

Inventory Data:

Structure Name	Levac Road Culvert No. 2		
Main Hwy/Road #	<input type="text"/>	On <input type="checkbox"/>	Under <input type="checkbox"/>
	Crossing <input type="checkbox"/> Navig. Water <input checked="" type="checkbox"/> Non-Navig. Water <input type="checkbox"/> Rail Type: <input checked="" type="checkbox"/> Road <input type="checkbox"/> Ped. <input type="checkbox"/> Other		
Hwy/Road Name	Levac Road		
Structure Location	0.65 km west of Arcand Road		
Latitude	46.379147	Longitude	-80.00738
Owner(s)	Municipality of West Nipissing	Heritage	<input type="checkbox"/> Not Cons. <input type="checkbox"/> Cons./not App. <input type="checkbox"/> List/not Desig.
MTO Region	Northeastern	Designation:	<input type="checkbox"/> Desig./not List <input type="checkbox"/> Desig. & List
MTO District	Sudbury	Road Class:	Freeway <input type="checkbox"/> Arterial <input type="checkbox"/> Collector <input type="checkbox"/> Local <input checked="" type="checkbox"/>
Old County		Posted Speed	<input type="text"/>
Geographic Twp.	Caldwell	No. of Lanes	2
Structure Type	Arch Culvert	AADT	<input type="text"/>
Total Deck Length	N/A	% Trucks	<input type="text"/>
Overall Str. Width	19.15	Inspection Route Sequence	<input type="text"/>
Total Deck Area	N/A	Interchange Number	<input type="text"/>
Roadway Width	8.2	Interchange Structure Number	<input type="text"/>
Skew Angle	15	Min. Vertical Clearance	<input type="text"/>
No. of Spans	1	Special Routes:	<input type="checkbox"/> Transit <input type="checkbox"/> Truck <input type="checkbox"/> School <input type="checkbox"/> Bicycle
Span Lengths	5.2 m x 3.3 m Multi Plate Pipe Arch		
		Detour Length Around Bridge	<input type="text"/> (km)
		Direction of Structure	N-S
		Fill on Structure	1.25 (m)

Historical Data:

Year Built	Unknown	Year of Last Major Rehab.	<input type="text"/>
Last OSIM Inspection	2021	Last Evaluation	<input type="text"/>
Last Enhanced OSIM Inspection	<input type="text"/>	Current Load Limit	<input type="text"/> (tonnes)
Enhance Access Equipment (ladder, boat, lift, etc.)	<input type="text"/>	Load Limit By-Law #	<input type="text"/>
Last Underwater Inspection	<input type="text"/>	By-Law Expiry Date	<input type="text"/>
Last Condition Survey	<input type="text"/>		

Rehab History: (Date/description)

Scheduled Improvements:			
Regional Priority Number	<input type="text"/>	Programmed Work Year	<input type="text"/>
Nature of Program Work:			

Appraisal Indices:		Comments
Fatigue		
Seismic		
Scour		
Flood		
Geometrics		
Barrier		
Curb		
Load Capacity		

Field Inspection Information:			
Date on Inspection:	October 19, 2022	Type of Inspection:	<input checked="" type="checkbox"/> OSIM <input type="checkbox"/> Enhanced OSIM
Inspector:	Mike Colton C. Tech.		
Others in Party:	Matt Lazurek		
Access Equipment	Sounding Hammer, Chest Waders, Digital Camera, Measuring Tape		
Weather:	Overcast		
Temperature:	4°C		

Additional Investigations Required:		Priority		
		None	Normal	Urgent
Material Condition Survey		X		
	Detailed Deck Condition Survey:			
	Non-destructive Delamination Survey of Asphalt-Covered Deck:			
	Concrete Substructure Condition Survey:			
	Detailed Coating Condition Survey:			
	Detailed Timber Investigation:			
	Post-Tensioned Strand Investigation:			
Underwater Investigation:		X		
Fatigue Investigation:		X		
Seismic Investigation:		X		
Structure Evaluation:		X		
Monitoring		X		
	Monitoring of Deformations, Settlements and Movements:		X	
	Monitoring Crack Widths:			
Investigation Notes:				

Overall Structure Notes:			
Recommended Work on Structure:	<input type="checkbox"/> None <input type="checkbox"/> Minor Rehab. <input type="checkbox"/> Major Rehab. <input checked="" type="checkbox"/> Replace		
Timing of Recommended work:	<input checked="" type="checkbox"/> 1 to 5 years <input type="checkbox"/> 6 to 10 years		
Overall Comments:			
Date of Next Inspection:	2024		

Suspected Performance Deficiencies

- | | | |
|---|--|------------------------------|
| 01 Load carrying capacity | 06 Bearing not uniformly loaded/unstable | 12 Slippery Surfaces |
| 02 Excessive deformations (deflections & rotations) | 07 Jammed Expansion joint | 13 Flooding/channel blockage |
| 03 Continuing settlement | 08 Pedestrian/vehicular hazard | 14 Undermining of foundation |
| 04 Continuing movements | 09 Rough riding surface | 15 Unstable embankments |
| 05 Seized bearings | 10 Surface ponding | 16 Other |
| | 11 Deck drainage | |

Maintenance Needs

- | | | |
|--------------------------------------|---------------------------------|--|
| 01 Lift and Swing Bridge Maintenance | 07 Repair to Structural Steel | 13 Erosion Control at Bridges |
| 02 Bridge cleaning | 08 Repair of Bridge Concrete | 14 Concrete Sealing |
| 03 Bridge Handrail Maintenance | 09 Repair of Bridge Timber | 15 Rout and Seal |
| 04 Painting Steel Bridge Structures | 10 Bailey Bridges – Maintenance | 16 Bridge Deck Drainage |
| 05 Bridge Deck Joint Repair | 11 Animal/Pest Control | 17 Scaling (Loose Concrete or ACR Steel) |
| 06 Bridge Bearing Maintenance | 12 Bridge Surface Repair | 18 Other |

Element Data

Element Group:	Barriers	Length:	0.19 m			
Element Name:	Post	Width:	0.19 m			
Location:	North and South	Height:	0.60 m			
Material:	Wood	Count:	50			
Element Type:	Post	Total Quantity:	50			
Environment:	Benign / Moderate / Severe	Limited Inspection	<input type="checkbox"/>			
Protection System:	Treated					Perform. Deficiencies
Condition Data:	Units	Exc.	Good	Fair	Poor	
	m ² / m / each / % / all		46	4		
Comments: Twisted offset blocks.						
Recommended Work:		<input type="checkbox"/> Rehab <input type="checkbox"/> Replace		Maintenance Needs:		
		<input type="checkbox"/> 1-5 years <input type="checkbox"/> 6-10 years		<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year		

Element Group:	Barriers	Length:	3.81 m			
Element Name:	Railing systems	Width:	N/A			
Location:	North and South	Height:	0.55 m			
Material:	Steel	Count:	24			
Element Type:	Flex Beam on Wood Post	Total Quantity:	91.44 m			
Environment:	Benign / Moderate / Severe	Limited Inspection	<input type="checkbox"/>			
Protection System:	Galv.					Perform. Deficiencies
Condition Data:	Units	Exc.	Good	Fair	Poor	
	m ² / m / each / % / all		87.44	4		
Comments: Generally in good condition.						
Recommended Work:		<input type="checkbox"/> Rehab <input type="checkbox"/> Replace		Maintenance Needs:		
		<input type="checkbox"/> 1-5 years <input type="checkbox"/> 6-10 years		<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year		

Element Group:	Decks	Length:	5.2 m			
Element Name:	Wearing Surface	Width:	8.0 m			
Location:	Top of Structure	Height:	0.076 m			
Material:	Asphalt	Count:	1			
Element Type:	Hot Mix	Total Quantity:	41.6 m ²			
Environment:	Benign / Moderate / Severe	Limited Inspection	<input type="checkbox"/>			
Protection System:						Perform. Deficiencies
Condition Data:	Units	Exc.	Good	Fair	Poor	
	m ² / m / each / % / all		41.6			
Comments: Generally in good condition.						
Recommended Work:		<input type="checkbox"/> Rehab <input type="checkbox"/> Replace		Maintenance Needs:		
		<input type="checkbox"/> 1-5 years <input type="checkbox"/> 6-10 years		<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year		

Element Data

Element Group:	Culverts	Length:	19.15 m			
Element Name:	Barrels	Width:	5.20 m			
Location:		Height:	3.30 m			
Material:	Corrugated Steel	Count:	1			
Element Type:	Multi Plate Pipe Arch	Total Quantity:	257 m ²			
Environment:	Benign / Moderate / Severe	Limited Inspection	<input checked="" type="checkbox"/>			
Protection System:	Galvanized	Perform. Deficiencies				
Condition Data:	Units m ² / m / each / % / all			Exc.	Good	Fair
			127	100	30	02, 03
Comments: Medium corrosion at waterline, entire length. Deflection at top of barrel at midspan, west side. Undermining at bottom of barrel, north end.						
Recommended Work: <input type="checkbox"/> Rehab <input checked="" type="checkbox"/> Replace <input checked="" type="checkbox"/> 1-5 years <input type="checkbox"/> 6-10 years				Maintenance Needs:		
				<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year		

Element Group:	Signs	Length:				
Element Name:	Signs	Width:				
Location:	NE, NW, SE, and SW	Height:				
Material:		Count:	4			
Element Type:		Total Quantity:	4 each			
Environment:	Benign / Moderate / Severe	Limited Inspection	<input type="checkbox"/>			
Protection System:		Perform. Deficiencies				
Condition Data:	Units m ² / m / each / % / all			Exc.	Good	Fair
			2		2	
Comments: 2 missing hazard signs at SE and NW.						
Recommended Work: <input type="checkbox"/> Rehab <input type="checkbox"/> Replace <input type="checkbox"/> 1-5 years <input type="checkbox"/> 6-10 years				Maintenance Needs:		
				<input type="checkbox"/> Urgent <input checked="" type="checkbox"/> 1 year <input type="checkbox"/> 2 year Replace missing signs.		

Element Group:	Embankments & Streams	Length:				
Element Name:	Streams and Waterways	Width:				
Location:		Height:				
Material:		Count:	1			
Element Type:		Total Quantity:	1			
Environment:	Benign / Moderate / Severe	Limited Inspection	<input type="checkbox"/>			
Protection System:		Perform. Deficiencies				
Condition Data:	Units m ² / m / each / % / all			Exc.	Good	Fair
			1			
Comments: Water level = 1.1 m						
Recommended Work: <input type="checkbox"/> Rehab <input type="checkbox"/> Replace <input type="checkbox"/> 1-5 years <input type="checkbox"/> 6-10 years				Maintenance Needs:		
				<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year		

Element Group:	Embankments & Streams			Length:		
Element Name:	Embankments			Width:		
Location:				Height:		
Material:				Count:	4	
Element Type:				Total Quantity:	4	
Environment:	Benign / Moderate / Severe			Limited Inspection	<input type="checkbox"/>	
Protection System:						Perform. Deficiencies
Condition Data:	Units m ² / m / each / % / all	Exc.	Good	Fair	Poor	
Comments: Generally in good condition.						
Recommended Work:		<input type="checkbox"/> Rehab <input type="checkbox"/> Replace <input type="checkbox"/> 1-5 years <input type="checkbox"/> 6-10 years		Maintenance Needs:		
				<input type="checkbox"/> Urgent <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year		



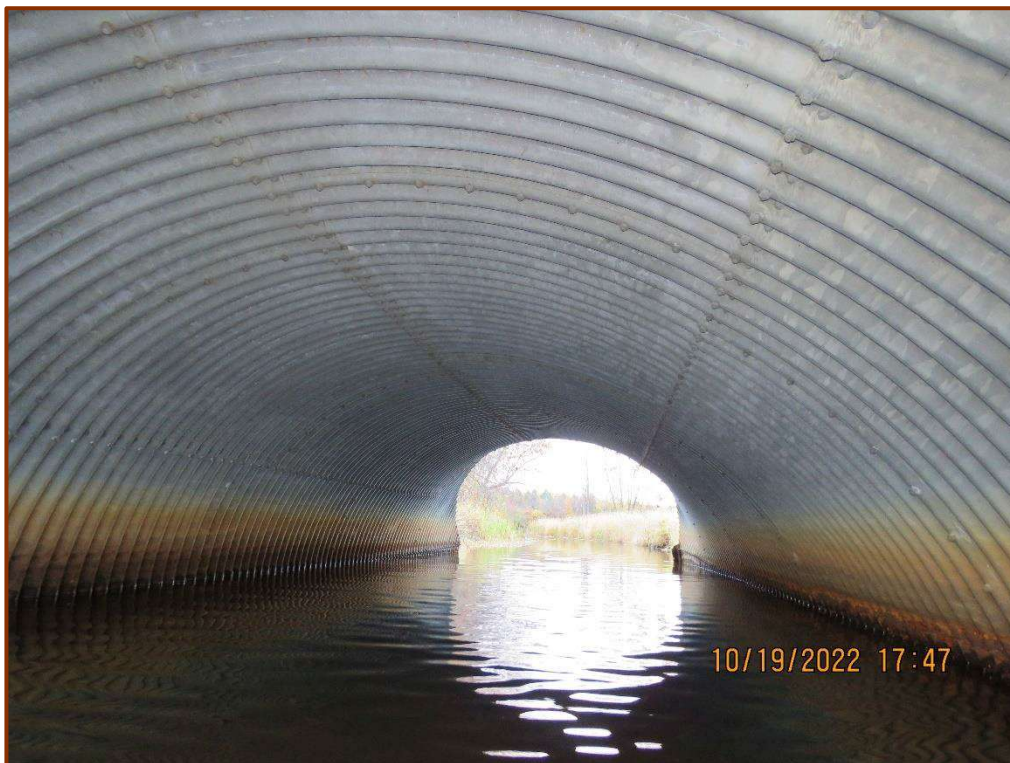
1. C-109 2022-10-19 North Elevation



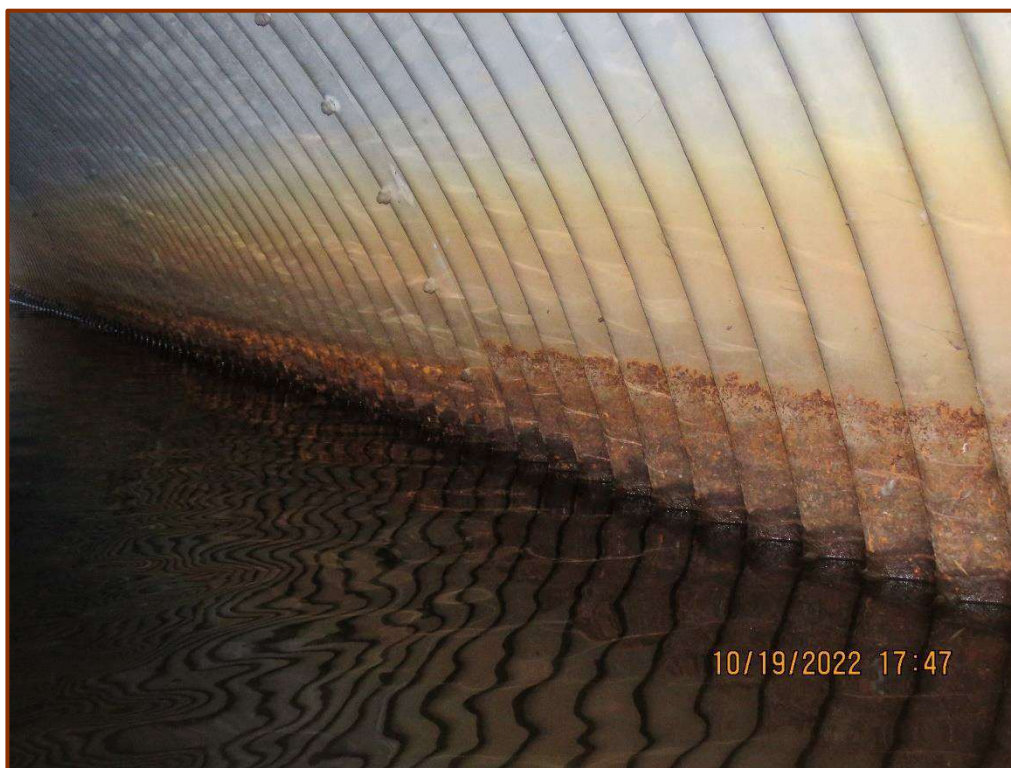
2. C-109 2022-10-19 South Elevation



3. C-109 2022-10-19 East Approach Looking West



4. C-109 2022-10-19 Barrel Looking North



5. C-109 2022-10-19 Medium Corrosion at Waterline (typical)



6. C-109 2022-10-19 North Waterway - Upstream



7. C-109 2022-10-19 South Waterway - Downstream