	27.00				
Lab Count	3.00	2.00	1.00	3.00	3.00	2.00	2.00	2.00	1.00	3.00	1.00	4.00	27.00				
Lab Month.Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00		
Lab Month.Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			
Lab Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	

Customized Monthly Report

From 01/01/2024 to 12/31/2024

Facility Name: POWASSAN DRINKING WATER SYSTEM
Receiver:

Facility Org Number: 6033
Facility Owner: Municipality Of Powassan
Service Population:

Works: 220000576
Facility Classification: Class 1 Water Treatment
Total Design Capacity: 1313 m3/day



														2024			
TW2	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Total	Avg	Max	Min	
E. Coli: EC - cfu/100mL																	
Count	2.00	2.00	3.00	2.00	1.00	2.00	3.00	2.00	3.00	2.00	3.00	1.00	26.00				
Lab Count	2.00	2.00	3.00	2.00	1.00	2.00	3.00	2.00	3.00	2.00	3.00	1.00	26.00				
Lab Month.Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00		
Lab Month.Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			
Lab Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	
HPC - cfu/mL																	
Count	2.00	2.00	3.00	2.00	1.00	2.00	3.00	2.00	3.00	2.00	3.00	1.00	26.00				
Lab Count	2.00	2.00	3.00	2.00	1.00	2.00	3.00	2.00	3.00	2.00	3.00	1.00	26.00				
Lab Month.Max	1.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00			2.00		
Lab Month.Mean	0.50	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00		0.12			
Lab Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	
Total Coliform: TC - cfu/100mL																	
Count	2.00	2.00	3.00	2.00	1.00	2.00	3.00	2.00	3.00	2.00	3.00	1.00	26.00				
Lab Count	2.00	2.00	3.00	2.00	1.00	2.00	3.00	2.00	3.00	2.00	3.00	1.00	26.00				
Lab Month.Max	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00		
Lab Month.Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00			
Lab Month.Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	



APPENDIX B

Monthly Summary of Operational Data

Customized Monthly Report

From 01/01/2024 to 12/31/2024

Facility Name: POWASSAN DRINKING WATER SYSTEM
Receiver:

Facility Org Number: 6033
Facility Owner: Municipality Of Powassan
Service Population:

Works: 220000576
Facility Classification: Class 1 Water Treatment
Total Design Capacity: 1313 m3/day



														2024			
Distribution	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Total	Avg	Max	Min	
CI Residual: Free DW1 - mg/L																	
Count	9.00	8.00	9.00	9.00	9.00	8.00	9.00	9.00	8.00	10.00	8.00	9.00	105.00				
IH Edited Count	9.00	8.00	9.00	9.00	9.00	8.00	9.00	9.00	8.00	10.00	8.00	9.00	105.00				
IH Month.Max	2.19	1.94	2.03	1.75	1.91	1.86	2.01	1.90	1.60	1.86	2.05	1.62			2.19		
IH Month.Mean	1.79	1.73	1.58	1.59	1.61	1.49	1.74	1.57	1.42	1.49	1.67	1.51		1.60			
IH Month.Min	1.48	1.56	1.33	1.38	1.30	1.30	1.40	1.18	1.28	1.31	1.50	1.39				1.18	
CI Residual: Free DW2 - mg/L																	
Count	9.00	8.00	9.00	9.00	9.00	8.00	9.00	9.00	8.00	10.00	8.00	9.00	105.00				
IH Edited Count	9.00	8.00	9.00	9.00	9.00	8.00	9.00	9.00	8.00	10.00	8.00	9.00	105.00				
IH Month.Max	2.11	1.90	1.98	1.95	1.77	1.78	1.94	1.79	1.57	1.66	1.96	1.67			2.11		
IH Month.Mean	1.83	1.70	1.58	1.63	1.57	1.60	1.77	1.58	1.38	1.49	1.77	1.52		1.62			
IH Month.Min	1.63	1.59	1.34	1.31	1.39	1.46	1.45	1.37	1.26	1.38	1.58	1.43				1.26	
CI Residual: Free DW3 - mg/L																	
Count	9.00	8.00	9.00	9.00	9.00	8.00	9.00	9.00	8.00	10.00	8.00	9.00	105.00				
IH Edited Count	9.00	8.00	9.00	9.00	9.00	8.00	9.00	9.00	8.00	10.00	8.00	9.00	105.00				
IH Month.Max	2.08	1.76	1.63	1.86	1.71	1.73	1.91	1.73	1.57	1.66	2.04	1.64			2.08		
IH Month.Mean	1.84	1.67	1.54	1.66	1.53	1.49	1.75	1.54	1.39	1.47	1.66	1.52		1.59			
IH Month.Min	1.55	1.55	1.47	1.49	1.37	1.24	1.42	1.07	1.11	1.34	1.11	1.41				1.07	
CI Residual: Free DW4 - mg/L																	
Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
IH Edited Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
IH Month.Max	2.08	1.96	1.72	1.73	1.72	1.59	1.89	1.55	1.57	1.72	1.99	1.77			2.08		
IH Month.Mean	1.89	1.72	1.60	1.59	1.63	1.54	1.72	1.49	1.42	1.52	1.76	1.52		1.62			
IH Month.Min	1.72	1.59	1.50	1.41	1.57	1.51	1.35	1.32	1.25	1.28	1.57	1.26				1.25	
														2024			
Raw Well 1	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Total	Avg	Max	Min	
Turbidity - NTU																	
Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
IH Edited Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
IH Month.Max	0.16	0.10	0.11	0.11	0.12	0.11	0.10	0.09	0.11	0.11	0.12	0.10			0.16		
IH Month.Mean	0.11	0.08	0.09	0.09	0.10	0.09	0.08	0.06	0.08	0.08	0.10	0.09		0.09			
IH Month.Min	0.07	0.06	0.07	0.06	0.08	0.06	0.05	0.01	0.05	0.06	0.07	0.08				0.01	

Customized Monthly Report

From 01/01/2024 to 12/31/2024

Facility Name: POWASSAN DRINKING WATER SYSTEM
Receiver:

Facility Org Number: 6033
Facility Owner: Municipality Of Powassan
Service Population:

Works: 220000576
Facility Classification: Class 1 Water Treatment
Total Design Capacity: 1313 m3/day



														2024			
Raw Well 2	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Total	Avg	Max	Min	
Turbidity - NTU																	
Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
IH Edited Count	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00				
IH Month.Max	0.12	0.13	0.10	0.12	0.11	0.14	0.12	0.10	0.12	0.11	0.10	0.09			0.14		
IH Month.Mean	0.09	0.11	0.09	0.10	0.10	0.10	0.11	0.07	0.10	0.09	0.09	0.08		0.09			
IH Month.Min	0.06	0.09	0.07	0.08	0.08	0.06	0.08	0.01	0.08	0.08	0.07	0.07				0.01	
														2024			
Treated Water	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Total	Avg	Max	Min	
Cl Residual: Free Min = 0.45 - mg/L																	
OL Month.Max	3.73	2.93	2.55	2.29	2.57	2.15	3.95	5.16	2.26	2.54	3.16	2.24			5.16		
OL Month.Mean	1.88	1.69	1.64	1.66	1.65	1.61	1.74	1.54	1.49	1.57	1.88	1.55		1.66			
OL Month.Min	1.07	1.05	0.89	1.17	0.89	1.05	0.77	1.11	1.02	1.04	1.11	0.93				0.77	



January 15, 2025

By Email

Allison Quinn, Clerk
250 Clark Street
PO Box 250
Powassan, ON POH 1Z0

Dear Allison,

Re: North Bay-Mattawa Conservation Authority 2025 Budget and Levy

The North Bay-Mattawa Conservation Authority (NBMCA) Board of Directors approved the 2025 budget during the board meeting held December 16, 2024.

The Conservation Authorities Act requires that a notice of the levy apportionment is provided to participating municipalities. Please find the required information via this letter and the attached 2025 Budget for NBMCA, which includes the levy apportionment for all members.

Total Budget

The NBMCA 2025 Budget has been set at \$4,174,009.

Municipal Levy

The total municipal levy for 2025 is \$1,496,527. This is comprised of the 2025 General Levy amount of \$961,544 and the sole-benefitting levy amount of \$534,983.

The municipal levy has not been increased this year, however, the amount owing year-over-year may change due to variances in the Modified Current Value Assessment (MCVA) provided by the Ministry of Natural Resources (MNR) and used to calculate the share of the total levy owed by each member municipality.

Powassan Levy

For the Municipality of Powassan, the 2025 levy amount is \$393 and is comprised solely of operations funds.

The table below shows the levy amounts for NBMCA municipalities.

Table 1: Municipal Levy Apportionment for Operating and Capital Costs – Budget 2025

Municipality	Area % in CA	MCVA	TOTAL LEVY 2025	OPERATING			Capital	
				General Levy	Sole-benefit Levy	Total Operating Levy	Sole-benefit Levy	Total Capital Levy
Bonfield	100	3.45	\$ 33,143	\$ 33,143		\$ 33,143		\$ -
Calvin	100	1.23	\$ 11,850	\$ 11,850		\$ 11,850		\$ -
Chisholm	94	1.51	\$ 14,499	\$ 14,499		\$ 14,499		\$ -
East Ferris	83	6.39	\$ 61,438	\$ 61,438		\$ 61,438		\$ -
Mattawa	71	0.99	\$ 9,475	\$ 9,475		\$ 9,475		\$ -
Mattawan	19	0.06	\$ 597	\$ 597		\$ 597		\$ -
North Bay	100	79.07	\$ 1,265,289	\$ 760,306	\$ 342,000	\$ 1,102,306	\$ 162,983	\$ 162,983
Papineau-Cameron	35	0.80	\$ 7,712	\$ 7,712		\$ 7,712		\$ -
Callander	100	6.46	\$ 92,131	\$ 62,131	\$ 30,000	\$ 92,131		\$ -
Powassan	1	0.04	\$ 393	\$ 393		\$ 393		\$ -
		Total	\$ 1,496,527	\$ 961,544	\$ 372,000	\$ 1,333,544	\$ 162,983	\$ 162,983

Notes:

- **Modified Current Value Assessment (MCVA):** data provided by the Ministry of Natural Resources and Forestry (MNR) annually and used to calculate the general levy for each member municipality.
- **General Levy:** amount owing by all member municipalities for the shared administration of the NBMCA.
- **Sole-benefitting Levy:** amount owing by individual municipalities for work carried out in specific municipalities for work requested, or otherwise deemed to be the benefit, of only that municipality.
- **Operating Levy:** for NBMCA operations, including day to day activities, routine services, and administration.
- **Capital Levy:** for capital works projects in NBMCA conservation areas and on trails (such as boardwalk replacement, trails hazard tree removal, signage), Section 28 related technical studies and implementation, and watershed management strategy initiatives.



The Municipality of Powassan Council appointed member is sincerely appreciated for continued participation in a collaborative governance structure that guides the NBMCA.

Please find attached your invoices for the above-mentioned amount. Your early remittance of this levy is appreciated. For further information, please feel free to contact me via email at robin.allen@nbmca.ca

Thank you,

A handwritten signature in black ink, appearing to read "R. Allen", is positioned below the "Thank you," text.

Robin Allen
Interim-Chief Administrative Officer, Secretary Treasurer
North Bay-Mattawa Conservation Authority

Attachments:

1. Invoices for 2025 levy amounts
2. 2025 Budget for the North Bay-Mattawa Conservation Authority including municipal levy apportionment amounts.

Cc: Councillor Dave Britton

*Sent by Email on January 16, 2025, by NBMCA Executive Assistant Rebecca Morrow
On behalf of Robin Allen, Interim-Chief Administrative Officer, Secretary Treasurer*



NORTH BAY - MATTAWA
**CONSERVATION
AUTHORITY**

2025 Budget

Approved December 16, 2024

Prepared by
Robin Allen, Interim CAO, Secretary Treasurer
Aaron Lougheed, Manager, Finance

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1. Introduction

The North Bay-Mattawa Conservation Authority (NBMCA) provides leadership through coordination of watershed planning, implementation of resource management programs and promotion of conservation awareness in collaboration with others.

NBMCA is one of 36 Conservation Authorities in Ontario and was established under the Conservation Authorities Act in 1972 by member municipalities. NBMCA is a member of Conservation Ontario. NBMCA is governed by a 12-member Board of Directors, appointed by the 10 member municipalities.

The 2025 Budget is \$4,174,009.

2. Status of Reserves and Deferred Revenue

Below is a brief look at the NBMCA reserve accounts and deferred revenue as of November 1, 2024, and an estimate to end of year 2024. These figures are unaudited.

Table 1: Reserve Accounts

Reserve Account	As of Nov. 1, 2024 (UNAUDITED)
NBMCA Lands Acquisition - Capital	\$21,984
NBMCA Onsite Sewage System (OSS) Program (under the Ontario Building Code Part 8) - Operating	\$279,788
Laurentian Snowboarding Club and Ski Hill - Operating	\$50,789
Laurentian Snowboarding Club and Ski Hill - Capital	\$127,852

Table 2: Deferred Revenue Status and Estimates

Program	As of Nov 1, 2024 (UNAUDITED)	Estimated at Dec. 31, 2024
Water and Erosion Control Infrastructure (WECI) - Capital/Special Projects	\$100,000	\$100,000

The deferred revenue is for committed projects spanning multiple years; for programs funded on a different fiscal year (usually provincial or federal initiatives); and planned activities that were not completed in the year budgeted for various reasons.

3. Status of the Mortgage Loan

The NBMCA has two offices: the head administrative office in North Bay, which is owned by NBMCA, and office space rented from a separate property owner in Parry Sound. The TD Bank mortgage loan on the North Bay administrative office building was renegotiated in June 2022 at an interest rate of 4.65%, and expires June 22, 2027.

The mortgage principal outstanding as of November 1, 2024 was \$520,400 and is estimated to decrease to \$490,650 by the end of 2025. The blended payments comprise of principal and interest amounts and will be expensed monthly to the Corporate Services operating budget as follows.

- **Principal payments in 2025:** estimated mortgage principal payment: \$18,500.
- **Interest payments in 2025:** estimated mortgage interest payment: \$25,000.

4. Revenue Sources

4.1 General Information

Generally, NBMCA funding comes from several sources:

- **Transfer Payments** (if applications submitted are approved) from the Ministry of Natural Resources (MNR) and Ministry of Environment, Conservation and Parks (MECP)
 - MNRF: Provincial Section 39 Transfer Payment
 - MNRF: Water and Erosion Control Infrastructure (WECI)
 - MNRF: Flood Hazard Identification and Mapping Program (FHIMP)
 - MECP: Drinking Water Source Protection.
- **Municipal Levy**
 - General Levy: apportioned to all municipalities using the Modified Current Value Assessment (MCVA) provided by MNRF
 - Sole-Benefitting Levy: applied to a single municipality for work undertaken by NBMCA upon which the municipality is solely benefitting.
- **Self Generated Revenue**
 - Fees for the Septic System Program, Regulation Permit, Plan Review
 - Natural Classroom user fees (main office in North Bay)
 - Property Rentals
 - Interest earned
 - Donations
- **Other Grants/Revenue** (programs/available funds vary from year to year)
 - Sponsorships
 - Administrative Overhead Charges
 - Canada Summer Jobs funding
 - Northern Ontario Heritage Fund Corporation (NOHFC) funding
 - Other

4.2 All Revenue Sources

The 2025 Budget is \$4,174,009. An overview of revenue sources for 2025 is provided below.

Table 3: 2025 Budget Revenue Sources

Source	Amount
Transfer Payments	\$475,492
Municipal Levy	\$1,496,527
Self Generated Revenue	\$1,214,735
Other Grants/Revenue	\$628,825
Deferred Revenue	\$100,000
Reserves	\$258,430
TOTAL	\$4,174,009

4.3 Municipal Levy Amounts

The 2025 Budget proposes a 0% increase in general levy compared to 2024.

Helpful definitions are provided below.

- **Modified Current Value Assessment (MCVA):** data provided by MNRF annually and used to calculate (apportion) the general levy for each member municipality.
- **General Levy:** apportioned to all municipalities using the MCVA provided by MNRF.
- **Sole-benefitting Levy/Sole-benefit Levy:** applied to a municipality for work undertaken by NBMCA that solely benefits that municipality.

The total municipal levy proposed for 2025 is \$1,496,527:

- A general levy of \$961,544 applied to all member municipalities.
- A sole-benefitting levy of \$504,983 to the City of North Bay for additional water resources management support, including the maintenance and operation of the Parks Creek Backflow Control Structure, Ice Management, WECl projects, Emerald Ash Borer Management, Encampment Cleanup on CA lands, increased parks support, and operation of the Laurentian Ski Hill.
- A sole-benefitting levy of \$30,000 to the Municipality of Callander for Floodplain Mapping projects.

The following tables outline the calculation of levy amounts for all participating municipalities for both operating and capital expenses.

Table 4: 2025 Budget – Municipal Levy Overview

Municipality	Area % in CA	MCVA Percentage	TOTAL LEVY 2025	OPERATING			Capital	
				General Levy	Sole-benefit Levy	Total Operating Levy	Sole-benefit Levy	Total Capital Levy
Bonfield	100	3.45	\$33,143	\$33,143		\$34,950		\$ -
Calvin	100	1.23	\$11,850	\$11,850		\$12,496		\$ -
Chisholm	94	1.51	\$14,499	\$14,499		\$15,290		\$ -
East Ferris	83	6.39	\$61,438	\$61,438		\$64,789		\$ -
Mattawa	71	0.99	\$9,475	\$9,475		\$9,992		\$ -
Mattawan	19	0.06	\$597	\$597		\$630		\$ -
North Bay	100	79.07	\$1,265,289	\$760,306	\$342,000	\$1,143,774	\$162,983	\$ 162,983
Papineau-Cameron	35	0.80	\$7,712	\$7,712		\$8,132		\$ -
Callander	100	6.46	\$92,131	\$62,131	\$30,000	\$95,520		\$ -
Powassan	1	0.04	\$393	\$393		\$414		\$ -
		Total	\$ 1,496,527	\$ 961,544	\$372,000	\$1,385,987	\$162,983	\$ 162,983

Table 5: 2024-2025 Budget Comparison – Municipal Levy Overview

Municipality	Area % in CA	MCVA 2025	General Levy 2025	MCVA 2024	General Levy 2024	Diff '25-'24
Bonfield	100	3.45	\$33,143	3.43	\$32,988	<i>\$155</i>
Calvin	100	1.23	\$11,850	1.23	\$11,871	<i>-\$21</i>
Chisholm	94	1.51	\$14,499	1.50	\$14,383	<i>\$116</i>
East Ferris	83	6.39	\$61,438	6.29	\$60,528	<i>\$909</i>
Mattawa	71	0.99	\$9,475	0.98	\$9,385	<i>\$90</i>
Mattawan	19	0.06	\$597	0.06	\$597	<i>\$0</i>
North Bay	100	79.07	\$760,306	79.23	\$761,790	<i>-\$1,484</i>
Papineau-Cameron	35	0.80	\$7,712	0.80	\$7,691	<i>\$21</i>
Callander	100	6.46	\$62,131	6.44	\$61,917	<i>\$215</i>
Powassan	1	0.04	\$393	0.04	\$395	<i>-\$2</i>
		Total	\$961,544		\$961,544	\$0
		2025 General Levy	\$961,544			
		2024 General Levy	\$961,544			

5. Expenditures

5.1 Overview of Expenditures

An overview of the 2025 Budget expenditures is provided below.

- Annual programming/operations and administration:
 - Corporate Services/ “General Functions” including:
 - Administration of staff and operations
 - Governance (Board of Directors, related committees) support
 - Finance
 - Human Resources
 - Communications
 - Geographic Information Systems (GIS)
 - Information Technology (IT)
 - Water Resources Management including:
 - On-site Sewage Systems Program
 - Flood Forecasting and Warning
 - Flood and Erosion Control
 - Ice Management
 - Low Water Response
 - Watershed Monitoring
 - Drinking Water Source Protection
 - Conservation Areas and Lands including public parks maintenance, natural resources conservation and stewardship partnerships
 - Planning and Regulations including plan input and review, Section 28 regulations and permitting
- Capital improvements:
 - North Bay main office – HVAC control unit, boiler, hot water tank, exterior lighting, windows (phase 1), vinyl siding (phase 1)
 - Kinsmen Bridge repair in North Bay
 - Culvert repair/replacement at Kinsmen/Kate Pace Way
 - Signage for conservation areas
- Special projects and studies:
 - Asset Management Plan (multi-year)
 - Floodplain mapping (multi-year)
 - Parks Creek Backflow Control Structure Capacity Upgrade Study (multi-year)
 - Chippewa Creek Erosion Control Project (multi-year)
 - Mattawa Natural Hazard Risk Study Terms of Reference (multi-year)
 - Conservation Areas Inventory and Strategy Projects (multi-year)
 - Watershed Based Resource Management Strategy (multi-year)

Overall, the 2025 Budget reflects the annual objectives of the NBMCA and also considers long-term requirements to support the health and climate resiliency of watershed residents.

5.2 Estimated Use of Reserves and Deferred Revenue

Budget 2025 estimates modest use of reserve, surplus, and deferred revenue amounts. The table below provides an overview of the usage estimated for 2025.

Note that deferred revenue is for committed projects spanning multiple years; for programs funded on a different fiscal year (usually provincial or federal initiatives); and planned activities that were not completed in the year budgeted for various reasons.

Table 5: Estimated Use Deferred Revenue in 2025

Reserve, Surplus, and Deferred Revenue	As of Nov 1, 2024 (UNAUDITED)	Estimated at Dec. 31, 2024	Proposed Budget 2025	Program Details
Lands Capital Acquisition - Reserve	\$21,984	\$21,984	\$ -	
On-site Sewage System (OSS) Program - Reserve	\$279,788	\$213,815	\$ -	Decrease due to Anticipated Operating Deficit in FY 2024
Water and Erosion Control Infrastructure (WECl) - Capital/ Special Projects	\$ -	\$100,000	\$100,000	Deferred Revenue for WECl projects
		Total	\$302,931	

5.3 Tangible Capital Assets Purchases

In 2009 the NBMCA and other public sector organizations adopted Section 3150, Tangible Capital Assets of the Public Sector Accounting Handbook. This change resulted in the disclosure of information on major categories of tangible capital assets and amortization of these assets in the audited financial statements. The details on how this was undertaken is described in the Board approved NBMCA Tangible Capital Asset Policy (TCAP).

As a result of the TCAP, it is the practice of NBMCA to pay for and record acquisition of capital assets as follows:

- Use of a one-time cost recovery method. This is accomplished by budgeting for the acquisition of the asset in the year it is acquired. This cost recovery method is typically used when NBMCA is constructing a facility, such as a building, flood and erosion control works, or purchasing a large piece of equipment.
- Use of a cost recovery over time method. This is accomplished by budgeting for the acquisition of an asset over its defined lifetime in years. Annual budgets include expenditures in the form of “internal leases” that are equal to the depreciation rate or life span of the asset. Typically, this method is best suited for smaller capital items with shorter life spans that are replaced on a regular basis such as vehicles, computers, plotters and so on.

The 2025 budget includes both methods of capital acquisition. The cost recovery over time method is being used to replace computers, laptops and most tablets. The use of the one-time cost recovery method is part of the capital and special projects program budgets.

6. 2025 Budget Summary

Following changes in the Conservation Authorities Act, Budget 2025 follows the same procedures as Budget 2024 in the allocation of funding for Category 1, 2, and 3 program areas.

Program budgets are presented as follows:

- Category 1 (mandatory),
- Category 2 (delegated by municipalities) and
- Category 3 (non mandatory) programs and services.

The Table below provides a summary of the program areas.

Table 6: NBMCA Programs and Services

Program Area	Description
Category 1 (Mandatory)	
A. Corporate Services (“General Functions” per O. Reg. 402/22) Category 1 (Mandatory)	These are operating expenses and capital costs that are not related to the provision of a specific program or service, but rather provide a corporate-wide supporting function. Includes: governance support, finance, human resources, geographical information systems (GIS), information technology (IT), communications, legal expenses, office equipment and supplies, administrative office buildings, vehicle fleet, asset management, etc. These were previously called Administration (operating), Interpretive Centre (operating), Outreach (operating), Central Services (capital) and Mortgage Principal Repayment programs in the 2023 NBMCA budget book.
B. Planning and Regulations Category 1 (Mandatory)	These are operating expenses. The main goal is to protect life and property from natural hazards specified in O. Reg. 686/21. Includes: natural hazard input and review for member municipalities, planning boards, and unincorporated areas; Section 28 permitting process; and technical studies such as updating the regulated areas. These were previously called Section 28 (operating), Watershed Planning (operating), and S. 28 DIA Technical (special studies) programs in the 2023 NBMCA budget book.
C. Water Resources Management Category 1 (Mandatory)	These are operating expenses and capital costs. The main goal is to protect life and property from natural hazards specified in O. Reg. 686/21. Includes: flood forecasting and warning, flood and erosion control, ice management, natural hazard infrastructure operational plan and asset management plan, low water response, watershed-based resource management strategy, and watershed monitoring (provincial partnership surface water and groundwater monitoring programs). These were previously called Flood Forecasting, Flood Control, Erosion Control, Ice Management, Water Quality (operating programs) and S. 28

Program Area	Description
	DIA Technical, Integrated Watershed Management (IWM), and Water Erosion Control Infrastructure (WECI) (capital programs) in the 2023 NBMCA budget book.
D. Conservation Areas and Lands Category 1 (Mandatory)	<p>These are operating expenses and capital costs. The main goal is to protect, conserve and manage conservation areas and lands owned by NBMCA, including providing safe, passive recreation to the public. Includes: management of NBMCA owned lands including public parks and trails, Section 29 enforcement, maintenance of assets such as bridges, benches, pavilions, etc., tree planting on NBMCA lands, land inventory, conservation area strategy, policy for land acquisition and disposition, Planning Act comments as the landowner. These were previously called Lands and Properties (operating and capital programs) in the 2023 NBMCA budget book.</p>
E. Source Protection Authority (SPA) Category 1 (Mandatory)	<p>These are operating expenses. The main goal is to protect existing and future municipal drinking water sources in the North Bay-Mattawa Source Protection Authority (NBMSPA) per the Clean Water Act, 2006. Includes: governance support to a Source Protection Committee and to the NBMSPA, technical studies, policy updates/development, proposal review and comments, plan input and review, and significant threat policy implementation. This was previously called Source Water Protection (operating program) in the 2023 NBMCA budget book.</p>
F. On-site Sewage System (OSS) Program Category 1 (Mandatory)	<p>These are operating expenses. The main goal is to regulate existing and new septic systems to protect the environment per the Building Code Act, 1992, Part 8. Includes: permitting and compliance for on-site sewage systems (septic systems) in municipalities and unorganized townships, and mandatory maintenance inspections to over 500 properties identified under the Clean Water Act, 2006. This was previously called the same (OSS operating program) in the 2023 NBMCA budget book.</p>
Category 2 (Delegated by a Municipality)	
G. Watershed-Municipal Programs Category 2 (Delegated by a Municipality)	<p>These are operating expenses. Includes: watershed-wide monitoring that supplement the mandatory watershed monitoring (under Water Resources Management program area), and septic system reinspection program under the Trout Lake Management Plan. This was previously Integrated Watershed Management (special studies/capital program) and Water Quality (operating program) in the 2023 NBMCA budget book.</p>
Category 3 (Non mandatory; advisable by NBMCA)	
H. Watershed- Support Programs Category 3 (Non mandatory; advisable by NBMCA)	<p>These are operating expenses and capital costs. These are programs and services that NBMCA has determined are advisable to provide to further the purposes of the Conservation Authorities Act. Includes: benthic monitoring, watershed report card, land acquisition and disposition, land lease and agreement management, stewardship and restoration, Miskwaadesi (Painted Turtle site), septic systems related plan input and</p>

Program Area	Description
	review, Mattawa River Canoe Race. This was previously Integrated Watershed Management (special studies/capital program), Water Quality (operating), Outreach (operating), Lands and Property (operating and capital) in the 2023 NBMCA budget book.
I. Ski Hill Category 3 (Non mandatory; advisable by NBMCA)	These are operating expenses and capital costs. Supports the Laurentian Ski Hill Snowboarding Club which is operated by a separate Board and staff. NBMCA owns most of the major capital assets as well as the land on which the ski hill operates.

Category: 1 (Mandatory) Program Area: A. Corporate Services

<u>Object Code</u>	<u>Revenue/Expense Category</u>	<u>2025 Budget</u>
Revenue:		
01	Transfer Payment	\$ 133,490
04	General Levy	\$ 216,672
06	Fees	\$ 3,500
07	Donations	\$ 500
09	Internal Rent	\$ 12,865
10	External Rent	\$ 36,005
13	Other Revenue	\$ 52,443
14	Interest Earned	\$ 54,000
16	Admin Overhead	\$ 628,825
	Total Revenue	\$ 1,138,300
Expense:		
30	Wages and Benefits	\$ 611,340
38	Per Diem	\$ 10,000
39	Members Mileage	\$ 5,500
40	Members Expense	\$ 2,000
41	Staff Mileage and Expense	\$ 20,000
42	Staff Certification and Training	\$ 10,000
43	Telephone	\$ 31,000
45	Insurance	\$ 50,000
46	Natural Gas	\$ 20,000
48	Office Supplies	\$ 6,500
49	Postage	\$ 1,500
50	Equipment Purchase	\$ 1,000
51	Equipment Rental	\$ 8,000
54	Bank Charges	\$ 2,000
55	Interest Expense - Mortgage	\$ 25,000
57	Staff Appreciation and Clothing	\$ 20,000
58	Audit	\$ 26,945
59	Legal Services	\$ 75,000
60	Materials and Supply	\$ 15,000
61	Cons. Ontario Levy	\$ 26,815
62	Services	\$ 70,000
70	Rental Expense	\$ 36,000
71	Water	\$ 6,200
72	Hydro	\$ 25,000
73	Vehicle Gas	\$ 700
74	Accounting Services	\$ 1,800
78	Internal Chargeback	\$ 12,500
91	Mortgage Principal Repayment	\$ 18,500
	Total Expense	\$ 1,138,300

Category: 1 (Mandatory)

Program Area: A. Corporate Services Capital

<u>Object Code</u>	<u>Revenue/Expense Category</u>	<u>2025 Budget</u>
Revenue:		
04	General Levy	\$ -
13	Other Revenue	\$ 205,987
	Total Revenue	\$ 205,987
Expense:		
30	Wages and Benefits	\$ 30,989
62	Services	\$ 161,700
67	Admin Overhead	\$ 13,298
	Total Expenses	\$ 205,987
	Net	\$ 0

Category: 1 (Mandatory)

Program Area: B. Planning and Regulations

<u>Object Code</u>	<u>Revenue/Expense Category</u>	<u>2025 Budget</u>
Revenue:		
04	General Levy	\$ 104,480
06	Fees	\$ 70,000
	Total Revenue	\$ 174,480
Expense:		
30	Wages and Benefits	\$ 119,857
41	Staff mileage and expense	\$ 2,000
42	Staff Certification & Training	\$ 5,000
67	Admin Overhead	\$ 41,795
78	Internal Chargeback	\$ 5,828
	Total Expenses	\$ 174,480
	Net	\$ 0

Category: 1 (Mandatory) Program Area: C. Water Resources Management

<u>Object Code</u>	<u>Revenue/Expense Category</u>	<u>2025 Budget</u>
Revenue:		
1	MNR Transfer Payment	\$ 30,000
4	General Levy	\$ 422,068
5	Sole-Benefitting Levy	\$ 50,000
13	Other Revenue	\$ -
	Total Revenue	\$ 502,068
Expense:		
30	Wages and Benefits	\$ 221,927
41	Staff Mileage and Expenses	\$ 1,500
42	Staff Cert. And Training	\$ 3,500
44	Taxes	\$ 20,572
45	Insurance	\$ 37,075
47	Repairs and Maintenance	\$ 10,000
62	Services	\$ 10,000
66	Consulting	\$ 60,000
67	Admin Overhead	\$ 125,385
72	Hydro	\$ 1,020
73	Vehicle Gas	\$ 3,000
78	Internal Chargeback	\$ 8,089
	Total Expenses	\$ 502,068
	Net	\$ 0

Category: 1 (Mandatory) Program Area: C. Water Resources Management Capital

<u>Object Code</u>	<u>Revenue/Expense Category</u>	<u>2025 Budget</u>
Revenue:		
01	MNR Transfer Payment	\$ 100,000
05	Sole-Benefitting Levy	\$ 17,983
13	Other Revenue	\$ 100,000
	Total Revenue	\$ 217,983
Expense:		
30	Wages and Benefits	\$ 39,673
66	Consulting Services	\$ 159,762
67	Administrative Overhead	\$ 13,298
78	Internal Chargeback	\$ 5,250
	Total Expenses	\$ 217,983
	Net	\$ 0

Category: 1 (Mandatory) Program Area: D. Conservation Areas and Lands

<u>Object Code</u>	<u>Revenue/Expense Category</u>	<u>2025 Budget</u>
Revenue:		
04	General Levy	\$ 218,324
05	Special Levy	\$ 250,000
07	Donations	\$ -
10	External Property Rental	\$ 40,000
13	Other Revenue	\$ -
	Total Revenue	\$ 508,324
Expense:		
30	Wages and Benefits	\$ 261,292
44	Taxes	\$ 17,251
45	Insurance	\$ 15,897
47	Repairs and Maintenance	\$ 25,000
60	Materials and Supplies	\$ 9,000
62	Services	\$ 40,000
64	Vehicle Lease	\$ -
67	Admin Overhead	\$ 134,884
73	Vehicle Gas	\$ 5,000
	Total Expenses	\$ 508,324
	Net	\$ -

Category: 1 (Mandatory) Program Area: D.

Conservation Areas and Lands Capital

<u>Object Code</u>	<u>Revenue/Expense Category</u>	<u>2025 Budget</u>
Revenue:		
04	General Levy	\$ -
05	Special Levy	\$ 80,000
	Total Revenue	\$ 80,000
Expense:		
30	Wages and Benefits	\$ 25,754
62	Services	\$ 42,847
67	Admin Overhead	\$ 11,399
	Total Expenses	\$ 80,000
	Net	\$ 0

Category: 1 (Mandatory)

Program Area: E. Source Protection Authority

<u>Object Code</u>	<u>Revenue/Expense Category</u>	<u>2025 Budget</u>
Revenue:		
01	MOECP Transfer Payment	\$ 212,002
	Total Revenue	\$ 212,002
Expense:		
30	Wages and Benefits	\$ 163,074
38	Per Diem	\$ 1,500
39	Members Mileage	\$ 2,000
40	Members Expenses	\$ 1,000
41	Staff Mileage & Expense	\$ 2,500
45	Insurance	\$ 2,600
53	Advertising/Communications	\$ 500
62	Services	\$ 3,500
67	Admin Overhead	\$ 18,998
70	Rental Expense	\$ 12,865
73	Vehicle gas	\$ 500
78	Internal Chargeback	\$ 2,965
	Total Expenses	\$ 212,002
	Net	\$ 0

Category: 1 (Mandatory)

Program Area: F. On-site Sewage System Program

<u>Object Code</u>	<u>Revenue/Expense Category</u>	<u>2025 Budget</u>
Revenue:		
06	Fees	\$ 948,365
13	Other Revenue	\$ 12,000
	Total Revenue	\$ 960,365
Expense:		
30	Wages and Benefits	\$ 635,347
41	Staff Mileage & Expense	\$ 3,000
42	Staff Certification & Training	\$ 5,000
56	Credit Card Charges	\$ 16,500
67	Admin Overhead	\$ 265,968
73	Vehicle Gas	\$ 8,000
78	Internal Chargeback	\$ 26,550
	Total Expenses	\$ 960,365
	Net	\$ -

Category: 2 (Delegated by a Municipality)

Program Area: G. Watershed-Municipal Programs

<u>Object Code</u>	<u>Revenue/Expense Category</u>	<u>2025 Budget</u>
Revenue:		
4	General Levy	\$ -
5	Sole-benefitting Levy	\$ 12,000
	Total Revenue	\$ 12,000
Expense:		
30	Wages and Benefits	\$ 12,000
67	Admin Overhead	\$ -
	Total Expenses	\$ 12,000
	Net	\$ -

Category: 3 (non-mandatory; advisable by NBMCA)

Program Area: H. Watershed Support Programs

<u>Object Code</u>	<u>Revenue/Expense Category</u>	<u>2025 Budget</u>
Revenue:		
4	General Levy	\$ -
6	Fees	\$ 15,000
7	Donations	\$ 22,500
	Total Revenue	\$ 37,500
Expense:		
30	Wages and Benefits	\$ 8,005
52	Publications and Printing	\$ 500
53	Advertising	\$ 2,000
60	Mat. & Supplies	\$ 7,500
62	Services	\$ 15,195
67	Admin Overhead	\$ 3,800
73	Vehicle Gas	\$ 500
	Total Expenses	\$ 37,500
	Net	\$ -

Category: 3 (non-mandatory; advisable by NBMCA)
Program Area: I. Ski Hill Operating

<u>Object Code</u>	<u>Revenue/Expense Category</u>	<u>2025 Budget</u>
Revenue:		
05	Sole-benefitting Levy	\$ 60,000
	Total Revenue	\$ 60,000
Expense:		
47	Ski Hill Operations	\$ 60,000
	Total Expenses	\$ 60,000
	Net	\$ -

Category: 3 (non-mandatory; advisable by NBMCA)
Program Area: I. Ski Hill Capital

<u>Object Code</u>	<u>Revenue/Expense Category</u>	<u>2025 Budget</u>
Revenue:		
05	Sole-benefitting Levy	\$ 65,000
	Total Revenue	\$ 65,000
Expense:		
47	Ski Hill Operations	\$ 65,000
	Total Expenses	\$ 65,000
	Net	\$ -

	<i>Revenue/Expense Category</i>	<i>TOTAL BUDGET 2025</i>
Revenue:		
1	Transfer Payment (S. 39)	\$ 133,490
1	Transfer Payment (WECl)	\$ 100,000
1	Transfer Payment (DWSP)	\$ 212,002
1	Transfer Payment (FHIMP)	\$ 30,000
4	General Levy	\$ 961,544
5	Sole-benefitting Levy	\$ 534,983
6	Fees	\$ 1,036,865
7	Donations	\$ 23,000
9	Internal Rent Rev.	\$ 12,865
10	Rental Rev. External	\$ 76,005
13	Other Revenue	\$ 370,430
14	Interest Earned	\$ 54,000
16	Admin Overhead	\$ 628,825
	Total Revenue	\$ 4,174,009
Expense:		
30	Wages and Benefits	\$ 2,129,258
38	Per Diem	\$ 11,500
39	Members Mileage	\$ 7,500
40	Members Expense	\$ 3,000
41	Staff Mileage and Expense	\$ 29,000
42	Staff Certification and Training	\$ 23,500
43	Telephone	\$ 31,000
44	Property Taxes	\$ 37,823
45	Insurance	\$ 105,572
46	Natural Gas	\$ 20,000
47	Repair & Maintenance	\$ 35,000
48	Office Supplies	\$ 6,500
49	Postage	\$ 1,500
50	Equipment Purchase	\$ 1,000
51	Equipment Rental	\$ 8,000
52	Publications and Printing	\$ 500
53	Advertising	\$ 2,500
54	Bank Charges	\$ 2,000
55	Interest Expense - Mortgage	\$ 25,000
56	Credit Card Fees	\$ 16,500
57	Staff Appreciation and Clothing	\$ 20,000
58	Audit	\$ 26,945

59	Legal Services	\$ 75,000
60	Materials and Supply	\$ 31,500
61	Cons. Ontario Levy	\$ 26,815
62	Services	\$ 343,242
66	Consulting Services	\$ 219,762
67	Admin Overhead	\$ 628,825
70	Rental Expense	\$ 48,865
71	Water	\$ 6,200
72	Hydro	\$ 26,020
73	Vehicle Gas	\$ 17,700
74	Accounting Services	\$ 1,800
78	Internal Chargeback	\$ 61,182
90	Mortgage Principal Repayment	\$ 18,500
TBD	Ski Hill Operations	\$ 60,000
TBD	Ski Hill Capital	\$ 65,000
	Total Expenses	\$ 4,174,009
	Net Surplus (-Deficit)	\$ -

**Ministry of
Municipal Affairs
and Housing**

Office of the Minister

777 Bay Street, 17th Floor
Toronto ON M7A 2J3
Tel.: 416 585-7000

**Ministère des
Affaires municipales
et du Logement**

Bureau du ministre

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Toronto (Ontario) M7A 2J3
Tél. : 416 585-7000



234-2024-5801

December 12, 2024

Dear Head of Council,

I am pleased to inform you of the introduction of the proposed Municipal Accountability Act, 2024 on December 12, 2024, which, if passed, would make changes to the *Municipal Act, 2001* and *City of Toronto Act, 2006* to strengthen the municipal code of conduct and integrity commissioner framework.

I appreciate the valuable feedback we have received from municipalities and share your commitment to safe and respectful workplaces. The proposed changes, if passed, would:

- enable the creation of a standard municipal code of conduct and standard municipal integrity commissioner investigation processes to help ensure consistency across all Ontario municipalities;
- create a role for the Integrity Commissioner of Ontario in municipal code of conduct and integrity commissioner matters, including providing training to municipal integrity commissioners; and
- establish a mechanism to remove and disqualify members of council and certain local boards for a period of four years for the most serious code of conduct violations following a recommendation from the local integrity commissioner, a concurring report from the Integrity Commissioner of Ontario, and a unanimous vote of council.

In the coming months, I will want to hear your feedback on the Bill as well as other matters regarding local accountability regimes. I look forward to seeing many of you at the upcoming Rural Ontario Municipal Association conference, where we will have the opportunity to discuss these changes and other matters of importance to your communities.

If passed, important work to develop the regulations to support this new framework would lie ahead, and I remain committed to engaging with you throughout that process. Our intention is to have these changes in effect for the new term of councils beginning in Fall 2026 to ensure there is adequate opportunity for local implementation.

For more information on these amendments, please see the [news release](#). To share your comments on the proposed legislation, please see a posting on the [Regulatory Registry](#) that will be open for comments for 60 days.

If you have any questions regarding these new provisions, please contact your local [Municipal Services Office](#) with the Ministry of Municipal Affairs and Housing.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Paul Calandra', written over a large, light blue circular scribble.

Hon. Paul Calandra
Minister of Municipal Affairs and Housing

- c: Jessica Lippert, Chief of Staff
 Owen Macri, Deputy Chief of Staff
 Martha Greenberg, Deputy Minister
 Caspar Hall, Assistant Deputy Minister, Local Government Division
 Sean Fraser, Assistant Deputy Minister, Municipal Services Division
 Municipal Clerks and CAOs



P.O. Box 382
North Bay, ON P1B 8H5
705.497.5555 Ext. 7507
admin@nearnorthcrimestoppers.com

January 6, 2025

Dear Mayor and Councilors,

Every January, Crime Stoppers Month is recognized worldwide for its vital role in community safety. This year's theme, "Empowering through Education, Preventing through Action!" reflects our mission to Stop, Solve, and Prevent Crime Together across our region's municipalities.

For 2025, we are not requesting a formal "Proclamation." Instead, we ask for your help amplifying awareness by sharing our messaging in newsletters, on social media, and on community electronic boards using the attached digital images. This effort is especially important as we've seen a significant rise in virtual tips, underscoring the value of robust digital engagement.

As you know, Near North Crime Stoppers (NNCS) serves the Districts of Nipissing and Parry Sound as a registered charitable program, enhancing safety through anonymous tips. Since our inception in 1988, NNCS has received over 23,600 tips, leading to 1,827 arrests, \$4.4 million in recovered property and cash, and nearly \$58 million in drugs seized from our communities.

In 2025, NNCS is launching a new campaign offering a guaranteed \$2,000 reward for tips leading to arrests involving fentanyl or firearms in drug-related offences. This initiative reflects our commitment to addressing critical safety concerns and will be posted publicly across our virtual platforms.

The success of Crime Stoppers relies on community engagement, with municipalities like yours playing a key role. By recognizing and supporting Crime Stoppers, you help advance your Community Safety and Well-Being Plans, ensuring safer communities for all.

Please feel free to contact us for more information, to arrange a presentation, or to request promotional items and road signs. Thank you for your continued support in making our region a safer place.

Sincerely,

A handwritten signature in black ink, appearing to read "Brandon Fenton".

Brandon Fenton
Chair

A handwritten signature in black ink, appearing to read "Mary Houghton".

Mary Houghton
Executive Secretary



**EMPOWERING THROUGH EDUCATION.
PREVENTING THROUGH ACTION.**

SAY it HERE

**CANADIAN
CRIME
STOPPERS
ASSOCIATION**



**ASSOCIATION
CANADIENNE
D'ÉCHEC AU
CRIME**

HELPING TO STOP, SOLVE AND PREVENT CRIME - TOGETHER
AIDONS À ARRÊTER, RÉSOUDRE ET PRÉVENIR LE CRIME - ENSEMBLE



**L'AUTONOMISATION PAR L'ÉDUCATION.
PRÉVENIR PAR L'ACTION.**

DITES-LE ICI

**CANADIAN
CRIME
STOPPERS
ASSOCIATION**



**ASSOCIATION
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Ministry of Rural Affairs

Ministère des Affaires rurales

Office of the Minister

Bureau du ministre

777 Bay, 17th Floor
Toronto, Ontario M7A 2J3
Tel: 647-329-1485

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Toronto (Ontario) M7A 2J3
Tél. : 647-329-1485



January 19, 2025

Peter Mclsaac
Mayor
Municipality of Powassan
pmcisaac@powassan.net

Dear His Worship Mclsaac:

It is my pleasure to share our government's new plan to support rural economic development, increase and nurture a rural workforce, and strengthen rural communities.

[Enabling Opportunity: Ontario's Rural Economic Development Strategy](#) is designed to help rural communities leverage new economic opportunities and prepare themselves for growth.

The Strategy focuses on three key pillars:

- **Safe and Strong Rural Communities** – Improving local economic development capacity and championing local leadership, supporting the rehabilitation of municipal and community infrastructure, optimizing rural connectivity, and supporting communities in developing plans for housing and transportation to ensure rural communities are places where people want to live, work and play.
- **Business Development and Attraction**- Supporting rural and Indigenous communities and other economic development partners in strengthening and growing rural business, encouraging entrepreneurship and innovation, attracting investment, revitalizing downtowns and diversifying regional economies.
- **Growing the Rural Workforce** – Helping grow local talent, raising awareness of job opportunities available in rural Ontario, supporting workers in obtaining the skills needed to succeed, and attracting and retaining workers so that rural communities and small towns thrive.

We brought together municipal and Indigenous leaders and rural stakeholders to provide input into the development of the new strategy. We held 13 regional roundtables to hear the thoughts, experiences, ideas, and inspiration of those living and working in rural Ontario and received many online submissions through our website.

By listening to rural residents, we created a Strategy that represents their concerns. My thanks go out to all of those who participated in the consultation process and I look forward to continuing these conversations.

.../2

Our government has a vision for thriving rural communities and believes that a strong and dynamic rural Ontario is essential for the success of the province's economy. As a proud resident of rural Ontario, I am confident in saying the future is bright for rural Ontario, especially when we work together

By working together, we can continue to build strong economies and position rural Ontario as a destination of choice for individuals, families, and businesses.

Sincerely,

A handwritten signature in blue ink that reads "Lisa M. Thompson". The signature is written in a cursive, flowing style.

Lisa M. Thompson
Minister of Rural Affairs

Ministry of Rural Affairs

Ministère des Affaires rurales

Office of the Minister

Bureau du ministre

777 Bay, 17th Floor
Toronto, Ontario M7A 2J3
Tel: 647-329-1485

777, rue Bay, 17^e étage
Toronto (Ontario) M7A 2J3
Tél. : 647-329-1485



Bonjour,

J'ai le plaisir de vous faire part du nouveau plan de notre gouvernement pour favoriser le développement économique des collectivités rurales, accroître et cultiver une main-d'œuvre en milieu rural et renforcer les collectivités rurales.

Meilleures perspectives : Stratégie ontarienne de développement économique des collectivités rurales vise à aider les collectivités rurales à tirer profit de nouvelles possibilités économiques et à se préparer à la croissance.

La stratégie est axée sur trois piliers clés :

- **Des collectivités sécuritaires et fortes** — soutenir les petites villes et les collectivités rurales en abolissant les obstacles au développement économique et en s'assurant que les régions rurales de l'Ontario ont de solides éléments fondamentaux en place pour permettre la réussite des collectivités rurales.
- **Le développement et l'attraction des entreprises** — aider les collectivités rurales et d'autres partenaires du développement économique à renforcer et à faire croître les entreprises rurales, à encourager l'entrepreneuriat et l'innovation, à attirer des investissements, à revitaliser les centres-ville et à diversifier les économies régionales.
- **La croissance de la main-d'œuvre en milieu rural** — faire croître le talent local, accroître la sensibilisation sur les possibilités d'emploi offertes dans l'Ontario rural, aider les travailleurs à obtenir les compétences nécessaires pour réussir et attirer et retenir les travailleurs afin que les collectivités rurales et les petites villes prospèrent.

Nous avons réuni des dirigeants municipaux et autochtones ainsi que des intervenants du milieu rural afin qu'ils fournissent des observations relativement à l'élaboration de la nouvelle stratégie. Nous avons tenu 13 tables rondes régionales pour écouter les réflexions, les expériences, les idées et l'inspiration des personnes qui vivent et travaillent dans les régions rurales ontariennes, en plus d'avoir reçu plusieurs commentaires en ligne par le truchement de notre site Web.

Les gouvernements précédents ont ignoré les besoins des régions rurales de l'Ontario. Leur vue à court terme a laissé ces collectivités se débrouiller seules et a entravé leur capacité de faire croître la main-d'œuvre locale, d'attirer des investissements et d'appuyer les collectivités. Notre gouvernement adopte une approche très différente. En écoutant les résidents des régions rurales, nous avons créé une stratégie qui répond à leurs préoccupations. Je tiens à remercier tous ceux et celles qui ont participé au processus consultatif et j'ai hâte de poursuivre ces conversations.

.../2

Notre gouvernement a une vision pour la prospérité des collectivités rurales et croit qu'un Ontario rural fort et dynamique est essentiel au succès de l'économie de la province. En tant que fière résidente de l'Ontario rural, je n'hésite pas à affirmer que l'avenir est prometteur pour les régions rurales de l'Ontario, en particulier lorsque nous travaillons ensemble.

En travaillant ensemble, nous pouvons continuer à bâtir de solides économies et à positionner l'Ontario rural comme une destination de choix pour les particuliers, les familles et les entreprises.

Veillez recevoir mes plus cordiales salutations.

A handwritten signature in blue ink that reads "Lisa M. Thompson". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Lisa M. Thompson
La ministre des Affaires rurales,

February 04, 2025

Municipality of Powassan Ontario, Response to US Tariffs

“In response to the U.S. tariffs that will have devastating consequences for the Canadian economy, local jobs, and our community, I am bringing forward a motion to the Municipality of Powassan Council to review the merits of amending our Procurement Bylaw to implement a “Canada First” policy.

This amendment will prioritize Canadian businesses in our procurement processes, supporting both local and national industries. By investing in Canadian companies, we can fortify our economy, protect jobs, and build a more resilient future for the Municipality of Powassan and Canada.

Government action must be swift, strategic, and substantial to shield jobs, stabilize industries, and safeguard our local economy.

I urge residents to shop local and choose Canadian whenever possible. At the same time, we must support businesses – both domestic and international – that invest in Canada, create jobs, and contribute to our economy.

In uncertain times, every purchasing decision matters. Now more than ever, we must stand together as Team Canada.”

Peter McIsaac

Mayor,

Municipality of Powassan

February 2025

February 2025							March 2025						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
						1							1
2	3	4	5	6	7	8	2	3	4	5	6	7	8
9	10	11	12	13	14	15	9	10	11	12	13	14	15
16	17	18	19	20	21	22	16	17	18	19	20	21	22
23	24	25	26	27	28		23	24	25	26	27	28	29
							30	31					

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Jan 26	27	28	29	30	31	Feb 1
2	3	4 Council	5 Recreation Committee meeting	6	7	8
9	10	11	12 MAPLE SYRUP MEETING - 6:10 NBMCA	13 DSSAB	14-15 Winter Carnival	
16 Winter Carnival	17 Family Day - office closed	18 Council mv - 6:30 - Council	19 Eastholme	20	21 Golden Sunshine Housing Copr.	22
23	24 Library Board	25	26	27	28	Mar 1

March 2025

March 2025							April 2025						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
						1			1	2	3	4	5
2	3	4	5	6	7	8	6	7	8	9	10	11	12
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16	17	18	19	20	21	22	20	21	22	23	24	25	26
23	24	25	26	27	28	29	27	28	29	30			
30	31												

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Feb 23	24	25	26	27	28	Mar 1
2	3	4 Council	5	6	7	8
9	10	11	12 NBMCA	13 DSSAB	14	15
16	17 Library Board	18 Council	19 Eastholme	20	21 Golden Sunshine Housing Copr.	22
23	24 6:00pm Police Services Board	25	26	27	28	29
30	31	Apr 1	2	3	4	5