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Bridge Inspections

TOWN OF PARRY SOUND

Inspection Summary Report

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November T 705-645-7756

November **T** 705-645-7756 **20**, 2020 tathameng.com

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Issue	Date	Description
1	November 20, 2020	Final Report

i

Table Contents

1	Introduction1
2	Inspection Summaries3
2.1	Seguin Street Bridge3
2.2	Seguin River Pedestrian Bridge4
2.3	Cascade Street Bridge No.15
2.4	Cascade Street Bridge No.25
2.5	Waubuno Street Bridge6
3	Recommendations
Tab	oles
Tak	ble 1: Bridge Locations

Appendices

Appendix A: Definitions
Appendix B: OSIM Forms



1 Introduction

Tatham Engineering Ltd. was retained by the Town of Parry Sound to perform detailed visual inspections for 5 bridges at various locations within town limits. This work is required in compliance with Ontario Regulation (O.Reg.) 104/97 as amended by O.Reg. 472/10. This regulation states that bridges are to be inspected every two years and these inspections are to be conducted in accordance with the Ontario Structure Inspection Manual (OSIM). The objectives of this work are to:

- Identify maintenance, repair, rehabilitation needs and load limit posting recommendations to protect and prolong the useful life of the structures; and
- Provide a basis for a management system for the planning and funding of the recommended works.

The bridge that were inspected are listed in Table 1.

Table 1: Bridge Locations

BRIDGE NAME	ROAD NAME	LOCATION
Seguin Street Bridge	Seguin Street	0.08 km West of River Street
Seguin River Pedestrian Bridge	Fitness Trail	0.1 km South of Seguin Street over Seguin River
Cascade Street Bridge No.1	Cascade Street	0.1 km East of Water Street
Cascade Street Bridge No.2	Cascade Street	0.02 km East of Water Street
Waubuno Street Pedestrian Bridge	Fitness Trail	Waubuno Street at Georgian Bay

The detailed visual inspections required by O.Reg.'s 104/97 and 472/10 involve an element by element inspection of the structure. Elements are reviewed and their condition and performance are assessed based on observations made by the inspector. The condition is then quantified and categorized as excellent, good, fair, or poor. Action may be required if elements are partially or wholly in a deteriorated condition state or have a performance deficiency. Maintenance needs, rehabilitation, or replacement recommendations are then determined with associated time frames to assist the Town with prioritization of the work.



This report summarizes the results of the detailed visual inspections and provides costing and scheduling information for the recommended works. A brief listing of terms used to identify deficiencies with respect to condition or performance states are provided in Appendix A.



2 Inspection Summaries

The following summarizes the inspection observations and recommendations. In addition to the deficiencies addressed by the recommended works, a complete compilation of condition and performance information for each bridge can be found in the OSIM reports which include photos of each element. These reports are included in Appendix B.

Recommended works are categorized into maintenance or rehabilitation work. These categorizations are intended to differentiate between smaller scale maintenance work that could be completed by the Town's works department, and larger scale rehabilitation work that may require engineering design and tendering of the construction works. Additional Investigations such as Material Condition Surveys, Underwater investigations, Structure Evaluations, etc. are identified both in the summaries below and the OSIM reports, along with recommendations for Enhanced OSIM Inspections which typically consist of the use of a Bridgemaster or similar bucket truck to enable a close-up within arms reach of all areas of the structure.

2.1 SEGUIN STREET BRIDGE

The Seguin Street Bridge is located on Seguin Street approximately 0.08 km west of River Street. The 55 m single span structure consists of a concrete deck on three trapezoidal weathering steel box girders supported on concrete abutments. The east abutment is founded on steel H-piles driven to bedrock, and the west abutment is founded on concrete footings on bedrock. The bridge is 20.6 m wide out to out with a clear roadway width of 15.0 m.

The bridge is in generally good condition with no evidence of foundation movements. No additional investigations are recommended at this time.

The following maintenance is recommended:

- Repair spalls in sidewalk on approaches and bridge span (1 year);
- Replace latch and repair electrical box (1 year); and
- Clean and recoat structural steel inside boxes and at exterior ends (1-5 years).

The following rehabilitation is recommended:

Replace northeast approach barrier connection with standard connection (1-5 years).

It is proposed the next OSIM inspection occur in 2022. An Enhanced OSIM Inspection using a BridgeMaster is recommended within the next 4 years.



2.2 SEGUIN RIVER PEDESTRIAN BRIDGE

The Seguin River Pedestrian Bridge is located on a fitness trail that was converted from a former railway bed, essentially rails to trails. It is approximately 0.1 km south of the Seguin Street Bridge and crosses the Seguin River. The 12-span structure consists of nine eastern timber trestles, followed by a steel through plate girder span, a deck on steel girder span, and another steel through plate girder span.

The bridge is in generally good to fair condition with localized areas in poor condition, with no evidence of foundation movements. Some timber elements have areas of substantial rot, most notably the east abutment wall and a number of bridge curb timbers. Barrier height should be increased to 1.37 m to meet CHBDC requirements for cyclists, however 1.2 m may be used based on owner approval.

The following maintenance is recommended:

- Replace missing pickets and retaining wall barriers (urgent);
- Repair unsupported conduit at west end (urgent);
- Clean off debris from bearing seats and girders (1 year);
- Replace missing timber posts (1 year);
- Replace missing and rotten timber deck planks (1 year);
- Replace rotten timber pier brace (1 year); and
- Replace deteriorated and missing curb sections (1 year).

The following rehabilitation is recommended:

- Clean and recoat structural steel (6-10 years);
- Replace east timber abutment wall (urgent);
- Repair crack in retaining wall (1-5 years);
- Replace east wingwalls (urgent); and
- Repair west concrete abutment (6-10 years).

It is proposed that the next OSIM inspection occur in 2022. During a 2012 inspection, water levels revealed timber cribbing supporting the concrete piers. Based on visual observations from boat access, deterioration of the timber was evident and due to condition and age an Underwater Investigation is recommended with a Priority of Normal, i.e. usually within 2 years.



2.3 CASCADE STREET BRIDGE NO.1

The Cascade Street Bridge No. 1 is located on Cascade Street approximately 0.1 km east of Water Street. The two span 26.45 m structure consists of precast concrete box girders supported on concrete abutments and pier. The bridge is 11.2 m wide out to out with a clear roadway width of 8.5 m.

The bridge is in generally good condition with no evidence of movement or significant deterioration. No Additional Investigations are recommended at this time.

The following maintenance is recommended:

- Replace south utility cover (1 year);
- Repair punctured railing (1 year);
- Rout and seal cracks, repair pothole in asphalt (2 years);
- Replace damaged guide rail sections and install end treatments (1 year); and
- Concrete sidewalk repair (2 years).

There is no recommended rehabilitation at this time.

It is proposed the next OSIM inspection occur in 2022.

2.4 CASCADE STREET BRIDGE NO.2

The Cascade Street Bridge No. 2 is also located on Cascade Street. It is adjacent to Cascade Street Bridge No. 1 and is approximately 0.02 km east of Water Street. The 10.0 m span is a concrete rigid frame structure with vertical legs. The bridge is 11.2 m wide out to out and has a clear roadway width of 8.0 m.

The bridge is in excellent to good condition with no evidence of movement or significant deterioration. No Additional Investigations are recommended at this time.

The following maintenance is recommended:

- Rout and seal cracks in asphalt wearing surface (1 year);
- Replace missing end caps on structure barrier (1 year);
- Replace vertical joint sealant between abutment walls and wingwalls (1 year);
- Repair void at bottom of retaining wall (2 years);
- Clean sidewalks (1 year); and
- Repair concrete void in south abutment wall (1 year).



The following rehabilitation is recommended:

Upgrade barrier connections to structure at north quadrants (1-5 years);

It is proposed the next OSIM inspection occur in 2022.

2.5 WAUBUNO STREET BRIDGE

The Waubuno Street Bridge is located along the Parry Sound Fitness trail and crosses Waubuno Street at Georgian Bay. It is a timber girder bridge with timber plank deck, timber barriers, and timber trestle supports. The structure has 3 spans of 3.73 m, 4.18 m, and 3.53 m each. The travelled width is 3.17 m, and the overall width is 3.57 m out to out. It is currently used by pedestrian and snowmobiles and is posted to a 10-tonne limit.

The bridge is in generally good condition; However, the ballast wall and timber piles show evidence of some deterioration. The structure is currently restricted to pedestrian and snowmobile use. No Additional Investigations are recommended at this time.

The following maintenance is recommended:

- Reorient bridge signage to face approaches (1 year);
- Install slope protection in eroded areas on embankment (1 year);
- Extend bridge barrier (2 years); and
- Replace 4 OFSC trail signs and 10-tonne load limit sign (2 years).

The following rehabilitation is recommended:

• Replace deteriorated ballast walls (1-5 years).

It is proposed the next OSIM inspection occur in 2022.



3 Recommendations

Overall, these five structures are in good condition with minimal recommended maintenance and rehabilitation work. The one exception is the Seguin River Pedestrian Bridge where we recommend replacement of the east timber abutment wall and wingwalls with a priority of Urgent, the reason being the timber has severe rot and is starting to lose the capability of supporting the backfill material. The maintenance and rehabilitation activities recommended in Section 2 are suggested to be completed at all structures within the indicated time frames.

The Seguin Street Bridge is recommended for an Enhanced OSIM Inspection using a BridgeMaster is recommended within the next 4 years to enable a close-up within arms reach of all areas of the structure. The Seguin River Pedestrian Bridge is recommended for an Underwater Investigation with a Priority of Normal, i.e. usually within 2 years.

We trust the above is sufficient for your purposes. If you have any questions or comments regarding the above, please do not hesitate to contact our office.



Appendix A: Definitions

Definitions

To convey the results of the visual inspections, defined terms are used to identify deficiencies with respect to condition or performance states. These terms are used in accordance with the OSIM guidelines and are defined below for clarification.

CONCRETE

Delamination: A discontinuity of the surface concrete which is substantially separated but not completely detached from concrete below or above it.

Efflorescence: A deposit of salts, usually white and powdery, on the surface of concrete left behind where water percolates through the concrete and dissolves or leaches chemicals from it.

Honeycombing: The result of improper or incomplete vibration of the concrete which results in voids being left in the concrete where the mortar failed to completely fill the spaces between the coarse aggregate particles.

Scaling: The local flaking, or loss of the surface portion of concrete or mortar as a result of the freeze-thaw deterioration of concrete. It is common in non air-entrained concrete but can also occur in air-entrained concrete in the fully saturated condition. It is prone to occur in poorly finished or overworked concrete where too many fines and not enough entrained air is found near the surface.

Scour: The removal of material from the stream bed or bank due to the erosive action of moving water in the stream. Scour can also cause removal of material supporting foundations.

Spalling: This is a continuation of the delamination process whereby the actions of external loads, pressure exerted by the corrosion of reinforcement or by the formation of ice in the delaminated area results in the breaking off of delaminated concrete. Spalling may also be caused by overloading of the concrete in compression.

WOOD

Wear and Abrasion: Wear is usually the result of dynamic and/or frictional forces generated by vehicular traffic, coupled with abrasive influx of sand, dirt and debris. It can also result from the friction of ice or water-borne particles against partly or completely submerged members. Abrasion is the deterioration of concrete brought about by vehicles or snow-plough blades scraping against concrete surfaces such as decks, curbs, barrier walls or piers.

Checks and Splits: Checks are longitudinal tissue separations along the side grain of wood members occurring across or through the annual growth rings. Splits are similar to checks, with more tissue separations, extending either through the wood member or from the side into the end grain, typically at the ends of the wood member.

Connection Deficiencies: connections loosened due to repetitive or dynamic loads, wear or decay of members.

Cracking, Splintering, Crushing and Shattering: physical damage as a result of impact loading or overloading of a member.

Fire and Chemical Damage: damage resulting from fire or from the use of non-preservative chemicals on the wood surface over a long period of time.

Insect Damage: Loss of section caused by tunnelling/boring by insects or larvae.

Rot or Decay: decomposition of wood.

Shakes: tissue separation that follow the growth rings and are visible at the ends of wood members.

Splits: severe separations similar to checks, extending to the ends of wood members.

Weathering: this occurs as a result of exposure to the actions of sun, rain, wind, frost and atmospheric pollutants, resulting in the gradual deterioration of the wood.

STEEL

Connection Deficiencies: loose connections, cracking or excessive corrosion of the connector, gusset plate or fasteners.

Corrosion: The deterioration of steel by chemical or electro-chemical reaction resulting from exposure to air, moisture, de-icing salts, industrial fumes and other chemicals and contaminants in the environment in which it is placed.

Cracking: linear fractures in steel extending partly or completely through the member.

Permanent Deformations: bending, buckling, twisting or elongation.

Patina: A relatively smooth rust layer, formed on weathering steel, which protects the underlying metal from further corrosion.

Appendix B: OSIM Forms

						MTO Site N	umber:		
Inventory Data:									
Structure Name	Seguin Street Bri	dge							
Main Highway #	Seguin Street	On X or U Structure	nder	Service on Structure	Navig. V	Vater X Road	Non-Navig. \ X Ped.	Water Other	
Location Description	0.081 km west of	River Street		Service under:	X Navig. V	Vater Road	Non-Navig. \ Ped.	Water Other	
Owner/Custodian	Town of Parry So	und							
MTO Region	Northeastern			Latitude	45° 20' 45" N	V Loi	ngitude	80° 01' 52"	W
Regional Engineer				Heritage Designation:	X Not Cor Desig.	ns. Co Desig./Not L	ns./Not App. List Des	List/Nosig. & List	ot Desig.
MTO Area	52 - Huntsville			Hwy Class:	Freeway	Arterial X	Collector	Loc	al
Old County	44 - Parry Sound			Posted Speed	50	No	. of Lanes	4	
Township	452 - McDougall			AADT	Unknow	n	% Truck	Unknow	n
Structure Type 1	Box beam of gird	ers							
Structure Material 1	Steel			Traffic Directional Bo	ound	W-E]	
Structure Type 2	Concrete deck								
Structure Material 2	Concrete			Inspection Frequence	СУ	2		(years)	
Total Deck Length	55.9	(m)		Inspection Year		2020]	
Overall Str. Width	20.6	(m)		Inspection Duration		2		(hrs)	
Culvert Length	0	(m)							
Total Deck Area	1151.54	(sq.r	n)						
Roadway Width	15	(m)		Min. Vertical Cleara	nce			(m)	
Skew Angle	0	(Deg	ree)	Detour Distance		2.2		(km)	
No. of Spans	1			Fill on Structure		0		(m)	
Span Lengths	55							(m)	
For retaining wall:									
Total Wall Length		(m)		Max. Wall Height				(m)	
Total Wall Area		(sq.r	n)	Ave. Wall Height				(m)	
	,			Angle of Backfill				(Degrees	;)
Historical Data									
Year Built	1987			Year of superstruct.	Constructed	N/A			
Last Reg. OSIM Inspe	ection 2018			Year of Last Minor F	Rehab.	N/A			
Last Enh. OSIM Inspe	ection			Year of Last Major F	Rehab	N/A			
Work History: (Dato/d	occription)			Current Load Limit	Unvectigation	History: (Dat	o/description)		(tonnes)
Work History: (Date/d	<u> </u>				2007 - Steel	thickness me	e/description) easurements w acity was com		ted and

						MTO S	ite Number:		
Field Inspection Info	rmation:								
Date of Inspection:	С	october 20, 2020	Type of Ins	Type of Inspection:			SIM	Enh. OSIM	
Inspected By	K	lieran Ferguson	I.						
Others in Party:	J	esse Godin, Safety	Design Syster	ms Re	scue Techn	ician			
Eng. Access Equipment:	N	None							
Special Access Equipment	Д	ccess Ladder, Air N	Monitor, Flash	light, f	Restraining	Harness, Re	trieval System		
Weather		vercast	Temperatur					12 °C	
Additional Investigat	ions Require	ed:	'			Priority		Estimated Cost	
9		None	Normal	Urgent	Estillated Cost				
Material Condition Survey Detailed Deck Condition	an Curuovi				V/				
Non-destructive Delan		of Acabalt Covered [Dogle:		X				
Concrete Substructure			Jeck.		X	-			
Detailed Coating Cond		еу.			X	-			
Detailed Coating Cont Detailed Timber Inves					Х	+			
Post-Tensioned Strand					X				
Underwater Investigation	u irivesiigaiiori.				Х	+			
Fatigue Investigation					X	+			
Seismic Investigation					Х	+			
Structure Evaluation:					X				
Monitoring					X				
Deformations, Settlem	ents and Mover	ments:			X				
Crack Widths:	crits and iviover	TICHUS.			X				
RSS Horizontal mover	ments of face:				X				
RSS Vertical moveme		riicture:			X	+			
RSS Local movements					X				
RSS Horizontal mover					X				
RSS Vertical moveme					X	+			
RSS Lateral earth pres					X	†			
Investigation Notes:		<u> </u>			Total Cost \$			\$0.00	
Overall Structure No	tes:								
Recommended Work on S	Т	None X N	Minor Rehab.		Major Rehal	n. Re	eplace		
Timing of Recommended V	Vork		X 1 to 5 years		6 to 10		ļ		
_	VOIR					,		ta a a a tha ca al	
Overall Comments: Generally in good condition. Interior corrosion. Minor deterioration of the BridgeMaster is recommended within					deck and gire	ders. An enh			
Date of Next inspection:		2022							
Overall Bridge Co	ondition								
% Poor in Deck	% Poor in Bea	r in Beams % Poor in Substructure %			oor in Barrie	rB		Index (BCI or BCIp)	
1%	0%	0%			0%		BClp 99.65	BCI 87.56	
Overal Bridge Su	fficiency	•				•	, , , , , ,	, 37.00	
Traffic	Economic	Widt	h	,	Alignment		Bridge Suffici	ency Index (BSI)	
0	5	0		, (ii)			82.56		

Element Data:									
Element Group:		Approaches			Length:		6.0 m		
Element Name:		Wearing Surface		Widt	Width:		15.0 m		
Location:		East and West		Heig	Height: 0.0		0.09	0.09 m	
Material:	ial: Asphalt			Count: 2		2			
Element Type:	ient Type:		Tota	Total Quantity:		180 sq.m			
Environment:		Severe		Limi	Limited Inspection:				
Protection System	1:	None							Performance
Candition Data		Units	Excellent	God	od	Fair		Poor*	Deficiencies
Condition Data:	sq.m		180						
Comments: No observed defects. Roadway has been recently paved and is in excellent condition.									

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 1 - Approach Surface.jpg



Description of Photo: Photo 2 - Approach Surface.jpg

Element Photo:

Description of Photo:

Element Data:									
Element Group:		Approaches	•	Length:	Length:		6.0 m		
Element Name:		Approach Slabs		Width:	Width:		15.0 m		
Location:		East and West		Height:		0.25 m			
Material:		Concrete		Count:	Count:		2		
Element Type:				Total Quant	Total Quantity:		180 sq. m		
Environment:		Moderate		Limited Insp	Limited Inspection:		X		
Protection System	:	None						Performance	
Candition Data		Units	Excellent	Good	Fair		Poor*	Deficiencies	
Condition Data:		sq.m		180					
Comments: Assumed to be in good condition based on asphalt. Roadway recently repaved.									

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 3 - Approach Slab.jpg

Element Data:								
Element Group:		Approaches		Length:		6.0 m		
Element Name:		Sidewalk		Width:	_	1.8 m		
Location:		All Quadrants		Height:				
Material:		Concrete		Count:		4		
Element Type:				Total Quant	tity:	43.2 sq. m		
Environment:		Severe		Limited Insp	Limited Inspection:			
Protection System	: <u> </u>	None	· ·		·		Performance	
Condition Data		Units	Excellent	Good	Fair	Poor*	Deficiencies	
Condition Data:		sq.m		41.79	1.4			
Comments: Light scaling typical. Three medium 200x200x25 mm deep spalls on northeast approach. 200x200x25 mm deep medium spall								
on s	outheast ap	proach. 5.0m of mediu	um cracks. 300 mm	of narrow crac	king at the e	dge of wingwalls.		

Recommended Work:	Rehab: Replace:	Maintenance Needs: 8 - Repair of Bridge Concrete
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: X 2 Year:
		Repair spalls.



Description of Photo: Photo 4 - Approach Sidewalk.jpg



Description of Photo: Photo 5 - Approach Sidewalk.jpg

Element Photo:



Description of Photo: Photo 72 - Sidewalk.jpg

Element Data:									
Element Group:): Approaches				Length: 6		6.0	m	
Element Name:	lame: Curb/Gutters				Width:				
Location:	Location: All Quadrants				Height: 0.14 m		1 m		
Material:	Concrete				Count:		4		
Element Type:	Element Type:		Total Quantity:		ty:	24.0) m		
Environment:		Severe		l		Limited Inspection:			
Protection System):	None							Performance
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies
	m				22.5	1.5			
Comments: Loca	alized abrasi	on to the tops and ed	ges of the curb th	nroug	ghout. Three	medium 100	x300)x15 mm spalls.	

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 6 - Approach Curb.jpg



Description of Photo: Photo 7 - Approach Curb.jpg

Element Photo:



Description of Photo: Photo 8 - Approach Curb.jpg

Element Data:									
Element Group: Approaches				Length:		14.6 m (NE) and 11.0 m (SW)			
Element Name:	Element Name: Barriers			Width:					
Location: SW and NE Quadrant		ts .		Height:					
Material: Steel Beam Guiderai				Count:					
Element Type: Beam		Total Qu		Total Quanti	ty:	25.6	m		
Environment:		Severe	Limited Inspection:						
Protection System	1:	Galvanized Coating							Performance
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies
		m			25.6				
					121 1				1 101

Comments: Light coating chalking typical. The northeast end is flared with a standard end terminal hidden behind a flowerbox with retaining wall. Connection to the northeast concrete barriers are substandard. Southwest corner steel beam guide rail has localized light corrosion at structure connection.

Recommended Work:	Rehab: Replace: X	Maintenance Needs:
Urgent: 1-5 Years: X	6-10 Years: None:	Urgent: 1 Year: 2 Year:
Replace substandard connection with curr	rent standard.	

Element Photo:



Description of Photo: Photo 9 - Approach Barrier.jpg



Description of Photo: Photo 10 - Approach Barrier.jpg

Element Photo:



Description of Photo: Photo 11 - Approach Barrier.jpg

Element Data:									
Element Group:		Approaches		Length:	Length:				
Element Name:		Drainage		Width:					
Location:		East and West Sides	Height:						
Material:		Concrete		Count:	5				
Element Type:			Total Quant	ity: 5					
Environment:		Severe	Limited Insp	ection:					
Protection System	:	Cast Iron Grating					Performance		
Condition Data		Units	Excellent	Good	Fair	Poor*	Deficiencies		
Condition Data:		each		5					
Comments: Ligh	t corrosion	typical.							

Replace:

None: X

Maintenance Needs:

Urgent:

1 Year:

2 Year:

Rehab:

6-10 Years:

1-5 Years:

Element Photo:

Recommended Work:

Urgent:



Description of Photo: Photo 12 - Catchbasins.jpg



Description of Photo: Photo 13 - Catchbasins.jpg

Element Photo:

Description of Photo:

Element Data:									
Element Group:	Decks			Length:		55.9 m			
Element Name:	Wearing Surface	9		Width:		15.0 m			
Location:				Height:		0.09 m			
Material:	Asphalt			Count:		1			
Element Type:				Total Quanti		838.5 sq	. m		
Environment:	Severe			Limited Inspe	ection:				
Protection System:	None							Performance	
Condition Data	Units	Excel	lent	Good	Fair		Poor*	Deficiencies	
Condition Data:	sq.m	838	.5						
Comments: No observed water along	d defects. Roadway h southwest edge.	as been recent	ly paved ar	nd is in excelle	ent condition	i. 200 mm	n of abrasion	. Some ponding of	
Recommended Work:		Rehab:	hab: Replace: Ma			ntenance Needs:			
Urgent:	1-5 Years:	6-10 Years:		None: X	Urgent:		1 Year:	2 Year:	
Element Photo:									

Description of Photo: Photo 14 - Wearing Surface.jpg

Element Data:									
Element Group:				Length:		55.9 m			
Element Name:	Element Name: Deck Top			Width:	Width:		20.6 m		
Location:	Location:			Height:		0.225 m			
Material:	Cast-in-place Concrete			Count:		1			
Element Type:	Гуре: CIP Concrete on suppo		ports, composite	Total Quantity:		1151.54 sq	ı. m		
Environment:	Moderate			Limited Inspection:		X			
Protection System		Asphalt and Waterpro	oofing					Performance	
Condition Data:		Units	Excellent	Good	Fair	F	Poor*	Deficiencies	
Condition Data:		sq.m		1151.54					
Comments: Assu	umed to be i	in good condition base	ed on asphalt. Road	way has recen	itly been pav	ed and is in	n excellent	condition.	

Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	nmended Work:	Rehab: Replace:	Maintenance Needs:
	Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 15 - Deck Top.jpg

Element Data:									
Element Group: Decks					Length: 500 mm wide x 23			mm wide x 230 d	eep drain
Element Name:		Drainage System W		Width:	200 mm dia pipe		mm dia pipes		
Location:					Height:	Height:			
Material:		Steel			Count:	8			
Element Type:		Metal Drain Pipes			Total Quant	ity:	8		
Environment:		Severe			Limited Insp	ection:			
Protection System	:	Hot Dip Galvanizing							Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		each			8				
Comments: Light corrosion at bottom of drain pipes typical, no other observed defects. No debris buildup in drain grating.									

Recommended Work:		Rehab:	Replace:		Maintenance Ne	eds:	
Urgent: 1-5	Years:	6-10 Years:		None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 16 - Drains.jpg

Element Data:										
Element Group:		Joints	Length:							
Element Name:		Seals/Sealants	Width:	Width:						
Location:			Height:	:						
Material:		Neoprene	Count:	2						
Element Type:		Strip Seal	Total Quant	Total Quantity: 2						
Environment:		Severe	Limited Insp	ection:	Х					
Protection System:								Performance		
Condition Data		Units	Good	Fair		Poor*	Deficiencies			
Condition Data:		each 2								
Comments: Sea	ls in general	ly good condition. Dir	t and debris coverir	ng seal. Corros	ion on adjace	ent steel	l armouring. N	o evidence of		
leakage or other performance deficiencies.										

Recommended Work: Rehab: Replace: Maintenance Needs:

 Urgent:
 1-5 Years:

 6-10 Years:
 None:

 X
 Urgent:

 1 Year:
 2 Year:

Element Photo:



Description of Photo: Photo 15 - Joint End Dam.jpg

Element Data:										
Element Group:		Joints			Length:		15.0 m			
Element Name:		Concrete End Dams			Width:		0.5 r	0.5 m		
Location:		East and West			Height:					
Material:		Concrete			Count: 4		4	4		
Element Type:					3		30 s	30 sq. m		
Environment:		Severe		Limited Insp	ection:					
Protection System	i:	Steel Angle							Performance	
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies	
		sq.m			30	_				
Comments: Ligh	nt scaling and	d abrasion typical. Lig	ht 300x100x15 m	m de	eep spall on e	east side and	d ligh	it 300x100x15 mm	n deep spall on west	

Comments: Light scaling and abrasion typical. Light 300x100x15 mm deep spall on east side and light 300x100x15 mm deep spall on west side. Approximately 600mm of hairline to narrow cracks.

Recommended Work:	Rehab: Replace:	Maintenance Needs:			
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:			

Element Photo:



Description of Photo: Photo 16 - Joint End Dam.jpg



Description of Photo: Photo 17 - Joint End Dam.jpg

Element Photo:

Description of Photo:

Element Data:									
Element Group:		Joints		Length:	Length:		20.6 m		
Element Name:		Armouring/Retaining Devices		Width:	Width:				
Location:		East and West		Height:	Height:				
Material:		Steel		Count:		2			
Element Type:		Angle		Total Quantity:		41.2 m			
Environment:		Severe		Limited Insp	Limited Inspection:				
Protection System:								Performance	
Condition Data		Units	Excellent	Good	Fair		Poor*	Deficiencies	
Condition Data:		m		40.2			1		
Comments: Light corrosion typical. Localized wear and deformations typical.									
1									

Replace:

None: X

Maintenance Needs:

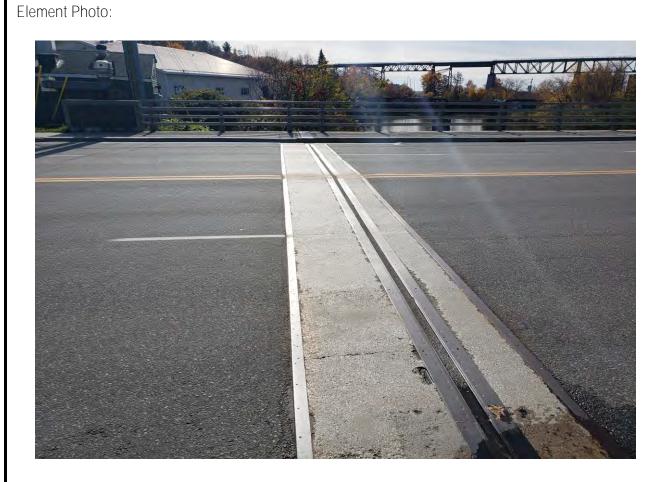
Urgent:

1 Year:

2 Year:

Recommended Work:

Urgent:



Rehab:

6-10 Years:

1-5 Years:

Description of Photo: Photo 18 - Armouring.jpg

Element Data:										
Element Group: Sid		Sidewalks / Curbs			Length: 5		55.9 m			
Element Name: Sidewalks		Sidewalks	idewalks		Width: 2.		2.8 r	2.8 m		
Location: North and		North and South		-	Height: 0.2		0.24	.24 m		
Material:		Concrete			Count: 2		2	_		
Element Type:					Total Quanti	ity:	313	sq. m		
Environment:		Severe			Limited Insp	ection:				
Protection System):	Epoxy Coated Steel		·					Performance	
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies	
		sq.m			311.7	1.2		0.1		
					- 11 - 11			11 47 11		

Comments: Light scaling typical. Transverse 0.5m narrow cracks along both the north and south sidewalk - 16 on the North and 27 on the South. 2.0m of transverse medium cracks on the North and 2.0m on the South. Abrasions of the curb edge along both sides of the roadway. Severe 150x600x25 mm spall. Two medium 100x300x25mm spalls. Medium 300x300x25 mm spall.

Recommended Work:	Rehab:	Replace:	Maintenance Needs:	8 - Repair of Bridge Concrete
Urgent: 1-5 Years:	6-10 Years:	None: X	Urgent: 1 Y	/ear: X 2 Year:
			Repair spalls	

Element Photo:



Description of Photo: Photo 19 - Sidewalk.jpg



Description of Photo: Photo 20 - Sidewalk.jpg

Element Photo:



Description of Photo: Photo 21 - Sidewalk.jpg

Element Data:									
Element Group:		Barriers			Length:		72 m		
Element Name:	lement Name: Railing Systems			Width:					
Location:	ocation: North and South			Height:					
Material: Aluminum			Count: 2						
Element Type:		4 Rail Metal Railing -	Rail Metal Railing - Aluminum		Total Quantity: 14		144	44 m	
Environment:		Severe			Limited Inspection:				
Protection System	1:								Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		m			135.8	8		0.2	
Comments: Two	Comments: Two 100x100 mm deformations with perforations on the porth side of the bridge. Localized abrasion throughout with some								

Comments: Two 100x100 mm deformations with perforations on the north side of the bridge. Localized abrasion throughout with some wear of the steel surface.

Recommended Work:		Rehab: Repla	ice:	Maintenance Needs:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent: 1 Year	r: 2 Year:

Element Photo:



Description of Photo: Photo 22 - Barrier.jpg



Description of Photo: Photo 23 - Barrier.jpg

Element Photo:

Element Data:									
Element Group:		Barriers			Length:		7.9 m		
Element Name:		Railings			Width:				
Location:	on: Northwest Quadrant				Height:				
Material: Aluminum				Count:		1			
Element Type:		4 Rail Metal - Alumini	um		Total Quantity:		7.9 ו	m	
Environment:		Severe			Limited Inspection:				
Protection System):								Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:	m				7.9				
Comments: Localized abrasion throughout, no other observed defects.									

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 24 - Barrier.jpg

Element Data:										
Element Group:		Retaining Walls		Le	Length:		50 m			
Element Name:	ment Name: Barrier Systems on Walls		Wi	Width:						
Location:			Не	Height:						
Material: Steel				Count: 1						
Element Type:		Pedestrian Handrail		То	Total Quantity: 5		50 m	1		
Environment:		Moderate		Lin	Limited Inspection:					
Protection System	1:	Hot-Dip Galvanized							Performance	
Condition Data:		Units	Excellent	Go	ood	Fair		Poor*	Deficiencies	
		m		49	49.9			0.1		
		m						-		

Comments: Pedestrian handrail along path under the west end of the bridge. Previously noted cracked post connection has been fixed. Localized light corrosion and abrasion throughout. 0.5 mm narrow crack in the concrete base of a post.

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:

Element Photo:



Description of Photo: Photo 25 - Lower Railing.jpg



Description of Photo: Photo 26 - Lower Railing.jpg

Element Photo:



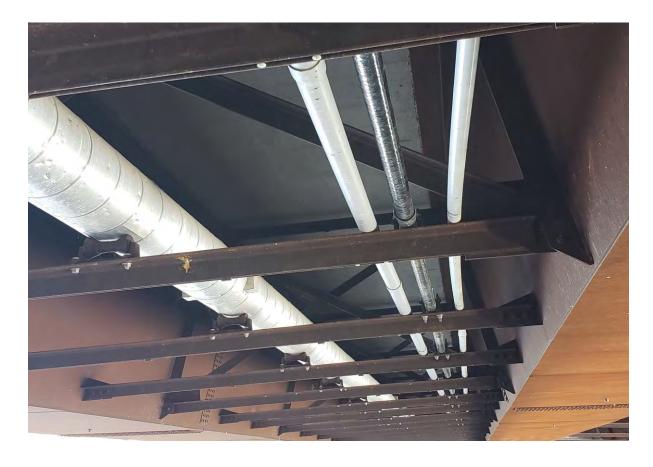
Description of Photo: Photo 27 - Lower Railing.jpg

Element Data:								
Element Group:		Accessories		Length:				
Element Name:				Width:	Width:			
Location:			Height:	Height:				
Material:			Count:		6			
Element Type:		Various	Total Quant	Total Quantity: 6				
Environment:				Limited Insp	ection:	Χ		
Protection System	:							Performance
Candition Data		Units	Excellent	Good	Fair		Poor*	Deficiencies
Condition Data:		each		6				
			hts. There is gas line lectrical and bell also					

Comments: Limited inspection due to duct heights. There is gas line supported on the north face of the bridge, insulated pipe (likely a watermain) under the north soffit, electrical and bell also appear to be supported under the north soffit. There are some punctures in the insulation of the watermain. Electrical also is supported along both ballast walls. The drawings indicate that there could also be hydro ducts within the sidewalk. Electrical box at northwest quadrant has a damaged latch and is left open.

Recommended Work:	Rehab: Replace:	Maintenance Needs: 18 - Other
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: X 2 Year:
		Replace latch and ensure electrical box is closed and locked.

Element Photo:

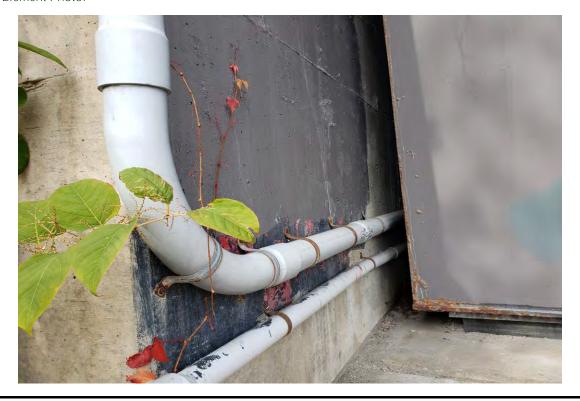


Description of Photo: Photo 28 - Utilities.jpg



Description of Photo: Photo 29 - Utilities.jpg

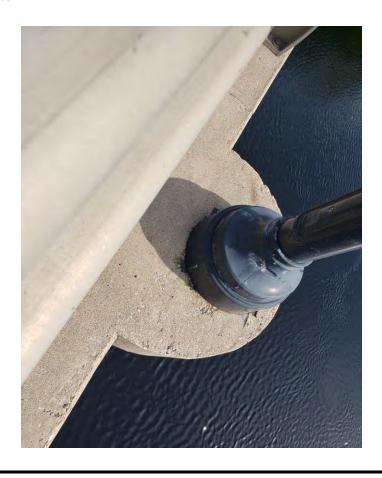
Element Photo:



Description of Photo: Photo 30 - Utilities.jpg

Element Data:	Element Data:								
Element Group:		Accessories			Length:				
Element Name:		Other - Light Standards		Width:					
Location:	tion:		Height:						
Material:	Material:		Count: 3		3				
Element Type:		Lighting Poles			Total Quantity: 3				
Environment:					Limited Inspection:				
Protection System	i:				·				Performance
Condition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:	 	each	3			_			
Comments: No observed defects.									

Recommended Work:		Rehab: Replac	ce:	Maintenance Nee	eds:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 31 - Lights.jpg

Element Data:								
Element Group:		Beams		Length:		6.8 m		
Element Name:		Diaphragms		Width:				
Location:		End		Height:		2.4 m		
Material:		Steel		Count:		4		
Element Type:	Element Type:			Total Quant	ity:	4		
Environment:		Moderate	Moderate					
Protection System	1:	Epoxymastic	poxymastic				Performance	
Condition Data		Units	Good	Fair	Poor*	Deficiencies		
Condition Data:		each	4					
	fitti was pres dition.	ent at the west end, b	ut no deterioration c	of the steel was	s noted. The	e coating appears to	still be in good	

Replace:

None: X

Maintenance Needs:

Urgent:

1 Year:

2 Year:

Rehab:

6-10 Years:

1-5 Years:

Element Photo:

Recommended Work:

Urgent:



Description of Photo: Photo 32 - Diaphragms.jpg

Element Data:										
Element Group:		Beams			Length:		15.85 m			
Element Name:		1 5		Width: 0.12		0.12	25 m			
Location:		Intermediate			Height: 2.4 m			m		
Material:		Steel			Count: 75					
Element Type:					Total Quantity: 7		75	75		
Environment:		Moderate			Limited Inspection:					
Protection System	1:	Weathering Steel							Performance	
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies	
		each	75							
Comments: No c	bserved ma	terial defects, patina i	s formed and uni	form	1.				,	

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 33 - Diaphragms.jpg

Element Data:										
Element Group:	Be	ams		Leng	Length:		1.2 m			
Element Name:	Gir	Girders		Widt	Width: 2.2		2.2 m			
Location:	End			Heig	Height: 2.8 m					
Material:	Ste	Steel		Cour	Count: 6					
Element Type:	Во	x/Trapezoidal		Tota	Total Quantity:		56 sq. m			
Environment:		derate		Limit	Limited Inspection:					
Protection System:	Ер	oxymastic							Performance	
Canditian Data	U	nits	Excellent	Goo	d	Fair		Poor*	Deficiencies	
Condition Data:	Si	m.p	55.8		·	0.4				

Comments: Four 200x200 mm areas of medium corrosion at the bottom flange at the drain holes. No other observed defects.

Recommended Work:		Rehab: Replace:		Maintenance Needs:	2 - Bridge Cleaning
Urgent: 1	-5 Years:	6-10 Years:	None: X	Urgent: 1 Y	'ear: X 2 Year:
				Clean and recoat in c cleaning. Refer to Be regarding cleaning.	conjunction with interior eams - Inside Boxes

Element Photo:



Description of Photo: Photo 34 - Girder Exterior End.jpg



Description of Photo: Photo 35 - Girder Exterior End.jpg

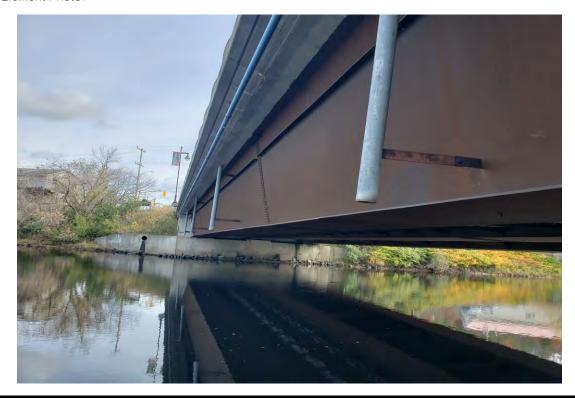
Element Photo:

Element Data:										
Element Group:		Beams			Length:		53.5 m			
Element Name:		Girders		Width: 2.		2.2 r	2.2 m			
Location:		Middle		Height: 2.8		2.8 r	n			
Material:		Steel		Count: 3		3				
Element Type:		Box/Trapezoidal			Total Quantity: 12		1251.9 sq. m			
Environment:		Moderate			Limited Inspection:					
Protection System	1:	Weathering Steel							Performance	
Condition Date:		Units	Excellent		Good	Fair		Poor*	Deficiencies	
Condition Data:		sq.m	1251.9							
Comments: No observed material defects, patina is formed and uniform.										

Recommended Work:		Rehab: Replac	ce:	Maintenance Nee	eds:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 36 - Girder Exterior Mid.jpg



Description of Photo: Photo 37 - Girder Exterior Mid.jpg

Element Photo:

Element Data:									
Element Group:		Beams			Length:		1.2 m		
Element Name:				Width: 2.2		2.2 r	2 m		
Location:		End		Height: 2.8 r		.8 m			
Material:		Steel		Count: 6					
Element Type:					Total Quantity: 5		56 s	q. m	
Environment:		Benign			Limited Inspection:				
Protection System	1:								Performance
Canditian Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m	33.5		12.5	10			
O 1 Th.	11	H I H Class	1 1100	C '1	1 1 11 11 11	0.1	4	C 1 A	1 1 4

Comments: The coating along the bottom flange and stiffeners has failed exhibiting Category 2 to 4 surface rust. Approximately 4 mm deep pitting of steel at bottom corners of box ends. Steel stiffeners have areas of localized severe corrosion with section loss on the north and south girder at both ends, with the middle girders having areas of localized light corrosion.

Recommended Work:		Rehab: Replace:		Maintenance Needs:	2 - Bridge Cleaning
Urgent:	1-5 Years:	6-10 Years:	None:	Urgent: 1 Y	'ear: X 2 Year:
				Clean and recoat the girder ends.	inside of north and south

Element Photo:



Description of Photo: Photo 38 - Interior Girder End



Description of Photo: Photo 39 - Interior Girder End

Element Photo:



Description of Photo: Photo 40 - Interior Girder End



Description of Photo: Photo 41 - Interior Girder End

Element Photo:



Description of Photo: Photo 42 - Interior Girder End

Element Data:										
Element Group:		Beams			Length:		53.5 m			
Element Name:		Inside Boxes		Width: 2.2		2.2 r	2 m			
Location:		Middle		Height: 2.8		2.8 r	n			
Material:		Steel		Count: 3		3	}			
Element Type:		Box/Trapezoidal			Total Quantity: 12		1251	1251.9 sq. m		
Environment:		Benign			Limited Inspection:					
Protection System):	Weathering Steel							Performance	
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies	
Condition Data:		sq.m	1226.9		25					
Comments: Gen	Comments: Generally no observed material defects, patina is formed and uniform, Localized areas of medium corrosion with signs of									

Comments: Generally no observed material defects, patina is formed and uniform. Localized areas of medium corrosion with signs of pitting.

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:

Element Photo:



Description of Photo: Photo 43 - Interior Girder Mid



Description of Photo: Photo 44 - Interior Girder Mid

Element Photo:



Description of Photo: Photo 45 - Interior Girder Mid





Description of Photo: Photo 46 - Interior Girder Mid

Element Photo:

Element Data:										
Element Group:		Coatings		Length:	Length:		1.2 m			
Element Name:				Width:	Width: 2.2		2 m			
Location:		Ends	Height:	Height: 2.8						
Material:				Count:	Count: 6		6			
Element Type:				Total Quan	Total Quantity:		112 sq. m			
Environment:				Limited Ins	Limited Inspection:					
Protection System):							Performance		
Condition Data:		Units	Excellent	Good	Fair		Poor*	Deficiencies		
		sq.m		56	38		18			
0 1 1-1-1										

Comments: Interior coating at ends of north and south girder have failed along the bottom flange and stiffener plates exhibiting Category 3 and 4 rusting. Category 2 to 3 rusting around the drain holes in the bottom flange. Remaing coating exhibiting chalking and Category 2 rusting, typical.

Recommended Work:		Rehab: Replace:		Maintenance Needs:	2 - Bridge Cleaning
Urgent:	1-5 Years:	6-10 Years:	None:	Urgent: 1 Y	'ear: X 2 Year:
				Clean and recoat the prevent further corro	interior of the girders to sion.

Element Photo:



Description of Photo: Photo 47 - Coatings

Element Data:									
Element Group:		Abutments			Length:				
Element Name:		Abutment Walls V		Width: 19.5		19.5	2.5 m		
Location:					Height: 5.73		5.73	5.73 m	
Material:		Concrete			Count: 2		2		
Element Type:		Conventional Closed			Total Quantity:		223.47 sq. m		
Environment:		Moderate			Limited Inspection:				
Protection System	1:	None							Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m		2	221.97	1.5			
		* I MA II I *	1 147 1 1 1		11.1	1 1 1 1		I CCITI	

Comments: Light scaling typical. Wall drains are clear. West abutment wall has been repainted, there is graffiti present. 5.73m long medium vertical crack (shown in chalk).

Recommended Work:		Rehab: Rep	place:	Maintenance Need	ls:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:

Element Photo:

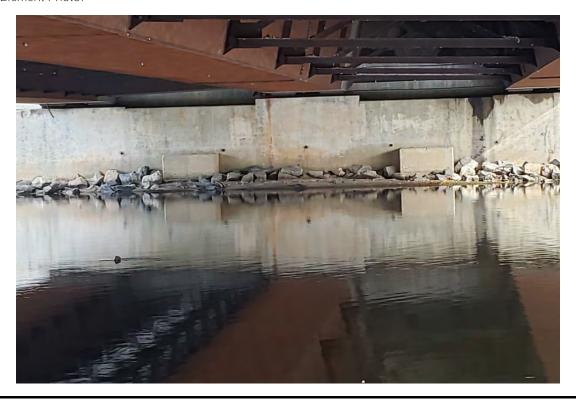


Description of Photo: Photo 48 - Abutment Wall.jpg



Description of Photo: Photo 49 - Abutment Wall.jpg

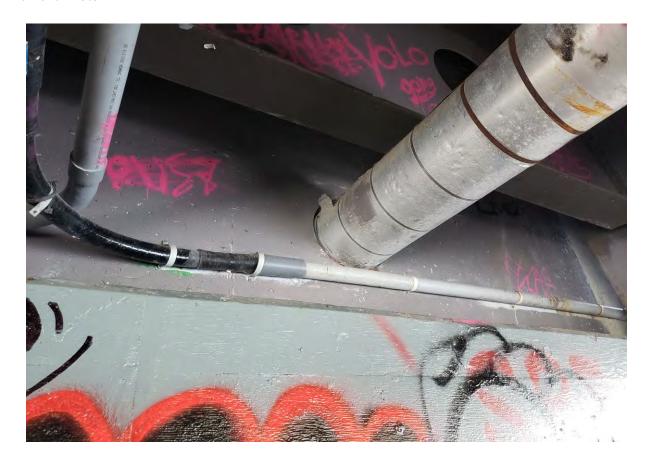
Element Photo:



Description of Photo: Photo 50 - Abutment Wall.jpg

Element Data:										
Element Group:		Abutments			Length:					
Element Name:		Ballast Walls		,	Width: 19.5		19.5	9.5 m		
Location:					Height:		3.23	m		
Material:		Concrete			Count: 2					
Element Type:					Total Quantity: 12		125.	125.97 sq. m		
Environment:					Limited Inspection:			Χ		
Protection System	1:								Performance	
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies	
		sq.m		1	125.72	0.25				
Comments: Lim	ited inspection	on as some of the wal	l are hidden by th	ne diar	phraams. Li	aht scalina t	vpic	al. 1.0m medium	crack.	

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 51 - Ballast Wall.jpg



Description of Photo: Photo 52 - Ballast Wall.jpg

Element Photo:

Element Data:									
Element Group:		Abutments			Length:		8.5 m		
Element Name:		Wingwalls		Width:					
Location:		All Quadrants		Height:		2.1 r	m		
Material:		Concrete		Count: 4		4			
Element Type:		Reinforced Concrete		Total Quantity:		71.4	sq. m		
Environment:		Moderate			Limited Inspection:				
Protection System	:	None							Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m		-	71.4	_			
Comments: Ligh	nt scaling typ	pical.							

Recommended Work:		Rehab: Re	place:	Maintenance Need	ls:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 53 - Wingwall.jpg



Description of Photo: Photo 54 - Wingwall.jpg

Element Photo:

Element Data:											
Element Group:		Deck		Length:	Length:		2.0 m				
Element Name:		Soffit - Inside Boxes		Width:	Width: 3.4						
Location:		Ends		Height:	Height:						
Material:		CIP Concrete	Count:	Count: 3							
Element Type:				Total Quar	Total Quantity: 20.						
Environment:		Moderate		Limited Ins	Limited Inspection:						
Protection System):							Performance			
Condition Data		Units	Excellent	Good	Fair	Poor*		Deficiencies			
Condition Data:		sq.m		20.2	0.2						
Comments: Ligh	nt scaling typ	Comments: Light scaling typical. Localized wet area stains on concrete at drainage tube locations.									

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 55 - Interior Soffit End



Description of Photo: Photo 56 - Interior Soffit End

Element Photo:

Element Data:									
Element Group:		Decks		Length:	5	51.9 m			
Element Name:		Soffit - Inside Boxes		Width:	Width: 3.4 r				
Location:		Middle		Height:					
Material:		CIP Concrete		Count:	Count: 3				
Element Type:				Total Quant	Total Quantity: 52		529.38 sq. m		
Environment:		Benign		Limited Insp	ection:				
Protection System):						Performance		
Candition Data		Units	Excellent	Good	Fair	Poor*	Deficiencies		
Condition Data:		sq.m		528.88		0.5			
Comments: Ligh	Comments: Light scaling typical. Localized hairline cracking with water stains throughout soffit, 1.0m on both the north and south girders.								

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 57 - Interior Soffit Mid

Element Data:										
Element Group:		Decks			Length:		51.9 m			
Element Name:		Soffit Thin Slab		Width:		6.8 m				
Location:		Interior		Height:						
Material:		Concrete			Count:					
Element Type:				Total Quantity:		352.9 s	sq. m			
Environment:		Benign			Limited Inspection:		X			
Protection System	:	·			·				Pe	rformance
Condition Data		Units	Excellent		Good	Fair		Poor*	De	eficiencies
Condition Data:		sq.m			352.9					
Comments: Ligh	nt scaling typ	oical.								

Recommended Work:		Rehab:	Replace:		Maintenance Needs:		
Urgent: 1-5 Ye	ears:	6-10 Years:		None: X	Urgent: 1	Year:	2 Year:



Description of Photo: Photo 58 - Mid Soffit.jpg

Element Data:									
Element Group:		Decks			Length:		2.0 m		
Element Name:		Soffit Thin Slab		Width: 15		15.3	m		
Location:		End		Height:					
Material:		CIP Concrete		Count: 2		2	2		
Element Type:				Total Quantity: 6		61.2	61.2 sq. m		
Environment:		Moderate	· ·		Limited Inspection:				
Protection System	1:								Performance
Condition Date:		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m			61.2	_		_	
Comments: Ligh	nt scaling typ	oical.							

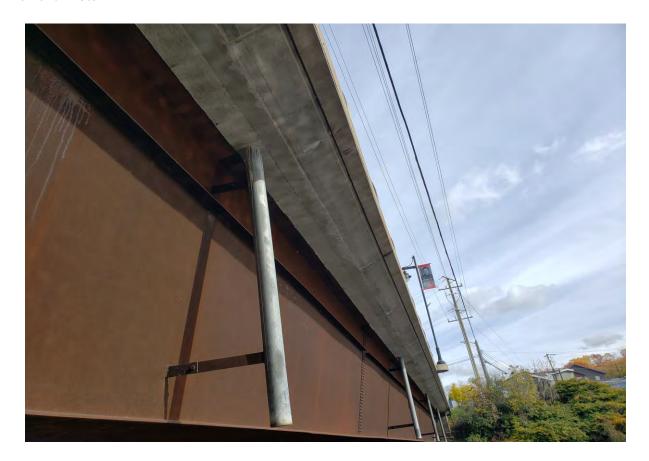
Recommended Work:		Rehab:	Replace:	Maintenance Needs:		
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent: 1	Year:	2 Year:



Description of Photo: Photo 59 - Soffit End.jpg

Element Data:								
Element Group:		Decks		Length: 5		51.9 m		
Element Name:		Soffit - Thin Slab				4.25 m		
Location:		Exterior		Height:				
Material:		Concrete		Count:		1		
Element Type:		_		3		220.6 sq. m		
Environment:		Moderate		Limited Insp	ection:			
Protection System):	Performan				Performance		
Condition Data:		Units	Excellent	Good	Fair	Poor*		Deficiencies
		sq.m		220.35		0.2		
Comments: Light scaling typical. 1.0m of narrow cracking with some water staining in overhang soffit.								

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 60 - Exterior Soffit.jpg

Element Data:								
Element Group:		Abutments		Length:		0.5 m		
Element Name:		Bearings				0.6 m		
Location:				Height:		0.1 m		
Material:				Count:		6		
Element Type:				Total Quantity:		6		
Environment:				Limited Insp	ection:	X		
Protection System	:							Performance
Condition Data		Units	Excellent	Good	Fair	Po	or*	Deficiencies
Condition Data:		each		6				
Comments: East	end bearing	pads were not acce	essible and were not i	nspected. Bea	rings on wes	st end appear	to be in	good condition.

Recommended Work:		Rehab: Replac	e:	Maintenance Need	ds:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 61 - Bearings.jpg



Description of Photo: Photo 62 - Bearings.jpg

Element Photo:

Element Data:							
Element Group: Retaining Walls			Length:		10.05 m		
Element Name: Walls			Width:				
Location: NW and SW Quadrants		ts	Height:	Height: 4.0 m			
Material: Concrete			Count:	4	4		
Element Type: Reinforced Concrete			Total Quant	ity:	160.8 sq. m		
Environment:	ronment: Moderate		Limited Insp	ection:			
Protection System	on System: None Performance					Performance	
Condition Data:		Units	Excellent	Good	Fair	Poor*	Deficiencies
		sq.m		160.8			
Commente: Ligh	at coaling tur	sical Four FOVFOV15 m	m light snalls on	the top of the se	outhwest rotal	ning wall where wat	or drains from above

Comments: Light scaling typical. Four 50x50x15 mm light spalls on the top of the southwest retaining wall where water drains from above. Northwest retaining wall has 8.0m of narrow vertical cracking.

Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	Recommended Work:	Rehab: Replace:	Maintenance Needs:
	Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:

Element Photo:



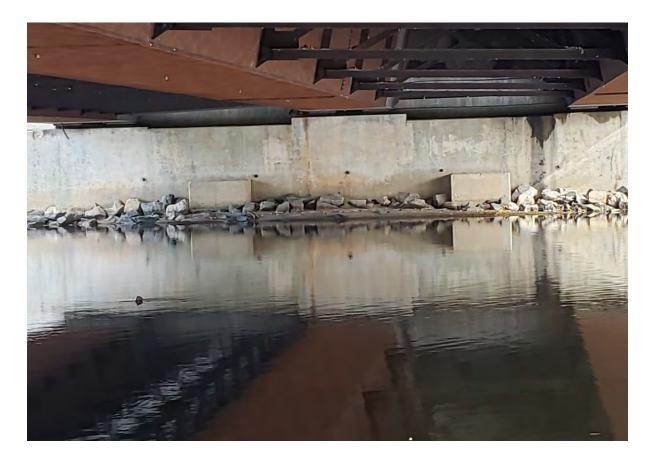
Description of Photo: Photo 63 - Retaining Wall.jpg

Element Data:									
Element Group:	Fo	oundations		Length:	th:				
Element Name:	Fo	oundation (below gr	ound level)	Width:					
Location:		West Height:		Height:					
Material:				Count:					
Element Type:	Sp	oread		Total Quanti	ty:				
Environment:		Limited Inspection			ection:				
Protection System	1:						Performance		
Condition Data	l	Units	Excellent	Good	Fair	Poor*	Deficiencies		
Condition Data:		N/A							
Comments: No o	observed defect	ts.	· · · · · · · · · · · · · · · · · · ·	-					
							-		
Recommended Work: Rehab: Replace:				Maintenance	e Needs:				
Urgent:	1-5 Y	/ears: 6-10) Years:	None: X	Urgent:	1 Year:	2 Year:		



Description of Photo: Photo 66 - Foundation.jpg

Element Data:												
Element Group:		Foundations				Length:						
Element Name:		Foundation (be	low g	round level)		Width:						
Location:		East				Height:						
Material:						Count:						
Element Type:		Piles			Total Quanti	ty:						
Environment:						Limited Insp	ectic	on:				
Protection System	1:							<u> </u>			Performance	5
Condition Data		Units		Excellen	t	Good		Fair	Poor*		Deficiencies	,
Condition Data:		N/A										
Comments:										.		
Recommended W	lork:		Dob	ah.	Danlaga			Maintenance	Moode			
Recommended w	UIK.		Reh	iab:	Replace	: <u> </u>		Mairiteriance	e Neeus.			
Urgent:	1-	5 Years:	6-1	0 Years:]	None: X		Urgent:	1 Year:		2 Year:]



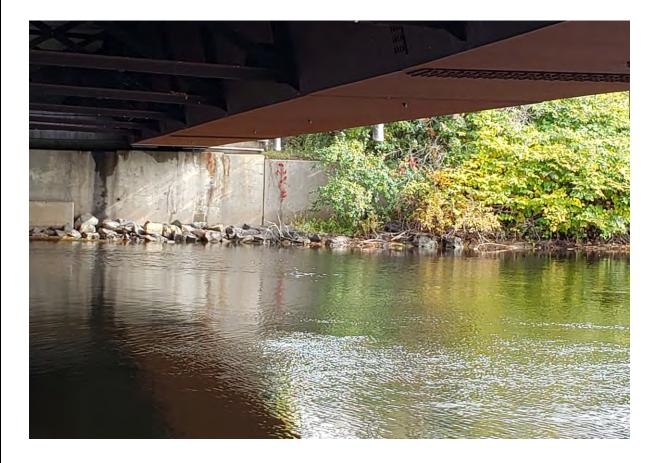
Description of Photo: Photo 64 - Foundation.jpg

	Embankments	s & Strea	ms		Length:				
	Streams & Wa	aterways			Width:				
					Height:				
					Count:				
					Limited Insp	ectio	n:		
:									Performance
	Units		Excelle	ent	Good		Fair	Poor*	Deficiencies
	all		all						
bserved def	ects. No signs	of scour	r or aggra	adation.				•	•
	o o								
						- 1			
ork:		Reha	b:	Replac	e:		Maintenance	e Needs:	
1-!	5 Years:	6-10	Years:		None: X] [Urgent:	1 Year:	2 Year:
	: observed def	Embankment Streams & Wa Units all Observed defects. No signs	Embankments & Strea Streams & Waterways : Units all observed defects. No signs of scour	Embankments & Streams Streams & Waterways : Units Excell all all observed defects. No signs of scour or aggra	Embankments & Streams Streams & Waterways : Units Excellent all all observed defects. No signs of scour or aggradation. ork: Rehab: Replac	Embankments & Streams Streams & Waterways Width: Height: Count: Total Quant Limited Insp: Units Excellent Good all observed defects. No signs of scour or aggradation.	Embankments & Streams Streams & Waterways Width: Height: Count: Total Quantity: Limited Inspection: Units all all observed defects. No signs of scour or aggradation.	Embankments & Streams Streams & Waterways Width: Height: Count: Total Quantity: Limited Inspection: Units Excellent Good Fair all observed defects. No signs of scour or aggradation. Rehab: Replace: Maintenance	Embankments & Streams Streams & Waterways Width: Height: Count: Total Quantity: Limited Inspection: Units all all observed defects. No signs of scour or aggradation. Rehab: Replace: Maintenance Needs:



Description of Photo: Photo 67 - Waterway.jpg

Element Data:										
Element Group:		Embankments &	Streams		Length:					•
Element Name:		Embankments			Width:					
Location:					Height:	Height:				
Material:					Count:	Count: 4				•
Element Type:					Total Quanti	ity:	4			
Environment:					Limited Insp	ection:				
Protection System	:	vegetation							Performance	i
Candition Data		Units	Exce	llent	Good	Fair		Poor*	Deficiencies	
Condition Data:		each	4	1						
Comments: No c	bserved de	fects.								
Recommended Wo	ork:		Rehab:	Replac	e:	Mainte	nance N	eeds:		
Urgent:	1-	5 Years:	6-10 Years:		None: X	Urgent:		1 Year:	2 Year:	
										-



Description of Photo: Photo 68 - Embankment.jpg



Description of Photo: Photo 69 - Embankment.jpg

Element Photo:



Description of Photo: Photo 70 - Embankment.jpg

Element Data:						
Element Group:	Embankments & S	Streams	Length:			
Element Name:	Slope Protection		Width:			
Location:			Height:			
Material:			Count:	2		
Element Type:	Rock Protection		Total Quantit	ty: 2		
Environment:	Limited Ins			ection:		
Protection System:						Performance
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data.	each	1 1	1			
Comments: No observed de	efects for rock prote	ction in front of east a	butment. West s	side has < 20% lo	ss of material be	eneath walkway.
2 - 1 104/ 1				1,,,,		
Recommended Work:	F	Rehab: Replac	e:	Maintenance	Needs:	
Urgent:	-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 71 - Slope Protection.jpg

Repair and Reh	abilitation Required:		Pric	ority		Estimated Structural
Element ¹	Repair and Rehabilitation Required ²	6 to 10 Years	1 to 5 Years	Within 1 Year	Urgent	Cost
Demolition						
Replacement						
Deck						
Sidewalk/Curb						
Barrier						
Joints						
Beams						
Abutment						
Soffit						
Total Deck	abilitated or Replacement Structure Dimensions ³ Length (m) Overall Str. Width (m)	ions ³ Total Structural Cost \$(\$0.00

^{1 -} Indicate specific costs for structure replacement OR for rehabilitation under the given headings.

- $\ensuremath{\text{2}}$ Give a very brief description of the rehabilitation work required.
- 3 Estimated structure dimensions after completion of the proposed work if it is expected to change.

Associated Work	Comments	Estimated Associated
		Work Cost
Approaches	Upgrade Structure Connections	\$20,000.00
Detours		
Traffic Control	Barriers, Flagging, Etc	\$10,000.00
Utilities		
Other	Engineering and Contingency	\$80,000.00
	Mobilization / Demobilization, General, Insurance	\$50,000.00
	Environmental and Access	\$30,000.00
	T. 14. 14. 1911 1.0 a. 1	+100.000
	Total Associated Work Cost	\$190,000.00

Total Constru	ction Cost	\$190,000.00

Justification:

Generally in good condition. Interior girder ends should be cleaned to mitigate continued corrosion. Minor deterioration of the deck and girders. The northeast approach barrier connection should be replaced with a standard connection.

					MTO Site Number:	
Inventory Data:						
Structure Name	Seguin River Pede	estrian Bridge				
Main Highway #	Parry Sound Fitness Trail	On X or Undo	Service on Structure	Navig. \	Water Non-Na	avig. Water dOther
Location Description	0.1 km South of Se	eguin Street	Service under:	X Navig. V	Water Non-Na	avig. Water d. Other
Owner/Custodian	Town of Parry Sou	ınd				
MTO Region	Northeastern		Latitude	45° 20' 45" N	N Longitude	80° 01' 52" W
Regional Engineer			Heritage Designation:	X Not Cor Desig.	ns. Cons./Not A	pp. List/Not Desig. Desig. & List
MTO Area	52 - Huntsville		Hwy Class:	Freeway	Arterial Colle	ector Local X
Old County	44 - Parry Sound		Posted Speed	0	No. of Lanes	s 0
Township	452 - McDougall		AADT	0	% Truck	k 0
Structure Type 1	Timber deck					
Structure Material 1	Timber		Traffic Directional B	Bound	W-E	
Structure Type 2	Steel Frame					
Structure Material 2	Steel		Inspection Frequen	ІСУ	2	(years)
Total Deck Length	96.5	(m)	Inspection Year		2020	
Overall Str. Width	4.6	(m)	Inspection Duration	1	2	(hrs)
Culvert Length	0	(m)				
Total Deck Area	332.93	(sq.m)				
Roadway Width	3.45	(m)	Min. Vertical Cleara	ance		(m)
Skew Angle	0	(Degree	e) Detour Distance		N/A	(km)
No. of Spans	12		Fill on Structure		0	(m)
Span Lengths	3.4, 3.8, 4.0, 4.0, 3.	9, 3.8, 3.8, 3.75, 3.0	55, 22.6, 14.3, 25.5			(m)
For retaining wall:						
Total Wall Length		(m)	Max. Wall Height			(m)
Total Wall Area		(sq.m)	Ave. Wall Height			(m)
			Angle of Backfill			(Degrees)
Historical Data						
Year Built	1920		Year of superstruct.	. Constructed	N/A	
Last Reg. OSIM Inspe	ection 2018		Year of Last Minor I	Rehab.	N/A	
Last Enh. OSIM Inspe	ection		Year of Last Major I	Rehab	N/A	
Work History: (Date/d	occrintion)		Current Load Limit	Unvestigation	History: (Date/descrip	/ (tonnes)
1990 - Converted from 2014 / 2015 - Deterior	n a railway traffic bric		S	2007 - Cond was complet 2008 - Addit	dition Survey and an evented	raluation for load capacity neasurements completed

						MTO S	ite Number:			
Field Inspection Info	rmation:									
Date of Inspection:	Od	ctober 20, 2020	Type of Insp	oection	า:	X Reg. O	SIM	Enh. OSIM		
Inspected By	Ki	eran Ferguson								
Others in Party:	No	one								
Eng. Access Equipment:	No	one								
Special Access Equipment	No	one								
Weather	0\	vercast	Temperature	9				12 °C		
Additional Investigat	ions Require	d:		-	None	Priority	Urgont	Estimated Cost		
Material Condition Survey					None	Normal	Urgent			
Detailed Deck Condition	on Survey.				Χ	 				
Non-destructive Delan		of Asphalt-Covered [)eck·		X	+				
	Concrete Substructure Condition Survey:									
Detailed Coating Cond		73.			X					
Detailed Timber Invest	,				X					
Post-Tensioned Strand	0				X					
	Underwater Investigation					Х		\$20,000.00		
Fatigue Investigation					Χ	<u> </u>		4 =0,000.00		
Seismic Investigation		Х								
Structure Evaluation:					Х					
Monitoring					Χ					
Deformations, Settlements and Movements:					Χ					
Crack Widths:					Χ					
RSS Horizontal movements of face:					Χ					
RSS Vertical movemen	nts of overall stru	icture:			Χ					
RSS Local movements	s or deterioration	of face elements:			Χ					
RSS Horizontal mover	ments within over	all structure:			Χ					
RSS Vertical movemen	nts within overall	structure			Χ					
RSS Lateral earth pres	ssure at the back	of facing elements			Χ					
Investigation Notes:					Total Cost \$20,0			\$20,000.00		
Overall Structure No	tes:			<u> </u>						
Recommended Work on St	tructure	None X M	linor Rehab.		Major Rehat	o. Re	place			
Timing of Recommended V	Vork	X Urgent	1 to 5 years		6 to 10	years				
Overall Comments:		The east abutment	 t wall_ballast w	ıall an	nd wingwall	s have sever	e to verv seve	re rot throughout and		
o vordii oominonto.		are recommended								
		severe to very sev	•					meenig er nave		
Date of Next inspection:		2022								
Overall Bridge Co	ondition									
% Poor in Deck	% Poor in Bear	ms	bstructure	% Pa	oor in Barriei	r B		Index (BCI or BCIp)		
0%	32%	10%	, o		0%		BClp 87.30	BCI 64.36		
Overal Bridge Su	fficiency							, 000		
Traffic	Economic	Widt	h	A	Alignment		Bridge Suffici	ency Index (BSI)		
0	0	0			0		64.36			

Element Data:									
Element Group:	Element Group: Approaches			Leng	Length:		6.0 m		
Element Name:		Wearing Surface		Widt	Width:		3.0 m		
Location:	Location: West and East End			Heig	ıht:				
Material: Gravel			Cour	Count: 2		2			
Element Type:			Tota	Total Quantity:			sq. m		
Environment:		Severe		Limit	Limited Inspection:				
Protection System):	None							Performance
Candition Data		Units	Excellent	Goo	d	Fair		Poor*	Deficiencies
Condition Data:		sq.m		36					
Comments: App	roach surfac	ce is in generally good	condition with li	ght wear,	typical.				

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 1 - Approach Surface



Description of Photo: Photo 2 - Approach Surface.jpg

Element Photo:

Description of Photo:

Element Data:								
Element Group:	/	Approaches		Length:	3	3.1 m		
Element Name:		Barriers		Width:				
Location:		SE Quadrant		Height:	1	0 m		
Material:		Lumber		Count:				
Element Type:				Total Quant	ity: 3	1 m		
Environment:		Moderate		Limited Insp	ection:			
Protection System	ection System:					Performance		
Condition Data:		Units	Excellent	Good	Fair	Poor*	Deficiencies	
Condition Data:		m		3.1				
Comments: Sout	theast barrier	light weathering	typical. No barriers ar	e required on th	e north end du	e to the retaining	wall barrier.	
Recommended We	ork:	F	Rehab: Repla	ce:	Maintenar	ice Needs:		
Urgent:	1-5	years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:	



Description of Photo: Photo 3 - Approach Barrier

Element Data:									
Element Group:		Decks		Length:	Length: 9		98.8 m		
Element Name:		3 - 1 - 1		Width:	Width: 3.45 m		m		
Location:	cation: Entire Structure		Height:	Height: 0.05 r					
Material:	Material: 2 x 10 Timber Planks (Count:	Count:					
Element Type:				Total Quant	Total Quantity: 3				
Environment:		Moderate		Limited Insp	Limited Inspection:				
Protection System):	None						Performance	
Candition Data		Units	Excellent	Good	Fair	Poor*	*	Deficiencies	
Condition Data:		sq.m		324.26	9.6	7			
	1 1		1.1.1. 19	191 1 1 1	1.11	0 1 1 1		P. 1.1.1	

Comments: Boards along center of path exhibit light to medium wear, likely due to snowmobile use. 9 deck boards have light to severe rot. 1.5m x 250mm section of deck board missing at east end.

Recommended Work:		Rehab:	Replace:	Maintenance Needs:	9 - Repair of Bridge Timber
Urgent:	1-5 Years:	6-10 Years:	None:	Urgent: 1	Year: X 2 Year:
				Replace missing and	d rotting timber planks.

Element Photo:



Description of Photo: Photo 4 - Wearing Surface.jpg



Description of Photo: Photo 5 - Wearing Surface.jpg

Element Photo:



Description of Photo: Photo 6 - Wearing Surface.jpg

Element Data:									
Element Group:		Decks		Length:	Length: 4.		4.4 m		
Element Name:		Deck Top		Width:		0.25 m			
Location:	9.00.0		0.25 m						
Material:	rial: 250 mm x 250 mm Timbers Count:			205					
Element Type:		Deck Beams		Total Quant	ity:	902 sq. m			
Environment:		Moderate		Limited Insp	Limited Inspection:				
Protection System	l:	Preservative Treatme	ent					Performance	
Condition Data		Units	Excellent	Good	Fair	Poor	.*	Deficiencies	
Condition Data:		sq.m		847.88	45.10	9.02)		

Comments: Light weathering typical. Localized light to severe checks and splits typical. Exposed ends were inspected but middle sections were covered by timber deck planks. 74 timbers on east through girder structure, 88 on west through girder structure, and 43 on deck-on-girder centre span. Centre span timbers are in unknown condition due to due to limited access.

Recommended Work:	Rehab: Replace:	:	Maintenance Needs:	
Urgent: 1-5 Years:	6-10 Years:	None: X	Urgent: 1	Year: 2 Year:

Element Photo:



Description of Photo: Photo 7 - Deck Top



Description of Photo: Photo 8 - Deck Top.jpg

Element Photo:

Description of Photo:

Element Data:								
Element Group:		Sidewalks / Cur	bs	Length:		98.8 m		
Element Name:		Curbs		Width:	Width: 0.4			
Location:			Height:		0.125 m			
Material:	aterial: 400 mm x 125 mm x 3960 mm Cou		Count:					
Element Type:		Lumber		Total Quant	ity:	103.74 sq. m		
Environment:		Severe		Limited Insp	Limited Inspection:			
Protection System:			·	·	·	·	Performance	
Candition Data		Units	Excellent	Good	Fair	Poor*	Deficiencies	
Condition Data:		sq.m		36.89	20.75	46.1	8 - Pedestrian / vehicular hazard	

Comments: Light to severe weathering, checks and splits typical. 8.0m section of curb is missing and 2 curb timbers have very severe rot resulting in tripping hazards. Two 1.0 m gaps where it appears the timber curb has been removed. 60m of severe to very severe rot.

Recommended Work:		Rehab: Repla	ace:	Maintenance Needs:	9 - Repair of Bridge Timber
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent: 1 Y	ear: X 2 Year:
				Replace deteriorated	and missing curb sections.

Element Photo:



Description of Photo: Photo 9 - Curb



Description of Photo: Photo 10 - Curb.jpg

Element Photo:



Description of Photo: Photo 11 - Curb.jpg

Element Data:								
Element Group:		Barriers		Length:	4	48.0 m (Lumber) and 50.8 m (Steel)		
Element Name:		Railing Systems	ing Systems Width:		n/a			
Location: Entire Bridge Length Height: 1.067 m (Lumber) and		d 2.44 m (Steel)						
Material:	sterial: Steel and Lumber Count: 2		2					
Element Type:		Post and Steel Barrie	ers	Total Quant	ity: 1	198 m		
Environment:		Moderate		Limited Insp	ection:			
Protection System	rotection System:					Performance		
Condition Data:		Units	Excellent	Good	Fair	Poor*	Deficiencies	
		m		196	0.5	1.5	8 - Pedestrian / vehicular hazard	

Comments: Timber railing system generally in good condition overall. Some posts have light splintering at bolt hole locations. Steel through girder acts as railing system on through girder spans and is in generally good condition. Southeast quadrant has 5 missing timber posts and 1 damaged timber post. 1.0m of damaged and missing timber along bottom rail. Height should be increased to 1.37 m to meet CHBDC requirements for cyclists, however 1.2m can be used based on owner approval.

Recommended Work:		Rehab: Replace:		Maintenance Needs:	3 - Bridge Handrail Maintenance
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent: 1 Y	ear: X 2 Year:
				Replace missing pos increased to meet Ch cyclists	ts. Height should be IBDC requirements for

Elelment Photo:



Description of Photo: Photo 12 - Railing



Description of Photo: Photo 13 - Railing.jpg

Element Photo:

Description of Photo:

Element Data:							
Element Group:	Accessories		Length:				
Element Name:	Signs		Width:				
Location:	East End	East End					
Material:			Count:	2			
Element Type:			Total Quanti	9			
Environment:	Benign		Limited Insp	ection:			
Protection System:						Performance	
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies	
Condition Data:	each		1		1		
	warning sign in poor condition a dition.	nd has been dama	iged, bent and is	weathered. One I	No Motorized Vel	nicles sign is in good	
Recommended Wo	ork: Reh	nab: Repla	ace:	Maintenance	Maintenance Needs:		
Urgent:	1-5 Years: 6-1	0 Years:	None: X	Urgent:	1 Year:	2 Year:	



Description of Photo: Photo 14 - Signs

Element Data:									
Element Group:		Accessories			Length:				
Element Name:		(3 - 3)		Width:					
Location:		Entire Structure		Height:					
Material:		- 10 0 1 - 1g 1 1 1 0 0 1 0		Count: 2					
Element Type:				Total Quantity: 2					
Environment:		Benign			Limited Inspection:				
Protection System	1:	Protective Coating							Performance
Condition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		each			2				
Comments: Pos	ts are genera	ally in good condition.	One light standar	rd ha	ad a bottom I	nousing and	the o	ther does not.	

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo:



Description of Photo: Photo 16 - Lighting.jpg

Element Photo:

Description of Photo:

Element Data:									
Element Group:		Accessories			Length:				
Element Name:		Electrical			Width:				
Location:		Entire Structure	ntire Structure H		Height:				
Material:		PVC			Count: 1				
Element Type:					Total Quantity: 1		1		
Environment:		Benign			Limited Inspection:				
Protection System):	Conduit							Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		each						1	16 - Other
Comments: Con	duit support	brackets have failed	at west end and r	equi	re repair.				•

Recommended Work:		Rehab: Repla	nce:	Maintenance Needs:	18 - Other
Urgent:	1-5 Years:	6-10 Years:	None:	Urgent: X 1 Y	'ear: 2 Year:
				Provide support to b	roken conduit.



Description of Photo: Photo 17 - Utilities

Element Data:									
Element Group:		Coating			Length:				
Element Name:				Width:					
Location:			Height:						
Material:		0.1001		Count:					
Element Type:	Element Type:		Total Quantity:		812.5	sq. m			
Environment:		Severe			Limited Inspection:			Χ	
Protection System	1:	Coating							Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m			140	336.25		336.25	
Comments: The	Through Gir	ders interior faces we	re painted by the	Rota	ary Club in 20	005 and are o	iener:	ally in good cond	dition The

Comments: The Through Girders interior faces were painted by the Rotary Club in 2005 and are generally in good condition. The remaining Through and Deck Plate Girder coatings are generally in fair to poor condition through Category 3 and 4 rust conditions.

Recommended Work:	Rehab: X Replace	Maintenance Needs:			
Urgent: 1-5 Years:	6-10 Years: X	None:	Urgent:	1 Year:	2 Year:
Clean and recoat steel to prevent further c	orrosion.				

Element Photo:



Description of Photo: Photo 18 - Coatings.jpg



Description of Photo: Photo 60 - Coatings.jpg

Element Photo:



Description of Photo: Photo 61 - Coatings.jpg

Element Data:								
Element Group:			Length:	Length:		5.0 m		
Element Name: Abutment Walls		Width:	Width:					
Location: West Side of Bridge		Height:	Height: 1.2		2 m			
Material: Cast-in-place Concrete		Count:						
Element Type:	Element Type:		Total Quar	Total Quantity:		q. m		
Environment:		Moderate		Limited Ins	Limited Inspection:		Χ	
Protection System):							Performance
Condition Data		Units	Excellent	Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m			6		2	
Camananta Ligh	t cooling tur	ical Fuldones of wet		acanaa and laa	lizad liabt ta		مرمالا مستميل مالمالم	

Comments: Light scaling typical. Evidence of wet areas with efflorescence and localized light to severe disintegration around edges.

Some spalls have wet areas and efflorescence. Very severe 1,000x250x75 mm disintegration. Severe 1,500x600x25 deep scaling and disintegration. Two very severe 1,500x50x25 mm deep spalls. Medium 200x250x25 mm spall. Ballast wall behind end diaphragm and not inspected.

Recommended Work:	Rehab: X Repla	ce: Maintenance Needs:	
Urgent: 1-5 Years	6-10 Years: X	None: Urgent: 1 Year: 2 Year:	
Repair concrete			

Element Photo:



Description of Photo: Photo 19 - Abutment Wall.jpg



Description of Photo: Photo 20 - Abutment Wall.jpg

Element Photo:



Description of Photo: Photo 21 - Abutment Wall.jpg

Element Data:									
Element Group:		Abutments			Length: 6		6 m		
Element Name:				Width:					
Location: East Side of Bridge		Height: 1.6 m		m					
Material:		Timber			Count: 1				
Element Type:				Total Quantity: 9.6 sq. m		sq. m			
Environment:		Severe			Limited Inspection:				
Protection System	1:	Creosote							Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m						9.6	
Comments: Very	Comments: Very severe not throughout with portions of the abutment wall starting to fail 300mm dia wingwall piles on each side of								

Comments: Very severe rot throughout with portions of the abutment wall starting to fail. 300mm dia. wingwall piles on each side of abutment wall also have very severe rot starting at top of pile and extending downwards.

Recommended Work:	Rehab: Replace: X	Maintenance Needs:
Urgent: X 1-5 Years:	6-10 Years: None:	Urgent: 1 Year: 2 Year:
Replace abutment wall.		

Element Photo:



Description of Photo: Photo 22 - Abutment Wall.jpg



Description of Photo: Photo 23 - Abutment Wall.jpg

Element Photo:



Description of Photo: Photo 24 - Abutment Wall.jpg

Element Data:									
Element Group:		Abutments		Length:	Length:				
Element Name:				Width:	Width: 3		300mm dia.		
Location:		East Side of Bridge		Height:	Height: 0.6 m				
Material:				Count:					
Element Type:				Total Quant	Total Quantity: 3		3.6 m		
Environment:		Severe		Limited Insp	Limited Inspection:				
Protection System	1:	Creosote						Performance	
Candition Data		Units	Excellent	Good	Fair	Poo	or*	Deficiencies	
Condition Data:		m		3.6					
Comments: Ligh	nt weathering	g typcial. Localized lig	ht checks and spli	its.					

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 25 - Abutment Piles.jpg

Element Data:									
Element Group:		Abutments		Length:	Length:		4.3 m		
Element Name:				Width:	Width: 0.		0.3 m		
Location:	East Side of Bridge		Height:	Height: 0.3 m		າ			
Material:				Count:			·		
Element Type:	Element Type:		Total Quan	Total Quantity: 5		5.16 sq. m			
Environment:		Severe		Limited Ins	Limited Inspection:				
Protection System	:	Creosote						Performance	
Condition Data		Units	Excellent	Good	Fair		Poor*	Deficiencies	
Condition Data:		sq.m		5.16					
Comments: Ligh	ıt weathering	g typical. Localized lig	ht checks and spli	ts.		·			

Recommended Work:		Rehab: Replac	ce:	Maintenance Nee	eds:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 26 - Abutment Pile Cap.jpg

Element Data:									
Element Group:		Abutments		Length:					
Element Name:		Bearings		Width:					
Location:		West Abutment		Height:					
Material: Steel				Count: 2					
Element Type:			Total Quantity:		2				
Environment: Severe				Limited Inspection:					
Protection System	1:	None							Performance
Canditian Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		each				2			
Comments: Real	rings have m	nedium corrosion with	debris accumula	ntina	around the h	nearings Gir	ders	and bracing abov	ve hearings have

Comments: Bearings have medium corrosion with debris accumulating around the bearings. Girders and bracing above bearings have moderate corrosion and the concrete below the bearing seats have minor delaminations and spalls.

Recommended Work:	Rehab: Replace:	Maintenance Needs: 6 - Bridge Bearing Maintena	ance
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: X 2 Year:	
		Clean debris from bearing seats.	

Element Photo:



Description of Photo: Photo 27 - Bearings



Description of Photo: Photo 28 - Bearings.jpg

Element Photo:

Description of Photo:

Element Data:									
Element Group:	ent Group: Abutments			Length:	Length:		2.4 m		
Element Name: Wingwalls			Width:	Width:					
Location: West Side of Structure		-e	Height:	Height:		1.2 m			
Material: Concrete		Concrete		Count:		2	2		
Element Type: Re		Reinforced Concrete		Total Quar	Total Quantity:		5.76 sq. m		
Environment: Moderate			Limited Ins	Limited Inspection:					
Protection System	1:	None						Performance	
Condition Data		Units	Excellent	Good	Fair		Poor*	Deficiencies	
Condition Data:		sq.m		5.66	0.1				
O	t cooling tur	inal Only couthwest	الملامات ما المتنسميات	. Madii 150	15005	0000	nall and faur mas	1: OFOFO1F	

Comments: Light scaling typical. Only southwest wingwall is visible. Medium 150x150x25 mm deep spall and four medium 250x50x15 mm deep spalls. Some efflorescence at the connection to the abutment.

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:

Element Photo:



Description of Photo: Photo 29 - Wingwalls

Element Data:										
Element Group:		Abutments			Length:		1.8 m			
Element Name:		Wingwalls			Width:					
Location: East Side of Struct		East Side of Structur	re		Height: (0.4 1	0.4 m average		
		Timber			Count: 2		2			
Element Type:					Total Quantity: 1.		1.44	1.44 sq. m		
Environment: Moderate		Moderate	derate		Limited Inspection:					
Protection System: None								Performance		
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies	
Condition Data:		sq.m						1.44		
Comments: Very	severe rot t	throughout.								

Urgent: X 1-5 Years: 6-10	Years: None:	Urgent: 1 Year: 2 Year:
Replace wingwall.		



Description of Photo: Photo 30 - Wingwall Piers.jpg

Element Data:								
Element Group:		Retaining Walls		Length:	40	40.0 m		
Element Name: Walls		Width:						
Location: Southwest		Height:	1	2 m				
Material: CIP Concrete		Count:						
Element Type:		Reinforced Concrete		Total Quant	ity: 48	48 sq. m		
Environment:		Moderate		Limited Insp	pection:			
Protection System	1:	None					Performance	
Condition Data:		Units	Excellent	Good	Fair	Poor*	Deficiencies	
		sq.m		47.45	0.25	0.3		
		1 1 4 0 1 11		4.0				

Comments: Light scaling typical. 1.2m long wide crack at structure connection. 1.0m long medium horizontal crack.

Recommended Work:		Rehab: X	Replace:	Maintenance No	eeds:	
Urgent:	1-5 Years: X	6-10 Years:	None	Urgent:	1 Year:	2 Year:
Crack repair.						

Element Photo:



Description of Photo: Photo 31 - Retaining Wall.jpg

Element Data:								
Element Group:	Retaining Wa	alls	Length:	10.	0 m			
Element Name:	Barrier Syste	ms on Walls	Width:	n/a				
Location:	Southwest		Height:	1.0	76 m			
Material:	Timber		Count:	2				
Element Type:			Total Quant	tity: 21.	52 m			
Environment:	Moderate		Limited Insp	Limited Inspection:				
Protection System:								
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies		
Condition Data:	m			18	3.52	8 - Pedestrian / vehicular hazard		
-	ached.	roken or missing posts. 3.0	n or top rail is	illissilig. Severa	i post anchors na	ave become		
Recommended Wo	rk:	Rehab: Replac	e:	Maintenanc	e Needs: 9 - R	Repair of Bridge Timber		
Urgent:	1-5 Years:	6-10 Years:	None:	Urgent: X	1 Year:	2 Year:		
				Replace mis top rail.	ssing and broker	n pickets, anchors and		



Description of Photo: Photo 32 - Railing



Description of Photo: Photo 33 - Railing.jpg

Element Photo:



Description of Photo: Photo 34 - Railing.jpg

Element Data:									
Element Group:		Beams			Length: 34.1 m		m		
Element Name:		Main Beams W		Width: 0.25 m		m			
Location:	Timber Trestle Spans		Height: 0.4 m		n				
Material:		Timber		Count:	8				
Element Type:	ement Type:			Total Quantity: 354		354.	54.64 sq. m		
Environment:		Severe			Limited Inspection:				
Protection System	1:	Creosote							Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m			353.39	1.25			
Comments: Light weathering typical, 5.0m long medium check on southeast exterior beam.									

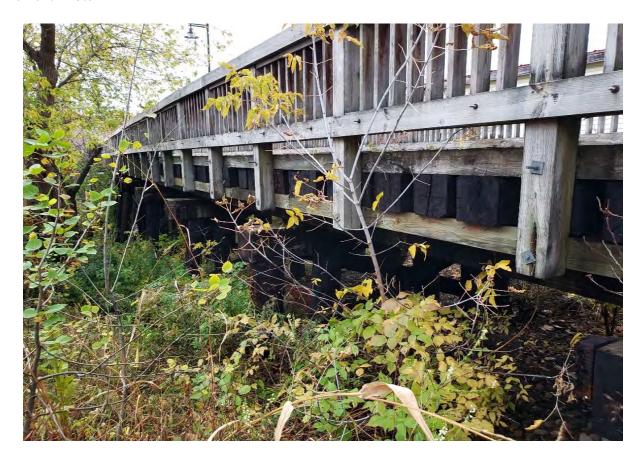
Recommended Work:	Rehab: Replace):	Maintenance Need	ds:	
Urgent: 1-5 Years	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 35 - Timber Beams

Element Data:							
Element Group:	Beams		Length:	4.6	4.6 m		
Element Name:	me: Stringers '		Width:	Width: 0.25 m			
Location:	Timber Trestle Spans		Height:	Height: 0.25 m			
Material:	Timber		Count:				
Element Type:	Beams	Beams		Total Quantity: 524.4 sq. m			
Environment:	Severe		Limited Ins	pection:			
Protection System:	Creosote Treatment					Performance	
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies	
Condition Data:	sq.m		521.76	2.64			
Comments: Light	weathering typical. Localized li	ght to medium che	ecks and splits t	pical.	•	-	

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 36 - Stringers



Description of Photo: Photo 37 - Stringers.jpg

Element Photo:

Description of Photo:

Element Data:									
Element Group:		Piers			Length: 5.0 m		n		
Element Name:		Pile Caps			Width: 0.35 m		m		
Location:		Timber Trestle Spans H		Height: 0.35 m		m			
Material:		Timber		Count:	6				
Element Type:	ent Type:		Total Quantity: 42 s		esq. m				
Environment:		Severe			Limited Inspection:				
Protection System	1:	Creosote							Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m			39.5	2.1		0.4	
Comments: Ligh	Comments: Light weathering typical Localized light to severe medium checks and splits typical								

Recommended Work:		Rehab: Replace	e:	Maintenance Need	S:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 38 - Pile Cap.jpg



Description of Photo: Photo 39 - Pile Cap.jpg

Element Photo:

Description of Photo:

Element Data:									
Element Group:		Piers			Length:				
Element Name:				Width: 0.3 m dia.		m dia.			
Location:		Timber Trestle Spans H		Height: 3.0 m ave.		n ave.			
Material:		Timber		Count:	36				
Element Type:	Гуре:		Total Quantity: 108 m		m				
Environment:		Severe			Limited Inspection:				
Protection System	1:	Creosote							Performance
Canditian Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		m			101.5	5.4		1.1	
Comments: Ligh	Comments: Light weathering typical. Localized light to severe medium checks and splits typical.								

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 40 - Piles.jpg



Description of Photo: Photo 41 - Piles.jpg

Element Photo:



Description of Photo: Photo 42 - Piles.jpg

Element Data:									
Element Group:		Piers		Length:	5	i.9 m			
Element Name:				Width:	Width: 0.075 m				
Location:				Height:	eight: 0.25 m				
Material:				Count:	: 18				
Element Type:				Total Quant	Total Quantity: 106.2		5.2 m		
Environment:		Moderate		Limited Insp	Limited Inspection:				
Protection System	1:	Creosote					Performance		
Candition Data		Units	Excellent	Good	Fair	Poor*	Deficiencies		
Condition Data:		m		90.3	10.6	5.3			
Comments: One	brace near	east pier has severe ro	ot. Localized light	to severe mediu	m checks and	splits typical.			

Recommended Work:		Rehab:	Replace:	Maintenance Needs:	9 - Repair of Bridge Timber
Urgent:	1-5 Years:	6-10 Years:	None:	Urgent: 1 Y	ear: X 2 Year:
				Replace damaged bra	ace.



Description of Photo: Photo 43 - Bracing.jpg

Element Data:									
Element Group:		Piers			Length:				
Element Name:		Bearings	Bearings W		Width:				
Location:		H		Height:					
Material:		Steel		Count: 10		10			
Element Type:					Total Quantity: 1		10		
Environment:		Moderate			Limited Inspection:			Χ	
Protection System	l:								Performance
Condition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		each			·	10			
Comments: Limi	ited inspectiv	on due to height restri	iction. Deck on ai	rder	bearings ap	pear to have	med	ium corrosion at	east end. Remaining

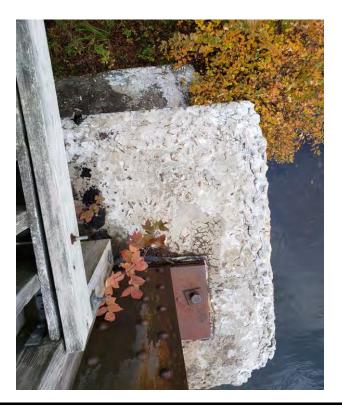
Comments: Limited inspection due to height restriction. Deck on girder bearings appear to have medium corrosion at east end. Remaining bearings assumed to be in fair condition as a result of medium corrosion.

Recommended Work:		Rehab: Replac	e:	Maintenance Nee	ds:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:

Element Photo:



Description of Photo: Photo 44 - Pier Bearings



Description of Photo: Photo 45 - Pier Bearing.jpg

Element Photo:



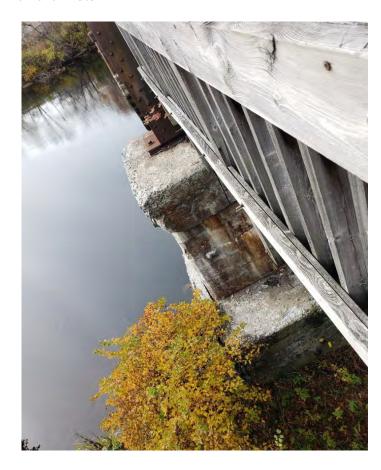
Description of Photo: Photo 46 - Pier Bearing.jpg

Element Data:								
Element Group:	oup: Piers		Length:		5.0 m			
Element Name:	Element Name: Shafts/Columns/Pile/Bents		Width:		3.5 m			
Location: West spans		Height:	Height: 4.8					
Material: Cast-in-place Concrete		Count:			}			
Element Type:		Reinforced Concrete		Total Quant	ity:	246.33 sq. m		
Environment:		Moderate		Limited Insp	ection:	Χ		
Protection System	1:	None					Performance	
Condition Data:		Units	Excellent	Good	Fair	Poor*	Deficiencies	
		sq.m		123.17	61.58	61.58		
		1 1 1 6				611 1		

Comments: Limited inspection due to lack of access. Light to very severe scaling and large areas of light to severe disintegration. East pier has localized exposed rebar. Narrow to medium cracking with staining and efflorescence noted at all piers. Areas of light to severe erosion at base of central pier at waterline.

Recommended Work:	Rehab: X Replace	e:	Maintenance Ne	eds:	
Urgent: 1-5 Years:	6-10 Years: X	None:	Urgent:	1 Year:	2 Year:
Abutments originally designed for railwa impact serviceabilty at this time or into the		inticipated to			

Element Photo:



Description of Photo: Photo 47 - Piers



Description of Photo: Photo 48 - Piers.jpg

Element Photo:



Description of Photo: Photo 49 - Piers.jpg

Element Data:									
Element Group:		Foundations			Length:				
Element Name:		Foundation (below ground level)		Width:					
Location:		West abutment and inwater piers		Height:					
Material:				Count:					
Element Type:		Unknown			Total Quantity:				
Environment:					Limited Inspection:				
Protection System	:								Performance
Candition Data		Units	Excellent		Good	Fair	Pod	or*	Deficiencies
Condition Data:		N/A			1				
Comments: 2012	inspection ¹	water levels revealed	timber cribbing s	suppo	orting the cor	ncrete piers. B	ased on vis	ual obse	ervations from boat

Comments: 2012 inspection water levels revealed timber cribbing supporting the concrete piers. Based on visual observations from boat access, deterioration of the timber was evident and due to condition and age an underwater inspection is recommended.

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:

Element Photo:



Description of Photo: Photo 52 - Foundations.jpg

Element Data:									
Element Group:		Beams		Length:	Length:		14.3 m		
Element Name:				Width:	Width: 0.43		43 m		
Location:		Timber Deck on Girder Spans H		Height:	Height: 2.45		.45 m		
Material:		Steel		Count:	Count: 2				
Element Type:				Total Quan	Total Quantity: 1		177 sq. m		
Environment:		Severe		Limited Insp	Limited Inspection:				
Protection System):	Paint						Performance	
Condition Data:		Units	Excellent	Good	Fair		Poor*	Deficiencies	
		sq.m		128	44		5		
0	A. L. a. a. a. a. P. a. a.	1 \ \ \ \	ala all'CC and an all la		I a a a Plana al .	.l . C	and a Albandania	and a second self-through	

Comments: Light to medium corrosion typical. Web stiffener and bottom flanges have localized deformations throughout, especially on north side. Localized areas of web and bottom flanges have areas of severe corrosion.

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:

Element Photo:



Description of Photo: Photo 53 - Girders.jpg



Description of Photo: Photo 54 - Girders.jpg

Element Photo:

Description of Photo:

Element Data:										
Element Group:		Beams			Length: 24		24.0	24.0 m (average)		
Element Name:				Width: 0.43		3 m				
Location:		Through Girder Spans		Height: 2.45		15 m				
Material:		Steel		Count: 4						
Element Type:					Total Quantity: 63		635.5	635.5		
Environment:		Severe			Limited Inspection:			Χ		
Protection System):	Paint							Performance	
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies	
		sq.m			566	63		6.5		
			6.1 1		.166				1.1	

Comments: Light corrosion typical. Significant areas of the bottoms of stiffeners have medium to very severe corrosion with up to approximately 50% section loss. Several bottoms of stiffeners have very severe corrosion with up to 100% section loss, particularly the north side of the west through span.

Recommended Work:	Rehab: X Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: X None:	Urgent: 1 Year: 2 Year:
Clean and recoat structural steel		

Element Photo:



Description of Photo: Photo 55 - Girders.jpg

Element Data:					·	·				
Element Group:		Beams	ams Le		Length: 3		3.96 m			
Element Name:		Bracing	Bracing Wi		Width:					
Location:		Deck on Girder Span	Deck on Girder Span He		Height: 2.4		2.45	2.45 m		
Material:		Steel C		Count: 5		5	5			
Element Type:					Total Quantity: 5		5			
Environment:		Severe	· ·		Limited Inspection:			Χ		
Protection System	:		· ·		·				Performance	
Condition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies	
Condition Data:		each			3	2				
Comments: Ligh	Comments: Light to medium corrosion typical.									

Recommended Work:		Rehab: F	Replace:	Maintenance Ne	eds:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 56 - Diaphragms.jpg

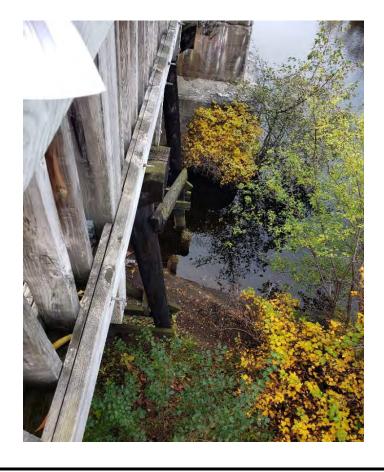
Element Data:							
Element Group:	Beams		Length:		4.4 m		
Element Name:	Floor Beams	Width:					
Location:	Through Girder Spar	ns	Height:				
Material:	Steel		Count:		15		
Element Type:			Total Quanti	ty:	15		
Environment:	Severe	Limited Insp	ection:	Χ			
Protection System:							Performance
Condition Data:	Units	Excellent	Good	Fair		Poor*	Deficiencies
	each		15				
Comments: Limited inspecti	on due to lack of acce	ess. Light corrosion t	ypical.		·		
Recommended Work: Rehab: Replace:				Mainten	ance Need:	S:	
Urgent: 1-	5 Years: 6-1	0 Years:	None: X	Urgent:		1 Year:	2 Year:



Description of Photo: Photo 57 - Floor Beams

Element Data:								
Element Group: Embankments & Streams			Length:					
Element Name:	ne: Embankments			Width:				
Location:		NW, SW, NE, and SE Quadrants						
Material:		Trees, Shrubs, and Ea	Count:					
Element Type:		Vegetation		Total Quant	Total Quantity: 4			
Environment:		Moderate		Limited Insp	Limited Inspection:			
Protection System):	Vegetation						Performance
Condition Data		Units	Excellent	Good	Fair		Poor*	Deficiencies
Condition Data:		each	4					
Comments: No c	observed def	fects. Embankments a	are vegetated and a	appear stable.		,	-	

Recommended Work:		Rehab: R	eplace:	Maintenance Need	ls:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 58 - Embankments

Element Data:							
Element Group:	Embankments & Stre	eams	Length:				
Element Name:	Streams & Waterway		Width:				
Location:	North and South		Height:				
Material:			Count:				
Element Type:			Total Quantit	7			
Environment:	Benign		Limited Inspe	ection:			
Protection System:						Performance	
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies	
Condition Data:	all	1					
Comments: No observed de	fects. Waterway is fre	e flowing and is free o	of debris.				
Recommended Work:	Ret	nab: Replace:		Maintenance	Needs:		
Urgent: 1-	-5 Years: 6-1	0 Years:	None: X	Urgent:	1 Year:	2 Year:	



Description of Photo: Photo 59 - Waterway

Repair and Rehabil	itation Requir		Prio		Estimated Structural		
Element ¹	Repair and Re	chabilitation Required ²	6 to 10 Years	1 to 5 Years	Within 1 Year	Urgent	Cost
Demolition	Demolition						
Replacement							
Beams/MLEs	Rehab.= (Clean and recoat	X				\$400,000.00
Abutments	Replace = F	Replace east abutment wall				Χ	\$20,000.00
Abutments	Rehab. =	Repair concrete	Χ				\$12,000.00
Retaining Wall	Rehab.= F	Repair concrete		Х			\$7,500.00
Retaining Wall Barrier							
Piers							
Wingwalls	Rehab. =	Replace east wingwalls		Х			\$12,000.00
Deck							
Estimated Rehabilita Total Deck Leng		ent Structure Dimensions ³ Overall Str. Width (m)			Total Str	ructural Cost	\$451,500.00

- 1 Indicate specific costs for structure replacement OR for rehabilitation under the given headings.
- $\ensuremath{\mathbf{2}}$ Give a very brief description of the rehabilitation work required.
- 3 Estimated structure dimensions after completion of the proposed work if it is expected to change.

Associated Work	Comments	Estimated Associated Work Cost
Approaches		WOIK COSt
Detours	Trail Closure Signage	\$1,000.00
Traffic Control		
Utilities		
Other	Engineering and Contingency	\$100,000.00
	Mobilization / Demobilization, General, Insurance	\$100,000.00
	Access / Dewatering / Environmental	\$150,000.00
	Total Associated Work Cost	\$351,000.00

Total Construction Cost	4000 500 00
I otal Construction Cost	\$802.500.00
Total construction cost	Ψ002,000.00

Justification:

The east abutment wall, ballast wall and wingwalls have severe to very severe rot throughout and are recommended to be replaced. Several curb timbers and deck planks are missing or have severe to very severe rot throughout and are recommended to be replaced. The west through truss has several vertical stiffeners with 100% sections loss at the interface with the bottom flange, however load carrying capacity is not a concern at this time. Barrier height should be increased to 1.37 m to meet CHBDC requirements for cyclists, however 1.2m can be used based on owner approval. Concrete abutment and piers, steel girder repairs, and coating of steel elements is recommended to be considered in a 6-10 year time frame to prolong the structure's service life.

					MTO Site Number:		
Inventory Data:							
Structure Name	Cascade Street Br	ridge No. 1					
Main Highway #	Cascade Street	On X or Under Structure	Service on Structure	Navig. \	Water Non-Na	vig. Water d. Othe	er
Location Description	0.095 km east of V	Vater Street	Service under:	Navig. \	Water X Non-Na Road Pec		er
Owner/Custodian	Town of Parry Sou	und			_		
MTO Region	Northeastern		Latitude	45° 21' 01" N	N Longitude	80° 01' 3	3" W
Regional Engineer			Heritage Designation:	X Not Cor Desig.	ns. Cons./Not Ap	pp. List/	'Not Desig.
MTO Area	52 - Huntsville		Hwy Class:	Freeway	Arterial X Colle	ector Lc	ocal
Old County	44 - Parry Sound		Posted Speed	40	No. of Lanes	5 2	一
Township	452 - McDougall		AADT	Unknow	vn % Truck	< Unknow	wn
Structure Type 1	Box beam of girde	ers	<u>-</u>				
Structure Material 1	Concrete		Traffic Directional	Bound	N-S		
Structure Type 2	Concrete deck						
Structure Material 2	Concrete		Inspection Frequer	ncy	2	(years)	
Total Deck Length	52.9	(m)	Inspection Year		2020		
Overall Str. Width	11.2	(m)	Inspection Duration	n	2	(hrs)	
Culvert Length	0	(m)					
Total Deck Area	592.5	(sq.m)					
Roadway Width	8.5	(m)	Min. Vertical Clear	ance		(m)	
Skew Angle	0	(Degree)	Detour Distance		2.2	(km)	
No. of Spans	2		Fill on Structure		0	(m)	
Span Lengths	26.45, 26.45					(m)	
For retaining wall:							
Total Wall Length		(m)	Max. Wall Height			(m)	
Total Wall Area		(sq.m)	Ave. Wall Height			(m)	
			Angle of Backfill			(Degree	es)
Historical Data							
Year Built	1981		Year of superstruc	t. Constructed	N/A		
Last Reg. OSIM Inspe			Year of Last Minor		N/A		
Last Enh. OSIM Inspe	ection		Year of Last Major		2009		
Work History: (Date/d	escrintion)		Current Load Limit		History: (Date/descript	tion)	(tonnes)
orx instory, (Date/U	<u> </u>			mvosigatiol	s.org. (Buterueselipl	<u></u>	

					MTO Si	te Number:	
Field Inspection Infor	mation:						
Date of Inspection:	0	ctober 21, 2020	Type of Inspe	ection:	X Reg. O	SIM	Enh. OSIM
Inspected By	K	ieran Ferguson					
Others in Party:	N	one					
Eng. Access Equipment:	N	one					
Special Access Equipment	N	one					
Weather	0	vercast/Light Rain	Temperature				10 °C
Additional Investigat	ions Require	ed:		None	Priority Normal	Urgent	Estimated Cost
Material Condition Survey				None	NOITHAL	Orgent	
Detailed Deck Condition	nn Survey			Х	-		
Non-destructive Delam		of Asphalt-Covered D)eck·	X			
Concrete Substructure	,		, con.	X		+	
Detailed Coating Cond		cy.		X		+	
Detailed Timber Invest	,			X		+	
Post-Tensioned Strand				X	+		
Underwater Investigation	i irivesiigaiiori.				_		
9				X		1	
Fatigue Investigation				X	-	1	
Seismic Investigation				X	-	1	
Structure Evaluation:					_		
Monitoring				X			
Deformations, Settlem	ents and Moven	nents:		Х			
Crack Widths:				Х			
RSS Horizontal moven				Х			
RSS Vertical movemer				Х			
RSS Local movements				Х			
RSS Horizontal moven				Χ			
RSS Vertical movemer	nts within overal	l structure		Х			
RSS Lateral earth pres	ssure at the back	k of facing elements		Х			
Investigation Notes:					Total Cost \$0		
Overall Structure Not	ies:						
Recommended Work on St	ructure	None X M	linor Rehab.	Major Reha	ıb. Re	place	
Timing of Recommended V	Vork	Urgent)	X 1 to 5 years	6 to 10		•	
Overall Comments:		The bridge is in ge			,	rmanaa dafiai	ionolos
Overall Comments.		The bridge is in ge	enerally good co	maition. No sig	уппсан ренс	imance denci	encies.
D		0000					
Date of Next inspection:	un dition	2022					
Overall Bridge Co							
% Poor in Deck	% Poor in Bea	ims % Poor in Sub	ostructure	% Poor in Barrie	er Br		Index (BCI or BCIp)
0%	0%	0%		0%		BClp 100.00	BCI 74.40
Overal Bridge Sut	fficiency				•		,
Traffic	Economic	Width	h I	Alignment		Bridge Suffici	ency Index (BSI)
0	3				0 71.40		

Element Data:								
Element Group:	lement Group: Approaches			Length:	6	85 m		
Element Name:		Wearing Surface		Width:	Width: 8.5			
Location:		North and South			0	09 m		
Material:		Asphalt		Count:	Count: 2			
Element Type:	Element Type:		Total Quan	ity: 1	16.45 sq. m			
Environment:		Severe		Limited Insp	ection:			
Protection System):	None					Performance	
Candition Data		Units	Excellent	Good	Fair	Poor*	Deficiencies	
Condition Data: sq.m		sq.m		113.95	1.25	1.25		
Comments: Ligh	Comments: Light ravelling typical, North: 2.0m of parrow cracking, South: 5.0m of wide cracking and 5.0m of medium cracking at							

Comments: Light ravelling typical. North: 2.0m of narrow cracking. South: 5.0m of wide cracking and 5.0m of medium cracking at transverse joint. Some medium progressive edge cracking around each catchbasin.

Recommended Work:		Rehab: Replac	e:	Maintenance No	eeds:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:

Elelment Photo:



Description of Photo: Photo 1 - Approach Surface

Element Data:									
Element Group:	nt Group: Approaches		Length:		6.85	6.85 m			
Element Name:	: Slabs		Width: 8.		8.5 r	n			
Location:	ocation: North and South		Height:		0.25	5 m			
Material:	erial: Concrete		Count: 2		2	2			
Element Type:		Solid Slab			Total Quantity:		116.	45 sq. m	
Environment:		Moderate			Limited Inspection:			Χ	
Protection System	:	Asphalt Wearing Surf	face						Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m			116.45				
Comments: App	Comments: Approach slabs appear to be in good condition based on asphalt condition.								

Recommended Work:		Rehab: Replace	e:	Maintenance Needs:	15 - R	out and Seal
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent: 1	/ear: X	2 Year:
				Rout and Seal		



Description of Photo: Photo 2 - Approach Slab

Element Data:										
Element Group:	Approaches				Length:		600	600 mm		
Element Name:		Drainage			Width:		600	mm		
Location:	North and So	outh			Height:					
Material:	Concrete				Count:		4			
Element Type:		0 mm Catchbas	in		Total Quanti	ity:	4			
Environment:	Severe				Limited Insp	,				
Protection System:	Cast Iron Fra	me and Grate							Performance	
	Units		cellent		Good	Fa	ıir	Poor*	Deficiencies	
Condition Data:	each				4					
Comments: Light drain	corrosion typical. Some age.	debris has coll	ected on tl	he ro	oad surface a	around th	e catcht	oasin inlets, no o	bstruction to	
Recommended Wo	rk:	Rehab:	Repla	ace:		Mai	ntenance	Needs:		
Urgent:	1-5 Years:	6-10 Years			None: X	Urg€	ent:	1 Year:	2 Year:	



Description of Photo: Photo 3 - Approach Catchbasin



Description of Photo: Photo 4 - Approach Catchbasin.jpg

Element Photo:



Description of Photo: Photo 5 - Approach Catchbasin.jpg

Element Data:										
Element Group:		Approaches		Length:		6.85 m				
Element Name:	lame: Curb/Gutters '		Width:							
Location:	ocation: West		Height: 0.14		0.14	m				
Material:	crial: Concrete		Count: 2		2	-				
Element Type:					Total Quantity:		13.7	13.7 m		
Environment:		Severe			Limited Inspection:					
Protection System	1:	None							Performa	ance
Canditian Data		Units	Excellent		Good	Fair		Poor*	Deficien	cies
Condition Data:		m			13.6	0.1				
Comments: Light scaling typical. Four medium 150x100x25 mm spalls.										

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 6 - Approach Curb



Description of Photo: Photo 7 - Approach Curb.jpg

Element Photo:



Description of Photo: Photo 8 - Approach Curb.jpg

Element Data:										
Element Group:		Approaches		Length: 6.		6.85	o.85 m			
Element Name:		Sidewalk \		Width: 1.8 r		1.8 r	n			
Location:	cation: East Side		Height: 0.14		m					
Material:	al: Concrete		Count: 2		2					
Element Type:		Solid Slab			Total Quantity: 26.		26.5	o.578 sq. m		
Environment:		Severe			Limited Inspection:					
Protection System	1:	None							Performance	
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies	
Condition Data:		sq.m			24.828	1.3		0.45		
Comments: Ligh	nt scaling typ	ical. Longitudinal 1.8	m wide crack. So	me a	abrasion and	wear along o	curb	edae resultina in	localized medium	

Comments: Light scaling typical. Longitudinal 1.8m wide crack. Some abrasion and wear along curb edge resulting in localized medium spalls.

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:

Elelment Photo:



Description of Photo: Photo 9 - Approach Sidewalk

Element Data:									
Element Group:		Approaches		Length:	Length:		46.0 m		
Element Name:		Barriers		Width:	Width:				
Location:	Location: NW, SE, and SW Quadrants		Height:	Height:					
Material:	Material: Steel			Count:					
Element Type:		Steel Beam Guide Ra	il on Steel Posts	Total Quar	Total Quantity:		·		
Environment:		Severe		Limited Ins	Limited Inspection:		·		
Protection System	1:	Galvanized						Performance	
Condition Data		Units	Excellent	Good	Fair		Poor*	Deficiencies	
Condition Data:		m	8	42			4	8 - Pedestrian / vehicular hazard	
O . N	1 1 1 1	and a Harrist and a 1945 and Dis	1 1 11 1		and the second second	1 I N I	1.1	11 1	

Comments: Northwest is in excellent condition. Remaining rails have localized light corrosion typical. No guide rail at northeast approach. Southwest end termination has medium corrosion and full length deformations. SW W-beam has 2.5m of deformations and two 300x300 mm deformations. The end terminal has deficient height and end block is rotated sideways. Southeast has some abrasion deformations and it's bridge connection has deficient height.

Recommended Work:		Rehab: Replace:		Maintenance Needs:	18 - Other
Urgent:	1-5 Years:	6-10 Years:	None:	Urgent: 1 Y	ear: X 2 Year:
				Replace damaged guend treatments at the	ide rail sections and install e south approach.

Elelment Photo:



Description of Photo: Photo 10 - Approach Barrier



Description of Photo: Photo 11 - Approach Barrier.jpg

Element Photo:



Description of Photo: Photo 12 - Approach Barrier.jpg

Decks		Length: 5		52.8	52.8 m			
Wearing Surface		Width: 8.5 r		m				
Deck		Height: 0.08		8 m				
Asphalt		Count:						
			Total Quantity: 44		448.	148.8 sq. m		
Severe			Limited Inspection:					
							Performance	
Units	Excellent		Good	Fair		Poor*	Deficiencies	
sq.m			247.8	161		40	9 - Rough riding surface	
	Decks Wearing Surface Deck Asphalt Severe Units	Decks Wearing Surface Deck Asphalt Severe Units Excellent	Decks Wearing Surface Deck Asphalt Severe Units Excellent	Decks Wearing Surface Width: Deck Asphalt Count: Total Quanti Severe Units Excellent Good	Decks Wearing Surface Width: Deck Height: Asphalt Count: Total Quantity: Severe Limited Inspection: Units Excellent Good Fair	Decks Wearing Surface Deck Asphalt Count: Total Quantity: Units Length: 52.8 Width: 8.5 i Count: Total Quantity: Limited Inspection:	Decks Wearing Surface Width: B.5 m Deck Height: Count: Total Quantity: Severe Units Excellent Good Fair Poor*	

Comments: Light ravelling typical. Medium ravelling along curbs and centreline typical. Severe 300x300x25 mm and 500x500x25 mm deep potholes. 11.5 m of narrow cracks. Two medium wheel track ruts each 2.0 m long. Northbound land has curbside severe wheel track rut 52.8 m long x 25 mm deep. Southbound lane has two severe wheel track ruts 52.8 m long x 25mm deep.

Recommended Work:	Rehab:	Replace:	Maintenance Needs:	15 - Rout and Seal
Urgent: 1-5 Year	s: 6-10 Years:	None: X	Urgent: 1 Y	ear: 2 Year: X
			Rout and seal cracks	. Fill in potholes.

Elelment Photo:



Description of Photo: Photo 13 - Wearing Surface.jpg



Description of Photo: Photo 14 - Wearing Surface.jpg

Element Photo:



Description of Photo: Photo 15 - Wearing Surface.jpg

Element Data:									
Element Group:		Decks			Length:		52.8 m		
Element Name:		Deck Top V		Width: 11		11.2	11.2 m		
Location:		Deck			Height: 0.125 m			25 m	
Material:		Concrete			Count:				
Element Type:	Element Type:					591.	.36 sq. m		
Environment:		Moderate			Limited Inspection:			Χ	
Protection System	1:	Waterproofing and A	sphalt Pavement						Performance
Condition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m			591.36				
Comments: Limi	ited Inspecti	on. Deck top appears	to be in good co	nditi	ion based on	asphalt cond	oitib	٦.	

Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year:	
	2 Year:



Description of Photo: Photo 16 - Deck Top

Element Data:								
Element Group:	Decks		Length:					
Element Name:	Drainage Sys	item	Width:					
Location:	East and Wes	st Side	Height:	Height:				
Material:	Cast Iron Gra	ite - CSP Pipe	Count:					
Element Type:			Total Quanti	ty: 4				
Environment:	Severe		Limited Inspe	ection:				
Protection System:	Cast Iron Gra	te	_		Performance			
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies		
	each		4					
Comments: Light	corrosion typical. No evi	dence of clogging.						
Recommended Wo	ork:	Rehab: Rep	lace:	Maintenanc	e Needs:			
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:		



Description of Photo: Photo 17 - Drains

Element Data:									
Element Group:				Length:		52.8 m			
Element Name:	Element Name: Sidewalks		Width: 1.8		m				
Location: East Side of Bridge		Height: 0.15		ō m					
Material:	Material: Concrete			Count: 1					
Element Type:	Element Type:				3		102.96 sq. m		
Environment:		Severe			Limited Inspection:				
Protection System	1:								Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m			99.4	1.6		1.96	
Comments: Very	severe 1 00	0x400x25 mm deen sr	nall Severe 600x	300x	25 mm deen	snall 45 m o	f wic	de cracking 64 m	n of medium

Comments: Very severe 1,000x400x25 mm deep spall. Severe 600x300x25 mm deep spall. 4.5 m of wide cracking. 6.4 m of medium cracking. Medium 300x300x25 mm deep spall. Severe 1,200x150x25 mm deep spall with exposed rebar. Medium 300x100x50 mm deep spall. Medium 200x100x25 mm deep spall.

Recommended Work:		Rehab: Replace:		Maintenance Needs:	8 - Repair of Bridge Concrete
Urgent:	1-5 Years:	6-10 Years:	None:	Urgent: 1 Y	ear: 2 Year: X
				Concrete repair	

Elelment Photo:



Description of Photo: Photo 18 - Sidewalk



Description of Photo: Photo 19 - Sidewalk.jpg

Element Photo:



Description of Photo: Photo 20 - Sidewalk.jpg

Element Data:									
Element Group:	Element Group: Sidewalks / Curbs		Length:		52.8 m				
Element Name:		Curbs		Width:	Width: 0.9		.9 m		
Location:		West Side of Bridge	Height:	Height: 0.15 m		m			
Material:		Concrete	Count:						
Element Type:				Total Quant	Total Quantity: 55.		55.44 sq. m		
Environment:		Severe		Limited Insp	Limited Inspection:				
Protection System	:						Performance		
Candition Data		Units	Excellent	Good	Fair	Poor*	Deficiencies		
Condition Data:		sq.m		55.24	0.1	0.1			
Comments: 300r	nm of mediu	ım cracking. Medium 3	300x100x25 mm de	ep spall. Two m	nedium 200x2	00x25 mm deep spa	lls with exposed		

corroding rebar.

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:

Elelment Photo:

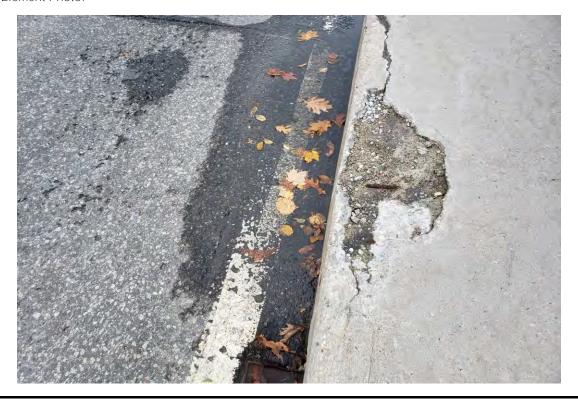


Description of Photo: Photo 21 - Curb



Description of Photo: Photo 22 - Curb.jpg

Element Photo:



Description of Photo: Photo 23 - Curb.jpg

Element Data:															
Element Group: Barriers			Length:		2.4 m										
Element Name:	Element Name: Railing Systems		Width:	Width:											
Location: East and West Side			Height:	Height: 1.12 m											
Material: Aluminum			Count:		50										
Element Type:		4 Rail Metal Railing -	Aluminum	Total Quant	ity:	120.0 m									
Environment:		Severe		Limited Insp	ection:										
Protection System):							Performance							
Condition Data:		Units	Excellent	Good	Fair	Po	or*	Deficiencies							
		m		114	114 4		2	8 - Pedestrian / vehicular hazard							
Carara anta Mas	t olde le le	dt dtiuu aaitiaa aa	a avecation of a	Om defermed a	Comments. What aids is in good condition with the execution of a 2 0m deformed continuouith come amall localized number use. Worlded										

Comments: West side is in good condition with the exception of a 2.0m deformed section with some small localized punctures. Welded connection between aluminum rail units. East side has some medium abrasion and localized deformations: one 100x100 mm deformation and two 100x300 mm deformations.

Recommended Work:	Rehab:	Replace:	Maintenance Needs:	3 - Bridge Handrail Maintenance
Urgent: 1-5 Years:	6-10 Years:	None: X	Urgent: 1 Y	ear: X 2 Year:
			Repair punctured rail	ing

Elelment Photo:

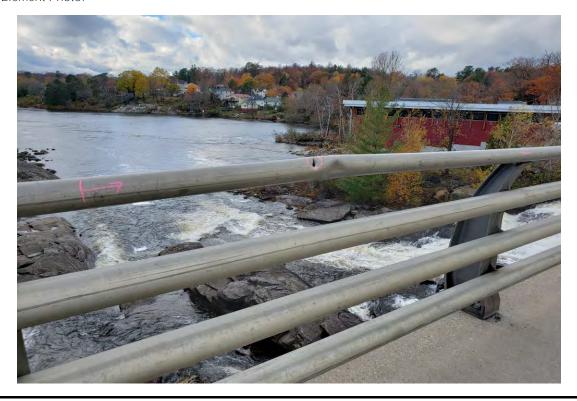


Description of Photo: Photo 24 - Railing



Description of Photo: Photo 25 - Railing.jpg

Element Photo:



Description of Photo: Photo 26 - Railing.jpg

Element Data:									
Element Group:		Accessories			Length:				
Element Name:		Utilities		Width: 0.075 m		5 m			
Location:		Overhead/East Side		Height:					
Material:	erial:		Count: 2		2				
Element Type:	Element Type: Rigid PVC Conduit			Total Quantity: 2					
Environment:		Benign			Limited Inspection:			Χ	
Protection System):	Conduit							Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		each			1			1	
Comments: Ove	rhead hydro	and electical conduit	along east side o	of brid	dge appear to	o be in good	cond	dition. Light pole	es appear to be in

Comments: Overhead hydro and electical conduit along east side of bridge appear to be in good condition. Light poles appear to be in good condition. South utility access cover has a wide crack through the center. North utility access cover is in good condition.

Recommended Work:	Rehab:	Replace:		Maintenance Needs:	1	8 - Other
Urgent: 1-5 Years:	6-10 Years:		None: X	Urgent: 1 Y	'ear: X	2 Year:
				Replace south utility	covering.	

Elelment Photo:



Description of Photo: Photo 27 - Utilities

Element Data:									
Element Group:		Abutments			Length:				
Element Name:	Element Name: Abutment Walls		Width: 11.		11.1	l.1 m			
Location:	Location: North and South			Height: 4.3		4.3 m	3 m		
Material:	al: Concrete			Count: 2		2			
Element Type:					Total Quanti	ity:	95.46	5 sq. m	
Environment:		Moderate	Moderate			Limited Inspection:		Χ	
Protection System	i:	None							Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m			93.36	2		0.1	
Comments: Sout	th·80m of r	medium vertical cracki	ing 100y300y25 r	nm (deen medium	snall with m	hediiii	m corroded reha	North abutment is

Comments: South: 8.0 m of medium vertical cracking. 100x300x25 mm deep medium spall with medium corroded rebar. North abutment is inaccessible due to fast flowing water.

Recommended Work:		Rehab: Replace	e:	Maintenance No	eeds:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:

Elelment Photo:



Description of Photo: Photo 28 - Abutment Wall



Description of Photo: Photo 29 - Abutment Wall.jpg

Element Photo:



Description of Photo: Photo 30 - Abutment Wall.jpg

Element Data:										
Element Group:		Abutments			Length:		6.65 m			
Element Name:	mme: Wingwalls		Width: n/a		n/a	3				
Location:	ocation: All Quadrants		Height: 4.3		4.3 r	m				
Material:		CIP Concrete		Count: 4						
Element Type:	ement Type: Reinforced Concrete			Total Quantity:		114.	38 sq. m			
Environment:		Moderate			Limited Inspection:			Χ		
Protection System	1:	None							Performance	
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies	
		sq.m			114.28	0.1				
Comments: Sou	thwest wing	wall has 300 mm of me	edium vertical cra	ackin	na. North win	awalls were i	inaco	cessible due to fa	st flowing water.	

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 31 - Wingwall



Description of Photo: Photo 32 - Wingwall.jpg

Element Photo:

Description of Photo:

Element Data:									
Element Group:		Foundations		Length:		n/a			
Element Name:		Foundation (below g	ground level)	Width:	Width:		n/a		
Location:		North and South		Height:	Height: n/a				
Material:		Concrete				2	2		
Element Type:		Spread footing	Total Quant	Total Quantity: n/a					
Environment:		Moderate	Limited Insp	ection:	X				
Protection System	i:		-					Performance	
Condition Data:		Units	Excellent	Good	Fair		Poor*	Deficiencies	
		all		Χ					
Comments: South: Two 600 mm long medium cracks in exposed portion of foundation footing. North footing is inaccessible due to fast flowing water.									

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 33 - Foundation



Description of Photo: Photo 34 - Foundation.jpg

Element Photo:

Description of Photo:

Element Data:								
Element Group:	Embankr	ments & Streams		Length:				
Element Name:	Streams	& Waterways		Width:				
Location:	East and	West		Height:				
Material:	Bedrock	Bedrock						
Element Type:					ty:	All		
Environment:	Severe			Limited Insp	ection:			
Protection System	1:							Performance
Condition Data	Units	Exce	ellent	Good	Fair	F	Poor*	Deficiencies
Condition Data:	all		Χ					
Comments: No o		.	-					
Recommended Work: Rehab: Replace:					Mainte	nance Needs	S:	
Urgent:	1-5 Years:	6-10 Years:		None: X	Urgent	1	Year:	2 Year:



Description of Photo: Photo 35 - Waterway

Element Data:									
Element Group:		Embankments & Stre	eams		Length:				
Element Name:		Embankments			Width:				
Location:		SW, SE, and NW Quadrants			Height:				
Material:		Trees, Shrubs, Earth		Count: 3		3			
Element Type:		Vegetation		Total Quantity: 3					
Environment:		Benign			Limited Inspection:				
Protection System	:				·			·	Performance
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies
		each			3				
Comments: All the	Comments: All three embankments are heavily vegetated. Some light erosion on northwest quadrant. No embankment element present								

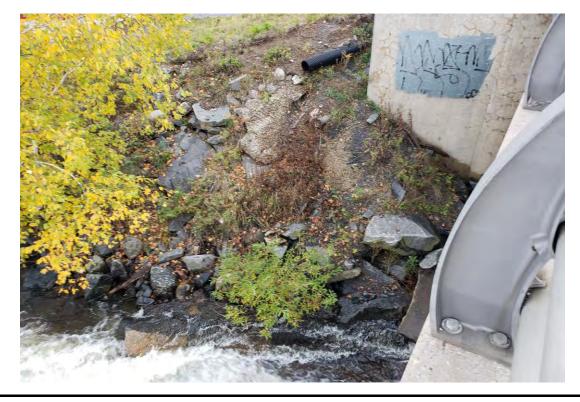
on northeast as it's part of the structure.

Recommended Work:		Rehab: Replac	e:	Maintenance N	eeds:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:

Elelment Photo:



Description of Photo: Photo 36 - Embankment



Description of Photo: Photo 37 - Embankment.jpg

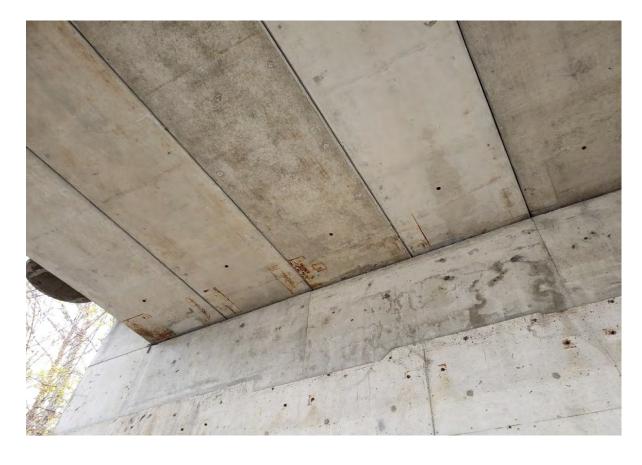
Element Photo:



Description of Photo: Photo 38 - Embankment.jpg

Element Data:									
Element Group:		Beams/Main Longitue	dinal Elements		Length:		26.45 m		
Element Name: Girders				Width:		1.2 r	1.2 m		
Location: Below Deck				Height: C		0.83	8 m		
Material:	erial: Concrete				Count: 1		16		
Element Type:	ement Type: Beam				Total Quantity:		298.3 sq. m		
Environment:		Moderate			Limited Inspection:			Χ	
Protection System	1:	Deck and Asphalt We	earing Surface						Performance
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies
		sq.m			297.9	0.4			
Comments: Ligh	nt scaling tyr	pical Four 300x300 mr	m medium delam	inati	ons along the	south airde	r end	ds with light reha	r staining

Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	Recommended Work:	Rehab: Replace:	Maintenance Needs:
	Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 39 - Girders



Description of Photo: Photo 40 - Girders.jpg

Element Photo:



Description of Photo: Photo 41 - Girders.jpg

Piers		Length:					
Bearings		Width:					
Pier		Height:					
		Total Quanti	ity:	}			
Moderate	Limited Insp	ection:	Χ				
					Performance		
Units	Excellent	Good	Fair	Poor*	Deficiencies		
each		8					
ssible for inspection. App							
F	Rehab: Replace:			Maintenance Needs:			
1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:		
	Bearings Pier Moderate Units each ssible for inspection. App	Bearings Pier Moderate Units Excellent each ssible for inspection. Appear to be in good cond Rehab: Replac	Bearings Pier Height: Count: Total Quant Moderate Limited Insp Units Excellent Good each 8 ssible for inspection. Appear to be in good condition. Rehab: Replace:	Bearings Pier Height: Count: Moderate Limited Inspection: Units Excellent Good Fair each 8 ssible for inspection. Appear to be in good condition. Rehab: Replace: Midth: Height: A Count: B C	Bearings Pier Height: Count: Noderate Limited Inspection: V Units Excellent Good Fair Poor* each 8 ssible for inspection. Appear to be in good condition. Rehab: Replace: Maintenance Needs:		



Description of Photo: Photo 42 - Pier Bearings

Element Data:										
Element Group:		Piers			Length:		1.0 m			
Element Name:		Shaft/Column			Width: 9.0		9.0 r	2.0 m		
Location:		Center of Bridge			Height: 6.15		15 m			
Material:		Concrete			Count: 1		1	1		
Element Type:				Total Quantity: 12		123.	0 sq. m			
Environment:		Moderate			Limited Inspection:			Χ		
Protection System	1:								Performance	
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies	
		sq.m			123					
Comments: Not	Comments: Not accessible for inspection. Appears to be in good condition. Previous report notes two 3.0 m long narrow vertical cracks									

Comments: Not accessible for inspection. Appears to be in good condition. Previous report notes two 3.0 m long narrow vertical cracks on south side. Exposed pier footing has localized light erosion.

Recommended Work:	Rehab: Replace):	Maintenance Need	ds:	
Urgent: 1-5 Years	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:

Elelment Photo:



Description of Photo: Photo 43 - Pier

Element Data:									
Element Group:		Retaining Wall		Length:		10.0 m			
Element Name:		Wall		Width:					
Location:		SW Embankment			Height: 1.2		1.2 r	m	
Material:		Gabion Baskets			Count: 1		1		
Element Type:		Rock			Total Quantity:		12 sq. m		
Environment:		Moderate			Limited Inspection:				
Protection System):								Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:	sq.m				12				
Comments: No e	Comments: No evidence of settlement or sliding. Minor deviations in horizontal alignment.								

Recommended Work:		Rehab:	Replace:		Maintenance Ne	eds:	
Urgent: 1-5	Years:	6-10 Years:		None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 44 - Stone Baskets

Repair and Reh	nabilitation Required:		Prio		Estimated Structural	
Element ¹	Repair and Rehabilitation Required ²	6 to 10 Years	1 to 5 Years	Within 1 Year	Urgent	Cost
Demolition						
Replacement						
Sidewalk						
Estimated Reh			Total Str	ructural Cost	\$0.00	

Indicate specific costs for structure replacement OR for rehabilitation under the given headings.
 Give a very brief description of the rehabilitation work required.

- ${\it 3-Estimated structure dimensions after completion of the proposed work-if it is expected to change.}\\$

Associated Work ⁴	Comments	Estimated Associated
		Work Cost
Approaches	Replace damaged rail sections, install end treatment	\$10,000.00
Detours		
Traffic Control		\$2,500.00
Utilities		
Other	Engineering and Contingency	\$10,000.00
	Mobilization/Demobilization, General, Insurance	\$10,000.00
	Total Associated Work Cost	\$32,500.00

Total Construction Cost	\$32,500.00

Justificat	ion:			
Damaged	guide rail sections should b	e replaced and an end tre	atment installed.	

					MTO Site Number:		
Inventory Data:							
Structure Name	Cascade Street Brid	ge No. 2					
Main Highway #		On X or Under Structure	Service on Structure	Navig. Wa	ater Non-Navig	J. Water Othe	r
Location Description	0.019 km east of Wa	ter Street	Service under:	Navig. Wa	ater X Non-Navig	J. Water Othe	r
Owner/Custodian	Town of Parry Soun	d			<u> </u>		
MTO Region	Northeastern		Latitude	45° 21' 02" N	Longitude	80° 01' 35)" W
Regional Engineer			Heritage Designation:	X Not Cons. Desig.	<u> </u>	. List/Noesig. & List	Not Desig.
MTO Area	52 - Huntsville		Hwy Class:	Freeway 7	Arterial Collect	or X Lo	cal
Old County	44 - Parry Sound		Posted Speed	40	No. of Lanes	2	一
Township	452 - McDougall		AADT	Uknown	% Truck	Unknov	vn
Structure Type 1	Rigid Frame Vertical	Leg					
Structure Material 1	Concrete		Traffic Directional Bo	und	N-S		
Structure Type 2	Concrete deck						
Structure Material 2	Concrete		Inspection Frequency	y	2	(years)	
Total Deck Length	11.5	(m)	Inspection Year		2020		
Overall Str. Width	11.2	(m)	Inspection Duration		2	(hrs)	
Culvert Length	0	(m)					
Total Deck Area	128.8	(sq.m)					
Roadway Width	8	(m)	Min. Vertical Clearan	се	3.6	(m)	
Skew Angle	10	(Degree)	Detour Distance		2.2	(km)	
No. of Spans	1		Fill on Structure		0	(m)	
Span Lengths	10					(m)	
For retaining wall:							
Total Wall Length	6	(m)	Max. Wall Height		2.8	(m)	
Total Wall Area	16.8	(sq.m)	Ave. Wall Height		2.8	(m)	
			Angle of Backfill			(Degree	s)
Historical Data							
Year Built	1984		Year of superstruct. (Constructed [V/A		
Last Reg. OSIM Inspe			Year of Last Minor Re	<u> </u>	V/A		
Last Enh. OSIM Inspe	ection		Year of Last Major Re	ehab L	Jnknown	,	(1)
Work History: (Date/d	escription)		Current Load Limit	Univestigation E	/ History: (Date/description	7	(tonnes)
orx instary, (Duttoru	<u> </u>			mvosigation	y. (Batoracsenption	<u>.,</u>	

				MTO Si	te Number:		
Field Inspection Infor	mation:						
Date of Inspection:	00	ctober 21, 2020	Type of Inspect	ion:	X Reg. 09	SIM	Enh. OSIM
Inspected By	Ki	eran Ferguson					
Others in Party:	No	one					
Eng. Access Equipment:	No	one					
Special Access Equipment	No	one					
Weather	O۱	/ercast/Light Rain	Temperature				10 °C
Additional Investigations Required:					Priority Normal	Urgent	Estimated Cost
Material Condition Survey				None	INUITIIAI	orgent	
Detailed Deck Condition	nn Survev			Х			
Non-destructive Delam		f Asnhalt-Covered D	erk.	X			
Concrete Substructure	,		CCK.	X			
Detailed Coating Cond		, y .		X	+		
Detailed Timber Invest				X	+		
Post-Tensioned Strand				X	+		
Underwater Investigation	i irivestiyatiori.			X			
Fatigue Investigation				X			
Ü				X			
Seismic Investigation Structure Evaluation:							
				X			
Monitoring Deformations, Settlem	onto and Mayam	onto		X		1	
	ents and Movern	ents:		X		1	
Crack Widths:				X			
RSS Horizontal moven		. 1		X			
RSS Vertical movemer				X			
RSS Local movements				Х			
RSS Horizontal moven				Х			
RSS Vertical movemen				X			
RSS Lateral earth pres	ssure at the back	of facing elements		Х			
Investigation Notes:					Total Cost \$0		
Overall Structure Not	ies:						
Recommended Work on St	ructure	None X M	inor Rehab.	Major Reha	b. Rep	olace	
Timing of Recommended V	Vork	Urgent >	1 to 5 years	6 to 10	years		
Overall Comments:		The bridge is gener	rally in good cond	Hition Annro	ach asnhalt re	enairs nlus de	ock rout & seal
Overall comments.		structure barrier co					
		Stractare barrier ec	литестопъ, герап	rooting (voic	a), repair more	ar aria storie i	ctairing wan.
Date of Next inspection:		2022					
Overall Bridge Co							
% Poor in Deck % Poor in Beams % Poor in Substructure 9			structure %	Poor in Barrie	er Br		Index (BCI or BCIp)
0%	0%	3%		2%		BCIp 99.25	BCI 72.88
Overal Bridge Sut	fficiency					, , , 20	, 2.00
Traffic	Economic	Width	1 I	Alignment		Bridge Suffici	ency Index (BSI)
0	3	0		0			9.88

Element Data:										
Element Group:		Approaches			Length: 5		5.3 1	5.3 m		
Element Name:		Wearing Surface		Width: 8.5 r		m				
Location:		North and South		Height:		0.09) m			
Material:		Asphalt		Count: 2						
Element Type:					Total Quantity: 90 s		90 s) sq. m		
Environment:		Severe			Limited Inspection:					
Protection System):	None							Performance	
Canalitian Data		Units	Excellent		Good	Fair		Poor*	Deficiencies	
Condition Data:		sq.m			87.4	2.5		0.1		
Comments: Nort	h 8.5m of m	nedium cracking Sout	h: 5 0m narrow tr	ansv	erse cracks	in northbour	nd la	ne Severe 300x30	00x25 mm pothole	

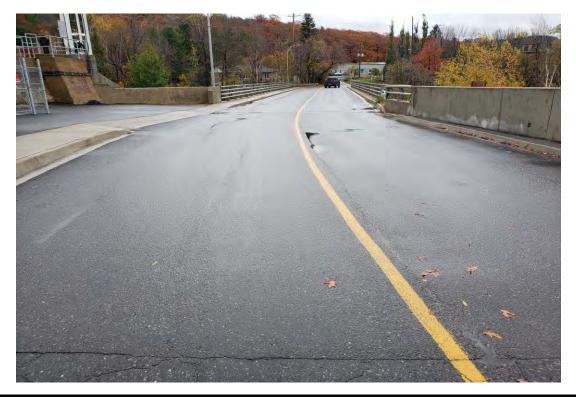
Comments: North: 8.5m of medium cracking. South: 5.0m narrow transverse cracks in northbound lane. Severe 300x300x25 mm pothole on north approach.

Recommended Work:	Rehab:	Replace:	Maintenance Needs:	15 - Rout and Seal
Urgent: 1-5 Yea	rs: 6-10 Years:	None:	Urgent: 1 Y	ear: X 2 Year:
			Rout and seal asphal	t cracks.

Elelment Photo:



Description of Photo: Photo 1 - Approach Surface



Description of Photo: Photo 2 - Approach Surface.jpg

Element Photo:



Description of Photo: Photo 3 - Approach Surface.jpg

Element Data:								
Element Group:		Approaches	Length:		5.3 m			
Element Name:		Sidewalks \		Width:		1.35 m		
Location:		NE and SE Quadrants	Height:	Height: 0.14 m				
Material:		Concrete	Count:	Count: 2				
Element Type:					ity:	15.8 sq. m		
Environment:		Severe		Limited Inspection:				
Protection System	:	None					Performance	
Canditian Data		Units	Excellent	Good	Fair	Poor*	Deficiencies	
Condition Data:		sq.m		15.8				
Comments: Nort	Comments: Northeast concrete sidewalk was previously replaced. Remaining sidewalk concrete has light scaling typical.							

Recommended Work:		Rehab: Re	place:	Maintenance Needs	:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent: 1	Year:	2 Year:



Description of Photo: Photo 4 - Approach Sidewalk

Element Data:										
Element Group:		Approaches		Length:	Length: 5		5.3 m			
Element Name:		Curb/Gutters		Width:	Width:					
Location:		All Quadrants		Height:	Height: 0.15		0.15 r).15 m		
Material:		Concrete		Count:	Count: 4		4			
Element Type:				Total Q	Total Quantity:		23.2 m			
Environment:		Severe		Limited	Limited Inspection:		·			
Protection System	1:	None					·	·	Performance	
Candition Data		Units	Excellent	Good		Fair		Poor*	Deficiencies	
Condition Data:		m		23.1		0.1				
Comments: Light scaling typical. Some debris has collected along the gutters, no obstruction to drainage. South guadrants have light										

Comments: Light scaling typical. Some debris has collected along the gutters, no obstruction to drainage. South quadrants have light abrasion minor scraping at edge along entire length.

Recommended Work:		Rehab:	Replace:		Maintenance Nee	ds:	
Urgent: 1-	5 Years:	6-10 Years:		None: X	Urgent:	1 Year:	2 Year:

Elelment Photo:



Description of Photo: Photo 5 - Approach Curb

Element Data:								
Element Group:		Approaches		Length:	Length:			
Element Name:		Drainage		Width:	Width:			
Location:		North and South		Height:				
Material:		600mm x 600mm Catch Basin		Count:		3		
Element Type:				Total Quantity:		3		
Environment:		Severe		Limited Inspection:				
Protection System		Cast Iron Grate		·		·		Performance
Condition Data		Units	Excellent	Good	Fair		Poor*	Deficiencies
Condition Data:		each		3				
Comments: Catchbasins located at northeast, southeast and southwest approaches. Light corrosion typical. Some debris has collected								

on the road surface around the catchbasin inlets, no obstruction to drainage.

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:

Elelment Photo:



Description of Photo: Photo 6 - Approach Catchbasin

Element Data:								
Element Group:		Approaches		Length:	40	46.0 m		
Element Name:		Barriers		Width:				
Location:		NW, NE, SE, and SW	Height:					
Material:		Steel	Count:					
Element Type:		Steel Beam Guide ra	il	Total Quant	ity: 40	46.0 m		
Environment:		Severe		Limited Insp	ection:			
Protection System):	Galvanized					Performance	
Condition Data:		Units	Excellent	Good	Fair	Poor*	Deficiencies	
		m		42.5	3	0.5		

Comments: Northeast rail has a substandard connection to bridge, missing bolt, 2 damaged posts, three 50x50 mm deformations and localized light abrasion deformations. Northwest rail has a rotated block and medium corrosion of the end termination and a substandard connection to bridge. Southeast rail is in good condition. Southwest rail is in good condition. No end treatments are provided on guiderail terminations and are not needed due to the presence of barrier curb.

Recommended Work:	Rehab: Replace: X	Maintenance Needs:
Urgent: 1-5 Years: X	6-10 Years: None:	Urgent: 1 Year: 2 Year:
Upgrade structure barrier connections.		

Elelment Photo:



Description of Photo: Photo 7 - Approach Barrier



Description of Photo: Photo 8 - Approach Barrier.jpg

Element Photo:



Description of Photo: Photo 9 - Approach Barrier.jpg

	Decks		Length	Length: 1		11.2 m			
			Width:	Width: 8.		8.5 r	8.5 m		
	Entire Deck Area		Height	Height: 0.0		0.09	0.09 m		
	Asphalt			Count: 1		1			
			Total (Total Quantity:		95.2 sq. m			
	Severe		Limite	Limited Inspection:					
1:	None							Performance	
	Units	Excellent	Good		Fair		Poor*	Deficiencies	
	sq.m		77.6		16.1		1.5	9 - Rough riding surface	
	1:	Decks Wearing Surface Entire Deck Area Asphalt Severe None Units	Decks Wearing Surface Entire Deck Area Asphalt Severe None Units Excellent	Decks Wearing Surface Width: Entire Deck Area Asphalt Count Total (Severe None Units Excellent Good	Decks Wearing Surface Width: Entire Deck Area Height: Asphalt Count: Total Quanti Severe Limited Insp None Units Excellent Good	Decks Wearing Surface Entire Deck Area Asphalt Count: Total Quantity: Severe None Units Entire Deck Area Height: Count: Total Punits Excellent Good Fair	Decks Wearing Surface Entire Deck Area Asphalt Count: Total Quantity: Severe Limited Inspection: None Units Length: 11.2 Width: 8.5 i Count: 1 Total Quantity: 95.2 Limited Inspection: Good Fair	Decks Wearing Surface Width: Entire Deck Area Height: Count: Total Quantity: Severe Limited Inspection: None Units Length: 11.2 m 8.5 m Coup m Coup m Count: 1 Total Quantity: 95.2 sq. m Limited Inspection: Poor*	

Comments: 18.2m of medium cracking. 4.0m of wide and 4.0m of medium cracking at north tranverse joint. 2.0m of wide and 2.0m of medium cracking at south transverse joint. 11.2x0.3 m strip of medium ravelling on east and west side generally along the wheel tracks. Each lane has a 11.2x0.3 m strip of medium loss of bond.

Recommended Work:		Rehab:	Replace:		Maintenance Needs:	15 - F	Rout and Seal
Urgent:	1-5 Years:	6-10 Years:		None: X	Urgent: 1	/ear: X	2 Year:
					Rout and seal aspha	lt cracks.	

Elelment Photo:



Description of Photo: Photo 10 - Wearing Surface.jpg



Description of Photo: Photo 11 - Wearing Surface.jpg

Element Photo:



Description of Photo: Photo 12 - Wearing Surface.jpg

Element Data:											
Element Group:	Decks				Length:		11.2	2 m			
Element Name:	Deck Top				Width:			8.5 m			
Location:	Entire Dec	Entire Deck Top					varies				
Material:	Concrete	Concrete			Count:		1				
Element Type:	Solid Slab	Solid Slab			Total Quant	ity:	95.2	2 sq. m			
Environment:	Moderate				Limited Insp	ection:		Χ			
Protection System	: Asphalt								Performance		
Condition Data:	Units Excellent					Fair		Poor*	Deficiencies		
Condition Data.	sq.m				95.2						
Comments: Limi	ted inspection. Deck to	o appears	to be in good coi	nditic	on based on	asphalt con	ditior	٦.			
Recommended We	ork:	Reh	ab: Repl	ace:		Mainte	nance	e Needs:			
Urgent: 1-5 Years: 6-10 Years:					None: X	Urgent:		1 Year:	2 Year:		



Description of Photo: Photo 13 - Deck Top

Element Data:										
Element Group: Decks		Decks			Length:			10.15 m		
Element Name:		Soffit - Thick Slab			Width:		11.2 m			
Location: Entire Deck Soffit					Height: Varies			aries		
Material: Concrete					Count: 1					
Element Type:		Solid Slab			Total Quant	ty:	113.	.68 sq. m		
Environment:		Moderate			Limited Insp	ection:		Χ		
Protection System	1:	None							Performance	
Carallilla Data		Units	Excellent		Good	Fair		Poor*	Deficiencies	
Condition Data:		sq.m			105.68	7.5		0.5		
		FL 000			1 141 4					

Comments: Limited Inspection. Five 300 mm narrow cracks on west fascia with wet areas. Four 300 mm narrow cracks on east fascia. Four 3.0m medium cracks with efflorescence and four additional 3.0m medium cracks. Three 2.0m medium cracks.

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:

Elelment Photo:



Description of Photo: Photo 14 - Soffit



Description of Photo: Photo 15 - Soffit.jpg

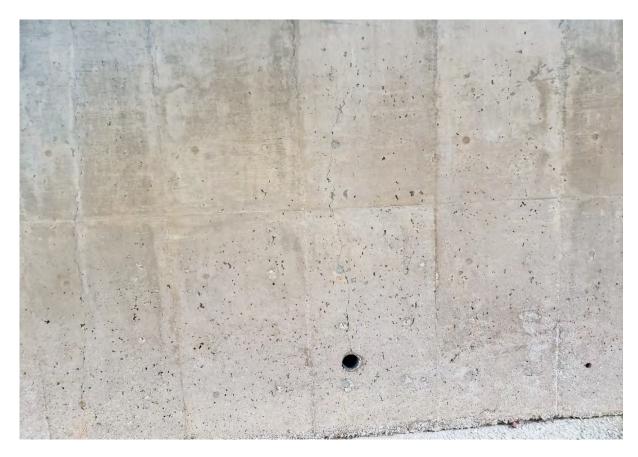
Element Photo:



Description of Photo: Photo 16 - Soffit.jpg

Element Data:									
Element Group:	Decks				Length:				
Element Name:		Drainage System		Width:	_				
Location:		Entire Deck Area	Height:	Height:					
Material:			Count:	Count: 1					
Element Type:			Total Qua	antity:	1				
Environment:		Severe	· ·	Limited In	spection:				
Protection System	1:				·	·		Performance	
Candition Data		Units	Excellent	Good	Fair		Poor*	Deficiencies	
Condition Data: all				Χ					
Comments: No deck drains. Drainage provided by surface sheet flow. Light sediment buildup along curb throughout. Abutment wall drains below deck are free of obstruction.									

Recommended Work:		Rehab: Rep	place:	Maintenance Nee	eds:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 17 - Abutment Wall Drain

Element Data:										
Element Group: Sidewalks and Curbs		ırbs		Length:		11.2	11.2 m			
Element Name: Sidewalks				Width:		1.35	1.35 m			
Location:	Location: East and West Side of Deck		of Deck		Height: 0.		0.14).14 m		
Material:	Material: Concrete				Count: 2		2)		
Element Type:		Solid Slab			Total Quant	ty:	33.38	3 sq. m		
Environment:		Severe			Limited Insp	ection:				
Protection System	1:								Performance	
Condition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies	
Condition Data:		sq.m			31.13	2.25				
Condition Data:	ata:		Excellent		31.13	2.25		Poor*		

Comments: Light scaling typical. 1.5m medium crack 2.0m south of north joint. East sidewalk edge along traffic face has light abrasion along entire length and 1.5m of medium cracks. Localized light abrasion along traffic face. Light rust staining along the east traffic face. West sidewalk has sand deposits along the raised curb.

Recommended Work:	Rehab: Replace:	Maintenance Needs: 2 - Bridge Cleaning
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: X 2 Year:
		Clean sidewalks.

Elelment Photo:



Description of Photo: Photo 18 - Sidewalk



Description of Photo: Photo 19 - Sidewalk.jpg

Element Photo:



Description of Photo: Photo 20 - Sidewalk.jpg

Element Data:								
Element Group:	Element Group: Barriers		Length:	Length:				
Element Name:		Railing Systems		Width:	Width:			
Location:	ocation: East and West Side of Deck			Height:	1	1.12 m		
Material:	iterial: Aluminum			Count:	Count: 12			
Element Type:		4 Rail Metal Railing -	Aluminum	Total Quant	ity: 2	28.8 m		
Environment:		Severe		Limited Insp	ection:			
Protection System	:							Performance
Units Excellent		Good	Fair	P	oor*	Deficiencies		
Condition Data:		m		14.4	13.9	(0.5	8 - Pedestrian / vehicular hazard
O 1 1/1/	All and Albert and All Property	and the second s	the contract of the second Philadelphia	English to the first	and the soul of the soul of	tana ana at tana	- P I - I - C	

Comments: West side railing system is generally in good condition. East side has localized abrasion and localized deformations on all 4 rails entire length, north end missing 2 caps. 50x50 mm gouge on east side.

Recommended Work:		Rehab:	Replace:		Maintenance Needs:	3 - Bridge Ha	andrail Maintenance
Urgent:	1-5 Years:	6-10 Years:	None	: X	Urgent: 1	/ear: X	2 Year:
					Replace missing end	d caps.	

Elelment Photo:



Description of Photo: Photo 21 - Barrier



Description of Photo: Photo 22 - Railing.jpg

Element Photo:



Description of Photo: Photo 23 - Railing.jpg

Element Data:										
Element Group:	Ac	ccessories		Length:	Length:					
Element Name:	Sig	Signs								
Location:	Northwest Approach			Height:						
Material:	Ste	eel		Count:	1					
Element Type:				Total Quant	ity: 1					
Environment:		enign		Limited Insp	ection:					
Protection System: Galvanized							Performance			
0 - 1111 - 1 D - 1 -	L	Jnits	Excellent	Good	Fair	Poor*	Deficiencies			
Condition Data:	е	each		1						
Comments: Brid	ge Freezes sigr	n is in good conditi	on. Tab portion ha	s minor map cr	acking.					
Recommended W	ork:	Reh	ab: Repla	ce:	Maintenanc	e Needs:				

None: X

Urgent:

2 Year:

1 Year:

Elelment Photo:

Urgent:

1-5 Years:



6-10 Years:

Description of Photo: Photo 24 - Signs

Element Data:										
Element Group:		Accessories				Length:				
Element Name:					Width:					
Location:	ation: Overhead and Beside Deck			Height:						
Material:				Count:		2				
Element Type:		Rigid Condui	t			Total Quanti	ty:	2		
Environment:	3.					Limited Insp	ection:		Χ	
Protection System	:									Performance
0 1111 D 1	Units			Excellent	Excellent Good		Fair		Poor*	Deficiencies
Condition Data:		each			2					
Comments: 75 mm diameter conduit duct not visible. Overhead hydro appears to be in good condition.										
Recommended W	ork:		Reh	ab: Rep	olace:		Mainte	nance	Needs:	
Urgent:	1-	-5 Years:	6-10	0 Years:		None: X	Urgent:		1 Year:	2 Year:



Description of Photo: Photo 25 - Overhead Hydro

Element Data:										
Element Group: Abutments			Length:							
Element Name:	Element Name: Abutment Walls			Width:		11.33 m				
Location:	Location: North and South				Height:			5.1 m		
Material:	Material: Concrete				Count: 2					
Element Type:					Total Quanti	ty:	115.	.57 sq. m		
Environment:		Moderate			Limited Inspection:					
Protection System	1:	None							Performance	
Candillan Data		Units	Excellent		Good	Fair		Poor*	Deficiencies	
Condition Data:		sq.m			112.32	3		0.25		
	·									

Comments: Light erosion at both ends of the footings. 4.0m of narrow cracking. 10.0m of medium cracking. 800mm of wide cracking at center of footing. Bottom of south wall has a localized area of very severe erosion with a 400x300x200 mm deep void with water churning within the void.

Recommended Work:	Rehab:	Replace:	Maintenance Needs:	8 - Repair of Bridge Concrete
Urgent: 1-5 Years	6-10 Years:	None: X	Urgent: 1 Y	ear: X 2 Year:
			Repair concrete void	

Elelment Photo:



Description of Photo: Photo 26 - Abutment Wall



Description of Photo: Photo 27 - Abutment Wall.jpg

Element Photo:



Description of Photo: Photo 28 - Abutment Wall.jpg

Element Data:										
Element Group:		Abutments		Length: 6		6.7 1	6.7 m			
Element Name:		Wingwalls			Width:					
Location:		All Quadrants			Height:		4.94	· m		
Material:	al: Concrete		Count: 4		4	4				
Element Type:		Wall			Total Quantity: 132		132.	39 sq. m		
Environment:		Moderate			Limited Inspection:					
Protection System):	None							Performance	
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies	
Condition Data: sq.m		sq.m			127.89	4		0.5		
Comments: Ligh	Comments: Light scaling typical. Southwest wingwall has a diagonal 1.0m long hairline crack. Southeast has 1.5m of medium vertical									

Comments: Light scaling typical. Southwest wingwall has a diagonal 1.0m long hairline crack. Southeast has 1.5m of medium vertical cracking at the center of the wall. All wingwalls have a wide 500mm long horizontal crack the width of the abutment wall at the top of wingwall and bearing seat. Medium scaling on the southeast wingwall 600mm high x 6.0m long.

Recommended Work:		Rehab:	Replace:		Maintenance N	leeds:		18 - Other
Urgent:	1-5 Years:	6-10 Years:		None:	Urgent:	1 Y	ear: X	2 Year:
					Replace vertic wall and wing			etween abutment rants

Elelment Photo:



Description of Photo: Photo 29 - Wingwall



Description of Photo: Photo 30 - Wingwall.jpg

Element Photo:



Description of Photo: Photo 31 - Wingwall.jpg

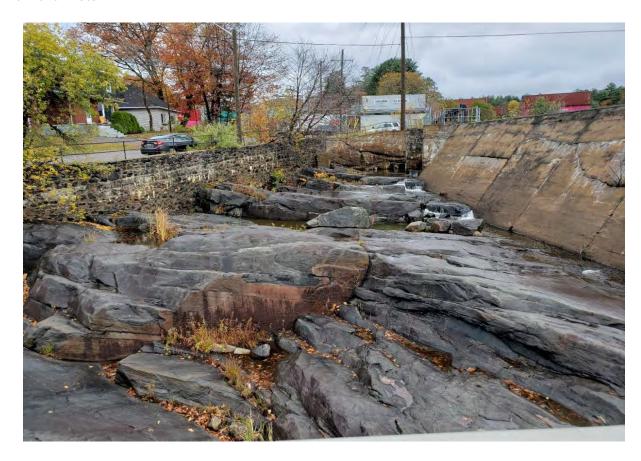
Foundations		Length:	Length:				
Foundation (I	below ground level)	Width:					
South and No	orth	Height:					
Concrete		Count:					
Spread Footi	ng	Total Quant	ity:				
Moderate		Limited Insp	ection:	Χ			
					Performance		
Units	Excellent	Good	Fair	Poor*	Deficiencies		
N/A							
ridence of movements or	other performance defic	iencies.					
rk·	Pohah: Don	200:	Maintenanc	·a Naads·			
I.N.	Reliau. Rep	ace.	Mannenanc	e Neeus.			
1-5 Years:	6-10 Years:	None:	Urgent:	1 Year:	2 Year:		
	Foundation (I South and No Concrete Spread Footi Moderate Units N/A vidence of movements or	Spread Footing Moderate Units Excellent N/A vidence of movements or other performance defice rk: Rehab: Repl	Foundation (below ground level) South and North Concrete Spread Footing Moderate Units Excellent N/A Vidence of movements or other performance deficiencies. Rehab: Replace:	Foundation (below ground level) South and North Concrete Spread Footing Moderate Units Excellent N/A Vidence of movements or other performance deficiencies. Foundation Width: Height: Count: Total Quantity: Limited Inspection: Fair N/A Vidence of movements or other performance deficiencies. Maintenance	Foundation (below ground level) South and North Concrete Spread Footing Moderate Units Excellent N/A Vidence of movements or other performance deficiencies. Width: Height: Count: Spread Footing Total Quantity: Limited Inspection: X Vidence of movements or other performance deficiencies. Replace: Maintenance Needs:		



Description of Photo: Photo 32 - Foundation

Element Data:						·			
Element Group:		Embankments & Streams			Length:				
Element Name:		Streams & Waterways		Wi	Width:				
Location:		East and West		He	eight:				
Material:		Exposed Bedrock		Сс	ount:				
Element Type:				То	Total Quantity:				
Environment:		Benign		Lir	Limited Inspection:				
Protection System	1:				·				Performance
Candition Data		Units	Excellent	Go	iood	Fair		Poor*	Deficiencies
Condition Data:		all	X						
	observed def ne time.	fects. Channel consist	ts of exposed bedr	rock an	nd is a spil	Ilway channe	l for an	upstream dan	n. Minimal flow most

Recommended Work:	Rehab: Replace	e:	Maintenance Ne	eeds:	
Urgent: 1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 33 - Waterway

Element Data:									
Element Group:		Embankments & Streams			Length:				
Element Name:		Embankments		Width:					
Location:		NE and NW Quadrant	.S		Height:				
Material:		Vegetation, shrubs, earth			Count:		2		
Element Type:					Total Quantity: 2		2		
Environment:		Moderate			Limited Inspection:				
Protection System		Stone Protection							Performance
Condition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		each	2						
Comments: No o	bserved def	ects.							

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 34 - Embankment

Element Data:									
Element Group:		Embankments & Streams		Length:					
Element Name:		Slope Protection		Width:					
Location:		NE and NW Quadrants		Height:					
Material:	aterial: 150mm - 300mm Rip Rap		Count:		2				
Element Type:		Hand Laid Rip Rap		Total Quantity: 2		2			
Environment:		Benign			Limited Inspection:				
Protection System	1:								Performance
Canditian Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		each	2						
Comments: No o	observed def	ects.							

Recommended Work:		Rehab: Replac	ce:	Maintenance Nee	eds:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 35 - Slope Protection

Element Data:									
Element Group:		Retaining Wall			Length:		15.0	m	
Element Name:		Wall			Width:				
Location:		SW Quadrant			Height: 1.8		1.8 r	.8 m	
Material:	rial: Mortar and Stone			Count: 1		1			
Element Type:					3		27.0	sq. m	
Environment:		Benign			Limited Insp	ection:	ection: X		
Protection System	1:								Performance
Candition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m			20	6.85		0.15	
Community Data	مرالمينية ماماء	ant of levidon footlike.	مما فطمنا لممسئلمهم	F		1 F£1		متحلة مقلم مصمام ممص	and a second and a second

Comments: Retaining wall part of hydro facility. Localized light loss of mortar and stones.-Efflorescence deposits throughout emanating from the mortar. Severe 1,500x300x300mm deep void at bottom center of wall with loss of mortar and stones.

Recommended Work:		Rehab: Re	eplace:	Maintenance Needs:	18 - Other
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent: 1 Y	'ear: 2 Year: X
				Repair void at bottor	n of retaining wall

Elelment Photo:



Description of Photo: Photo 36 - Retaining Wall



Description of Photo: Photo 37 - Retaining Wall With Missing Stones.jpg

Element Photo:



Description of Photo: Photo 38 - Retaining Wall.jpg

Repair and Reh	abilitation Required:		Pric	ority		Estimated Structural		
Element ¹	Repair and Rehabilitation Required ²	6 to 10 Years	1 to 5 Years	Within 1 Year	Urgent	Cost		
Demolition								
Replacement								
Wingwalls								
Foundation								
	Estimated Rehabilitated or Replacement Structure Dimensions ³]				
Total Deck	Length (m) Overall Str. Width (m) ructure replacement OR for rehabilitation under the given headings.		Total Structural Cost					

^{1 -} Indicate specific costs for structure replacement OR for rehabilitation under the given headings.

^{3 -} Estimated structure dimensions after completion of the proposed work - if it is expected to change.

Associated Work ⁴	Comments	Estimated Associated
		Work Cost
Approaches	Upgrade Barrier Connections	\$10,000.00
Detours		
Traffic Control		\$2,500.00
Utilities		
Other	Engineering and Contingency	\$30,000.00
	Mobilization and Demobilization; General; Insurance	\$30,000.00
	Access and Dewatering	\$25,000.00
	Total Associated Work Cost	\$97,500.00
	Total Construction Cost	\$97,500.00

Justification:

The structure barrier connections at the north approach are substandard and should be upgraded to meet the current standard. It is recommended that this work be completed in 1-5 years to improve safety.

^{2 -} Give a very brief description of the rehabilitation work required.

					MTO Site Number:		
Inventory Data:							
Structure Name	Waubuno Street B	Bridg <u>e</u>					
Main Highway #	Waubuno Street	On X or Under Structure	Service on Structure	Navig. V	Water Non-Na	avig. Water d. Othe	÷L
Location Description	Waubuno Street at	t Georgian Bay	Service under:	Navig. V	Water Non-Nav	avig. Water dOthe	÷L
Owner/Custodian	Town of Parry Sou	und					
MTO Region	Northeastern		Latitude	45° 20' 34" N	N Longitude	780° 02' 2	7" W
Regional Engineer			Heritage Designation:	X Not Cor Desig.	ns. Cons./Not Ap	.pp. List/NDesig. & List	Not Desig.
MTO Area	52 - Huntsville		Hwy Class:	Freeway	Arterial Colle	ector Lo	ocal X
Old County	44 - Parry Sound		Posted Speed	50	No. of Lanes	s 1	
Township	452 - McDougall		AADT	Unknow	vn % Truck	k Unknov	wn
Structure Type 1	Timber Girder						
Structure Material 1	Timber		Traffic Directional B	Bound	N-S		
Structure Type 2							
Structure Material 2			Inspection Frequen	ncy	2	(years)	
Total Deck Length	12.81	(m)	Inspection Year		2022		
Overall Str. Width	3.57	(m)	Inspection Duration	ภ	2	(hrs)	
Culvert Length	0	(m)					
Total Deck Area	45.7	(sq.m)					
Roadway Width	3.17	(m)	Min. Vertical Cleara	ance	2.96	(m)	
Skew Angle	0	(Degree)	Detour Distance		N/A	(km)	
No. of Spans	1		Fill on Structure		0	(m)	
Span Lengths	3.73, 4.18, 3.53					(m)	
For retaining wall:							
Total Wall Length		(m)	Max. Wall Height			(m)	
Total Wall Area		(sq.m)	Ave. Wall Height			(m)	
			Angle of Backfill			(Degree	;S)
Historical Data							
Year Built	1920		Year of superstruct	t. Constructed	N/A		
Last Reg. OSIM Inspe	<u> </u>		Year of Last Minor		N/A		
Last Enh. OSIM Inspe	ection		Year of Last Major		Unknown	1 10	() - n=\
Work History: (Date/d	locarintian)		Current Load Limit		/ n History: (Date/descript	/ 10	(tonnes)
Work History. (Dutora	<u>CSCription</u>			IIIVosuguno.	THISTORY. (Dutter weeds, 192)	<u>110117</u>	

					MTO Si	te Number:		
Field Inspection Infor	mation:							
Date of Inspection:	Oc	tober 21, 2020	Type of Inspec	tion:	X Reg. OS	SIM	Enh. OSIM	
Inspected By	Kie	eran Ferguson						
Others in Party:	No	ne						
Eng. Access Equipment:	No	ne						
Special Access Equipment	No	ine						
Weather	Ov	ercast/Light Rain	Temperature				10 °C	
Additional Investigat	ions Required	d:		None	Priority Normal	Urgent	Estimated Cost	
Material Condition Survey				INOTIC	INUITIAI	orgent		
Detailed Deck Condition	nn Survev			Х				
Non-destructive Delam		f Asnhalt-Covered D	leck.	X				
Concrete Substructure	,		CCIC.	X				
Detailed Coating Cond		у.		X		1		
Detailed Timber Invest	,			X	+	+		
Post-Tensioned Strand				X				
Underwater Investigation	i irivestiyatiori.							
9				X				
Fatigue Investigation				Х	+	1		
Seismic Investigation				X		<u> </u>		
Structure Evaluation:								
Monitoring				X				
Deformations, Settlem	ents and Movem	ents:		Х				
Crack Widths:				Χ				
RSS Horizontal moven				Χ				
RSS Vertical movemer				Χ				
RSS Local movements				Χ				
RSS Horizontal moven				X				
RSS Vertical movemer	nts within overall	structure		X				
RSS Lateral earth pres	ssure at the back	of facing elements		X				
Investigation Notes:					Total Cost			
Overall Structure Not	ies:							
Recommended Work on St	ructure [None X M	inor Rehab.	Major Reha	b. Re	place		
Timing of Recommended V	Vork F	Urgent >	1 to 5 years	6 to 10	vears	•		
-							11.00	
Overall Comments:		This bridge is in ge signage require rep			e elements su	ch as ballast v	wall timbers, and	
		o.gago . oqa o . o _r	oan or ropidoonic					
Date of Next inspection:		2022						
Overall Bridge Co								
% Poor in Deck % Poor in Beams % Poor in Substructure %			6 Poor in Barrie	er Br		Condition Index (BCI or BCIp)		
0%	0%	0%		0%		BCIp 100.00	BCI 70.58	
Overal Bridge Sut	fficiency				<u> </u>		, 5.50	
Traffic	Economic	Width	ր	Alignment		Bridge Suffici	iency Index (BSI)	
2	0	0		0				

Element Data:									
Element Group:		Approaches			Length:		6.0 m		
Element Name:		Wearing Surface			Width: 3.		3.61	3.6 m	
Location:		North and South of B	Ü		Height:				
Material:				Count: 2		2			
Element Type:				Total Quantity: 43.2		43.2	sq. m		
Environment:		Severe			Limited Inspection:				
Protection System	i:	None						·	Performance
Condition Data		Units	Excellent		Good	Fair		Poor*	Deficiencies
Condition Data:		sq.m			43.2				
Comments: Ligh	nt wear typica	al.							

Urgent: 1-5 Years: 6-10 Years: None: X Urgent: 1 Year: 2 Year:	Recommended Work:	Rehab: Replace:	Maintenance Needs:
	Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 1 - Approach Surface.jpg



Description of Photo: Photo 2 - Approach Surface.jpg

Element Photo:

Description of Photo:

Element Data:									
Element Group:		Accessories			Length:				
Element Name:	ement Name: Signs		Width:						
Location:	Location: North and South of Bridge		Height:						
Material:	al: Steel		Count:		10				
Element Type:			Total Quantity:						
Environment:		Severe			Limited Inspection:				
Protection System	1:	None							Performance
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies
		each			4	6			8 - Pedestrian / vehicular hazard
Comments: 10-to	onne load lir	mit signs are in good o	condition on sout	h an	proach but is	s missing on	nort	h approach Clea	arance sign is bent

Comments: 10-tonne load limit signs are in good condition on south approach but is missing on north approach. Clearance sign is bent and worn at corners. Still in good condition. Four OFSC trail signs are no longer present. One No Motorized Vehicles sign at each end of bridge. One object warning sign on south barrier.

Recommended Work:		Rehab: Replac	ce:	Maintenance Needs:	18 - Other
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent: 1 Y	'ear: X 2 Year:
				Reorient signs. Replationne load limit sign	ace 4 OFSC trail signs and 10-

Element Photo:



Description of Photo: Photo 3 - Signs.jpg



Description of Photo: Photo 4 - Signs.jpg

Element Photo:



Description of Photo: Photo 5 - Signs.jpg

Element Data:						
Element Group:	Accessories		Length:			
Element Name:	Utilities		Width:			
Location:	North and Sou	th of Bridge	Height:			
Material:	Steel		Count:	2		
Element Type:			Total Quantity	y: 2		
Environment:	Severe		Limited Inspe	ection:	Χ	
Protection System:						Performance
Condition Data:	Units	Excellent	Good	Fair	Poor*	Deficiencies
Condition Data:	each	1				
	spection due to cable g as intended.	height. Overhead cables	appear to be in o	excellent condit	ion, is free of dan	nage and is
Recommended Work:		Rehab: Replac	ce:	Maintenance	e Needs:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:



Description of Photo: Photo 6 - Overhead Hydro.jpg

Element Data:									
Element Group:		Decks			Length:		12.81 m		
Element Name:		Deck Top		Width: 3.57		3.57	m		
Location:	ocation:		Height: 0.0		0.03	8 m			
Material:	Wood		Count: 1		1				
Element Type:	Element Type: Wood Planks			Total Quantity: 4		45.73 sq. m			
Environment:		Moderate			Limited Inspection:				
Protection System	1:	None							Performance
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies
		sq.m			43.53	2.2			
Comments: Ligh	nt weathering	y typical. Localized me	edium checks thro	ouah	nout.				

Recommended Work:	Rehab:	Replace:	Maintenance Needs:	
Urgent: 1-5 Years:	6-10 Years:	None: X	Urgent: 1	Year: 2 Year:



Description of Photo: Photo 7 - Deck.jpg



Description of Photo: Photo 8 - Deck.jpg

Element Photo:



Description of Photo: Photo 9 - Deck.jpg

Element Data:									
Element Group:	ир: Sidewalks / Curbs		Length:		12.81 m				
Element Name:		Curb		Width: 0.2		0.2 r	2 m		
Location:				Height:					
Material:		Wood		Count: 2		2			
Element Type:	ė:			Total Quantity: 25		25.6	2 sq. m		
Environment:		Moderate			Limited Inspection:				
Protection System):								Performance
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies
		m			23.24 1.2			1.2	
Comments: 1.2m	n of 200x200	mm curb has been re	placed on the sou	uthwe	est section.	light weathe	rina	typical. I ocalized	light to severe

Comments: 1.2m of 200x200 mm curb has been replaced on the southwest section. Light weathering typical. Localized light to severe checks throughout.

Recommended Work:		Rehab:	Replace:		Maintenance Nee	eds:	
Urgent: 1-5 Y	'ears:	6-10 Years:		None: X	Urgent:	1 Year:	2 Year:

Element Photo:



Description of Photo: Photo 10 - Curb.jpg



Description of Photo: Photo 11 - Curb.jpg

Element Photo:



Description of Photo: Photo 12 - Curb.jpg

Element Data:										
Element Group:		Barriers		Length:		12.81 m				
Element Name:		Railing Systems			Width:					
Location:		East and West			Height: 1.		1.3	1.3 m		
Material:		Wood			Count:		2			
Element Type:		Wood rail > 83 mm thick			J		25.62 m			
Environment:		Moderate			Limited Inspection:					
Protection System):	None Performance						Performance		
Condition Data:		Units	Excellent		Good	Fair		Poor*	Deficiencies	
	m				25.62					
Comments: Light weathering typical. Previously noted damaged pickets have been replaced.										

Recommended Work:		Rehab:	Replace:		Maintenance Needs:	3 - Bridge Handrail Maintenance
Urgent:	1-5 Years:	6-10 Years:		None: X	Urgent: 1 Y	'ear: 2 Year: X
					Extend barrier along protection at embank	approaches to provide kments.



Description of Photo: Photo 13 - Barrier.jpg



Description of Photo: Photo 14 - Barrier.jpg

Element Photo:



Description of Photo: Photo 15 - Barrier.jpg

Element Data:									
Element Group:		Barriers		Length:	3		0.089 m		
Element Name:		Posts		Width:			0.089 m		
Location:				Height:	Height: 0.9).99 m		
Material:		Wood		Count: 1		18			
Element Type:				Total Quant	Total Quantity: 18		8		
Environment:		Moderate		Limited Insp	Limited Inspection:		·		
Protection System	:	None Perf					Performance		
Condition Date	Units	Excellent	Good	Fair		Poor*	Deficiencies		
Condition Data:		each		16	2			_	
Comments: Light weathering typical. 2 posts exhbiting medium splintering, likely from grooming operations. Previously noted damaged									

post has been replaced.

Recommended Work:	Rehab: Replace:	Maintenance Needs: 3 - Bridge Handrail Maintenance
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year: X
		Extend barrier along approaches to provide protection at embankments.

Element Photo:



Description of Photo: Photo 16 - Post.jpg



Description of Photo: Photo 17 - Post.jpg

Element Photo:



Description of Photo: Photo 18 - Post.jpg

Element Data:									
Element Group:		Beams		Length:		3.73 m, 4.18 m, 3.53 m			
Element Name:		Floor Beams		Width: 0.25		5 m			
Location:	Under Stringers			Height: 0.45		0.45	5 m		
Material:		Wood			Count:		18	18	
Element Type:		Rectangular Solid			Total Quantity:		36.04 sq. m		
Environment:		Severe			Limited Inspection:				
Protection System	1:	Creosote Treatment							Performance
Canditian Data		Units			Good	Fair		Poor*	Deficiencies
Condition Data: sq.m				36.04					
Comments: Ligh	Comments: Light weathering typical. Overhead light crushing on the east exterior beam, likely from vehicle impact. West side and east								

Comments: Light weathering typical. Overhead light crushing on the east exterior beam, likely from vehicle impact. West side and east sides show light crushing, likely from vehicle impact.

Recommended Work:		Rehab: Replac	e:	Maintenance Need:	S:	
Urgent:	1-5 Years:	6-10 Years:	None: X	Urgent:	1 Year:	2 Year:

Element Photo:



Description of Photo: Photo 19 - Beams.jpg



Description of Photo: Photo 20 - Beams.jpg

Element Photo:



Description of Photo: Photo 21 - Beams.jpg

Element Data:							
Element Group: Beams			Length:	[3	3.57 m		
Element Name: Stringers			Width:	Width: 0.2 m		1	
Location:	Location: Under deck			().2 m		
Material:	iterial: Wood			Count: 42			
Element Type:	Rectangular Solid		Total Quan	Total Quantity: 4			
Environment:	Severe		Limited Ins	Limited Inspection:			
Protection System	Creosote Treatmer	ıt				Performance	
Candition Data	Units	Excellent	Good	Fair	Poor*	Deficiencies	
Condition Data: each			22	20			
Comments: Only	ends of stringers were visible	or inspetion Light	to medium chec	ks and splits t	vnical.		

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:



Description of Photo: Photo 22 - Stringers.jpg



Description of Photo: Photo 23 - Stringers.jpg

Element Photo:



Description of Photo: Photo 24 - Stringers.jpg

Abutments	Length:				
Abutment Walls			3	3.36 m	
			Height: 0.68		
Wood			Count: 2		
Timber Wall		Total Quant	ity:	4.3 sq. m	
Severe		Limited Insp	ection:	Χ	
None					Performance
Units	Excellent	Good	Fair	Poor*	Deficiencies
sq.m		2.6	0.1	1.6	
:	Abutments Abutment Walls Wood Timber Wall Severe None Units	Abutments Abutment Walls Wood Timber Wall Severe None Units Excellent	Abutments Abutment Walls Width: Height: Wood Timber Wall Severe None Units Length: Width: Height: Count: Total Quant Excellent Good	Abutments Abutment Walls Width: Height: Wood Count: Timber Wall Severe Limited Inspection: None Units Excellent Good Fair	Abutments Abutment Walls Width: Height: 0.685 m Wood Count: Timber Wall Total Quantity: Severe Limited Inspection: None Units Excellent Good Fair Poor*

Comments: North: One transverse ballast wall timber has very severe rot. South: One transverse ballast wall timber has very severe rot at ends. One medium end split. 3 timber sills have been replaced.

Recommended Work:	Rehab: Replace: X	Maintenance Needs:
Urgent: 1-5 Years: X	6-10 Years: No	one: Urgent: 1 Year: 2 Year:
Replace ballast wall timbers both ends.		

Element Photo:



Description of Photo: Photo 25 - Abutment Wall.jpg



Description of Photo: Photo 26 - Abutment Wall.jpg

Element Photo:



Description of Photo: Photo 27 - Abutment Wall.jpg

Element Data:									
Element Group:		Piers		Length:	9		4.35 m		
Element Name:	Shafts/Columns/Pile Bents		Width:	Width: 0.3		3 m			
Location:			Height:	Height: 2.5		.52 m			
Material:		Wood		Count:	Count: 2				
Element Type:		Timber Piles with Cap	oping Beam	Total Quan	Total Quantity:		2 sq. m		
Environment:		Severe		Limited Ins	Limited Inspection:				
Protection System	1:	Creosote Treatment						Performance	
Candition Data	Units		Excellent	Good	Fair		Poor*	Deficiencies	
Condition Data:		sq.m	2.5	42.62	0.5				
O	ومرامرة والإمام ويتراك	a. Aa.l. a.a.l. Marrian Hualan	ممسطال بيمام مالمام	مقالمتم لمستاله	Caudhunada	مماليا!	أممم والمرمير مرموط مر	I dealed an indebtor on	

Comments: Light weathering typical. Newer timber pile cap with medium end splits. Southwest pile has been replaced. Light crushing on outer plies, likely from vehicle collisions.

Recommended Work:	Rehab: Replace:	Maintenance Needs:
Urgent: 1-5 Years:	6-10 Years: None: X	Urgent: 1 Year: 2 Year:

Element Photo:



Description of Photo: Photo 28 - Piers.jpg



Description of Photo: Photo 29 - Piers.jpg

Element Photo:



Description of Photo: Photo 30 - Piers.jpg

Element Data:										
Element Group:		Embankments	& Stre	ams	Length:	Length:				
Element Name:		Embankments			Width:					
Location:			l l		Height:					
Material:					Count:		4			
Element Type:					Total Quanti	9	4			
Environment:			Limited Inspection		ection:					
Protection System	:									Performance
O 1717 D - 1 -	Units			Excellent	Good	Fa	ir	Poo	r*	Deficiencies
Condition Data:		each			3	1				
		at the northwe on at all quadr		er and below noi	rth abutment timb	ers resul	ting in s	ome loss	of materia	al at edges of
Recommended W	ork:		Reh	ab: Repl	ace:	Mair	ntenance	Needs:	13 - Erosio	n Control at Bridges
Urgent: 1-5 Years: 6-10 Years: None: X			Urge	nt:	1 Y∈	ear: X	2 Year:			
						Insta	ıll slope	protectio	n at erode	d areas.



Description of Photo: Photo 31 - Embankment.jpg



Description of Photo: Photo 32 - Embankment.jpg

Element Photo:



Description of Photo: Photo 33 - Embankment.jpg

Element Data:									
Element Group:					Length:				
Element Name:	Slop	e Protection			Width:				
Location:		ŀ			Height:				
Material:					Count:		2		
Element Type:	Rock	ck Protection			Total Quanti	,	2		
Environment:			Limited Inspectio						
Protection System	1:								Performance
Condition Data:	Uni	ts	Excellent	Good		Fa	air	Poor*	Deficiencies
	ead	ch		1			1		
	th end generally i e fallen to the bas	•	n. North end has	Some	e medium los	s of mat	erial witl	h some rock prot	ection appearing to
Recommended W	ork:	Reh	nab: Repl	lace:		Mai	ntenance	e Needs: 13 - Ero	osion Control at Bridges
Urgent:	1-5 Yea	rs: 6-1	0 Years:		None: X	Urg	ent:	1 Year: X	2 Year:
						Inst face	-	protection on no	orth abutment interior



Description of Photo: Photo 34 - Slope Protection.jpg

Repair and Re	habilitation Required:		Prio	ority		Estimated Structural
Element ¹	Repair and Rehabilitation Required ²	6 to 10 Years	1 to 5 Years	Within 1 Year	Urgent	Cost
Barrier						
Abutment	Rehab. = Replace Ballast Walls		Х			\$15,000.00
Estimated Re	habilitated or Replacement Structure Dimensions ³					
Total Dec	k Length (m) Overall Str. Width (m)	Total Structural Cost \$15,0				

^{1 -} Indicate specific costs for structure replacement OR for rehabilitation under the given headings.

- 2 Give a very brief description of the rehabilitation work required.
- 3 Estimated structure dimensions after completion of the proposed work if it is expected to change.

Associated Work	Comments	Estimated Associated
		Work Cost
Approaches	Extend approach barriers	\$15,000.00
Detours	Closure Signage, Barricades, Etc	\$1,000.00
Traffic Control		
Utilities		
Other	Engineering & Contingency	\$25,000.00
	Mobilization / Demobilization; General; Insurance	\$15,000.00
	Total Associated Work Cost	\$56,000.00
	Total Construction Cost	\$71,000.00

Justification:

The deteriorated ballast wall timbers should be replaced as the rot will continue to progress affecting performance relating to retaining of backfill material.