Inventory Data:					
Structure Name	#30 East Red Bridg	ge, Elze	vir]
Main Hwy/Road#	On X	Unde	Crossing Navig. r Type Rail	. Water Non-Navig Road Ped.	. Water Other
Hwy/Road Name	Black River Road]
Structure Location	1.36 km N of North Ha	ıwkins Ba	ay Road]
Latitude	44.536558°N		Longitude 77.370)116°W]
Owner(s)	Municipality of Tweed		Heritage Not Cons. X Designation: Desig.	Cons./not App. Li	ist/not Desig.
MTO Region	Eastern		Road Class: Freeway	Arterial Collecto	
MTO District	Kingston		Posted Speed 80	No, of Lanes 1	
Old County			AADT	% Trucks	
Geographic Twp.			Inspection Route Sequence]
Structure Type	T-Beam		Interchange Number]
Total Deck Length	8.5	(m)	Interchange Structure Number]
Overall Str. Width	5.4	(m)	Min. Vertical Clearance		(m)
Total Deck Area	39.1	(sq.m)	Special Routes Transit	Truck School	Bicycle
Roadway Width	4.2	(m)	Detour Length Around Bridge	3	(km)
Skew Angle	0	(Deg.)	Direction of Structure	East-West]
No. of Spans	1		Fill on Structure	0	(m)
Span Lengths	7.6				(m)
Historical Data:					
Year Built	1930		Last Evaluation]
Last Biennial Inspect	2020-09-10		Current Load Limit	13	(tonnes)
Last BridgeMaster In	spection		Load Limit By-Law#	2020-67]
Last Condition Surve	у		By-Law Expiry Date]
Last Underwater Insp	ection				

Ontario Structure	Inspection	Manual -	Inspection	Form

Rehab History: (Date/description)	
Scheduled Improvements:	
seneduled improvements.	
5 1 15 1 1 1	
Regional Priority Number	Programmed Work Year
Regional Priority Number Nature of Program Work:	Programmed Work Year

MTO Site Number

011-0000

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

Field Inspection In	formation:
Date of Inspection:	May 17, 2022
Inspector:	Abdul Rahman Stott
Others in Party:	Cody Chambers
Equipment Used:	Camera and Hand Tools
Weather:	Sun and Cloud
Temperature:	13°C

Priority					
None	Normal	Urgent			
X					
X					
X					
X					
X					
X					
X					
	X				
X					
	X X X X X X X	None			

The structure is generally in poor condition on account of deterioration of major substructure and superstructure elements.

Recommended actions:

- Complete major rehabilitation (1-5 yrs.), consisting of:
 - o Abutment refacing and patch repairs
 - o Deck soffit patch repairs and deck top overlay or patch repairs
 - o T-beam patch repairs
 - o Barrier wall removal and replacement with guiderail system
 - o Rehabilitation and re-stabilization of retaining walls
- Implement approach guiderail (NOW)

BCI (2020): 27.83 BCI (2022): 24.27

Justification for significant BCI change: Deterioration of various structural elements

Next Detailed Visual Inspection: 2024

Suspected Performance Deficiencies 00 None 06 Bearing not uniformly loaded/unstable 12 Slippery surfaces Load carrying capacity 01 Jammed expansion joint Flooding/channel blockage 07 13 02 Excessive deformations (deflections & rotations) 08 Pedestrian/vehicular hazard 14 Undermining of foundation 03 Continuing settlement 09 Rough riding surface 15 Unstable embankments 04 Continuing movements 10 Surface ponding 16 Other 05 Seized bearings 11 Deck drainage Maintenance Needs Lift and Swing Bridge Maintenance 07 Repair of Structural Steel 13 Erosion Control at Bridges Repair of Bridge Concrete 14 Concrete Sealing 02 Bridge Cleaning 08 03 Bridge Handrail Maintenance 09 Repair of Bridge Timber 15 Rout and Seal Painting Steel Bridge Structures 10 Bailey bridges - Maintenance 16 Bridge Deck Drainage 05 Bridge Deck Joint Repair 11 Animal/Pest Control 17 Other Bridge Bearing Maintenance Bridge Surface Repair 06 12

	~.		
MTO	Site	Num	her

Element Data

Element Group:	Abutmonta		Longth		N/A				
Element Name:	Abutments Abutment Wa	lla.	Length	Width		6.2m			
Location:	Either end of s		Height		2.5m				
		CONTRACTOR OF THE PROPERTY OF			_				
Material:	Cast-in-place		Count		2)			
Element Type:	Conventional	Closed	Total Qua		31m ²	-			
Environment:	Benign		Limited I	nspection					
Protection System:	None				-		Perform.	Maint.	
Condition	Units	Exc.	Good Fair Poor*			Deficiencies	Needs		
Data:	m ²	0	0	9		22	00		
Comments: Light to severe scaling and honeycombing. Severe undermining of both abutments. Wide horizontal cracks. Wide full-height crack in east abutment. Recommended Work: Complete abutment None 6-10 years 1-5 years Y <1 year Urgent									
Recommended Work: Complete abutment None 6-10 years 1-5 years X <1 year Urgent refacing as part of major rehabilitation						gent			
Element Group:	Abutments		Length		1m				
Element Name:	Wingwalls		Width		N/A				
Location:	All four quadr		Height		2.1m				
Material:	Cast-in-place	Concrete	Count		4				
Element Type:			Total Qua		8.4m	2			
Environment:	Moderate		Limited I	Limited Inspection					
Protection System:	None						Perform.	Maint.	
Condition	Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs	
Data:	m ²	0	0	3.4		5	00		
Comments: Light to	severe scaling. Cra	acking at const	ruction joint	s, and wide	staine	d cracks.			
Recommended Worl	c: Complete patch	None	6-10	years	1-5 yea	rs X	year U	gent	
repairs to wingwalls		5,000,000,000		, П	,	Λ	, П		
Element Group:	Retaining Wal	ls	Length		4m				
Element Name:	Walls		Width						
Location:	All four quadr	ants	Height		1m				
Material:	Masonry		Count		4				
Element Type:	Stacked Stone	Gravity Wall	Total Qua	antity:	16m ²				
Environment:	Moderate	Gravity Wan	Limited I						
Protection System:	None		Emited	nspection			Perform.	Maint.	
Condition	Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs	
Data:	m ²	0	0	8		8	00	recus	
Comments: Outward			100		tainin	-	0.0	loss of	
backfill. Southwest				at above 10	, taming	, wans. South	cast wan exhibits	1035 01	
					1 5				
Recommended Work: Reinstate retaining None 6-10 years 1-5 years X <1 year Urgent walls as part of major rehabilitation									

MTO	Site	Num	her

Element Grou		Approaches		Longth	Length 6m					
Element Name		Wearing Surfa			Width		4.2m			
Location:	c.	Either end of d		Height		4.2m				
Material:			eck	Count		2				
		Gravel					0.4m ²			
Element Type Environment:	:	Carrana		Total Qua		_	0.4m²			
		Severe None		Limited In	ispection			Perform.	Maint.	
Protection Sys Condition	iem.	Units	Exc.	Good	Good Fair		Poor*	Deficiencies	Needs	
Data:		m ²	0	49.65 0			0.75	00	Needs	
2	rogion of	wearing surface			-	la :		00		
Comments. El	081011 01	wearing surface	over retaining	walls. Local	nzeu pomo	10	iormation.			
Recommended	d Work:		None	X 6-10	years	1-5	years <1	year Urge	ent 📗	
Element Grou		Barriers		Length		8	.5m			
Element Name	e:	Barriers/Parape		Width		-	.2m			
Location:		Along deck ed		Height		-	.2m			
Material:		Cast-in-place (Concrete	Count		2				
Element Type	:				Total Quantity:		44.22			
Environment:		Severe		Limited In	Limited Inspection]			
Protection Sys	stem:	None						Perform.	Maint.	
Condition		Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs	
Data:		m ²	0	28.2	8		8	00		
								wall and along base	e of walls.	
Localized spal	lling. Sev	vere erosion at ba	ise of north wa	ll. Moderate	to severe	4A	R. Northeast post	is partially scaled.		
Recommended	d Work:	Remove and repl	ace None	6-10	years	1-5	'years X <1	year Urge	ent	
barrier walls v	vith code	e-compliant rail	84					. П		
system.										
-										
Element Grou		Beams/MLEs		Langth		0	5			
Element Name		Girders		Width	Length		8.5m 0.3m			
Location:	.	Underside of d	ack	Height		+	0.55m			
Material:		Cast-in-place (D15.07	Count		4				
Element Type		T-Type	Concrete	Total Qua	ntity	-	7.6m ²			
Environment:	•	Severe		Limited In						
Protection Sys	tem:	None		Limited ii	ispection		_	Perform.	Maint.	
Condition	Terri.	Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs	
Data:		m ²	0	18	19.6		2	00	recus	
	edium to		-	100010000		d;		lized delamination,	enalling	
and wide horiz			ii caterior bear	ns. Typical	scaring and	ul	Sintegration, Loca	mzeu uciammation,	spannig,	
and wide norm	Loniai Ci	ucks.								
Recommende	d Work	Complete patch	None	6-10	vears	1-5	years X <1	year Urge	ent 🗀	
repair of t-bea			1 TONC		, 54115	. 5	X	Jan L		
	rehabilitation									

MTO Site Number	011-0000
VIIO SILC INUITION	011-0000

Element Group:	Decks		Length		8.5	m		
Element Name:	Deck Top - T	hin Slab	Width		5.4	m		
Location:	Spanning betwabutments	veen	Height					
Material:	Cast-in-place	Concrete	Count					
Element Type:			Total Qua	intity:	461	m ²		
Environment:	Severe		Limited In					
Protection System:	None		-				Perform.	Maint.
Condition	Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs
Data:	m ²	0	0	23.9		22	09	
Comments: Deck is Recommended Wor part of major rehabi	k: Resurface deck				ding,		year Urgo	ent
Element Group:	Deck		Length		8.5	m		
Element Name:	Soffit - Thick	Slab	Width		5.4	·m		
Location:	Underside of	leck	Height	Height				
Material:	Cast-in-place	Concrete	Count		1			
Element Type:			Total Qua	intity:	461	m ²		
Environment:	Benign		Limited I	Limited Inspection				
Protection System:	None						Perform.	Maint.
Condition	Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs
Data:	m ²	0	0	35		11	00	
Comments: Transve with exposed and co			ing. Effloresc	ence depo	sits a	t abutments. Lo	ocalized spalls and se	evere scaling
Recommended Wor repairs as part of ma		None	6-10	years	1-5 y	ears X	year Urgo	ent
Element Group:	Embankments	& Streams	Length		N/A	A		
Element Name:	Embankments		Width		N/A	A		
Location:	Side slopes of	abutments	Height		N/A	A		
Material:	•		Count		4			
Element Type:			Total Qua	intity:	4			
Environment:			Limited I					
Protection System:	None						Perform.	Maint.
Condition	Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs
Data:	Each	0	4	0		0	00	
Comments:		1		,	'			
Recommended Wor	k:	None	X 6-10	years	1-5 y	ears <	year Urgo	ent

N /	רו	$\Gamma \cap$	C:	+-	NI		nber
V	П			10	IN	uп	nner

Element Group:	Embankments	A SECURE OF PARTY PROPERTY OF THE PARTY PA	Length		-	/A				
Element Name:	Streams and W	aterways	Width		N/A					
Location:	Below structur	e	Height		N/A					
Material:			Count		N/	/A				
Element Type:			Total Qua	Total Quantity: All						
Environment:			Limited Inspection							
Protection System:	None			Perform. Mai						
Condition	Units	Exc.	Good	Fair	Poor*		Deficiencies	Needs		
Data:	All		All				00			
Comments: Structi	ire acts as overflow i									
Recommended Work: None			X 6-10 y	years	1-5	years <1	year Urge	ent		
Element Group:	Foundations		Length		N	/A				
Element Name:	Foundation (be	elow grad lvl)	Width		-	/A /A				
Location:	Buried substru		Height		_	/A				
Material:	Cast-in-place (Count N/A							
Element Type:	Cust-III-place	Sonereic		Total Quantity: N/A						
Environment:			Limited Ir		X	200000				
Protection System:	None		Limited II	ispection			Perform.	Maint.		
Condition	Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs		
Data:	N/A	EXC.	Good	ган	-	POOL	14	Needs		
550,000,000	ation is severely und	amainad at hat	h abutus auta				14			
Comments. Found	ation is severely und	eriffined at bot	n abutilients							
Recommended Wo	ork:	None	X 6-10 y	years	1-5	years <1	year Urge	ent		
Element Group:	Accessories		Length		N/A					
Element Name:	Signs		Width		N/A					
Location:	All four quadra	ants	Height		N/	/A				
Material:	Steel		Count		4					
Element Type:	Hazard Market Maximum Tor		Total Qua	ntity:	4					
Environment:	Severe		Limited Ir	spection						
Protection System:			1	1			Perform.	Maint.		
Condition	Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs		
Data:	All	0	4	0	1	0	00	2,000		
	shared with adjacent				roac	572				
	_				Toac					
Recommended Wo	ork:	None	X 6-10 y	years	1-5	years <1	year Urge	ent		

BRIDGE PHOTOGRAPHS

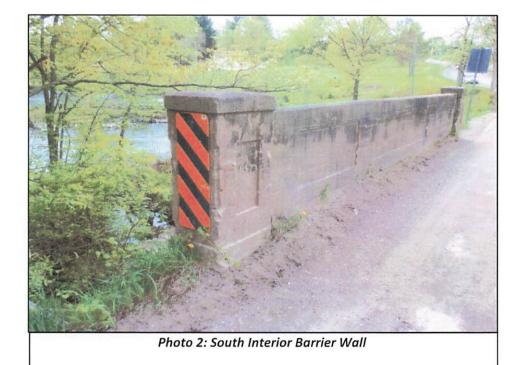
Owner: Municipality Of Tweed

Hwy/Road Name: Black River Road

Structure Name: East Red Bridge

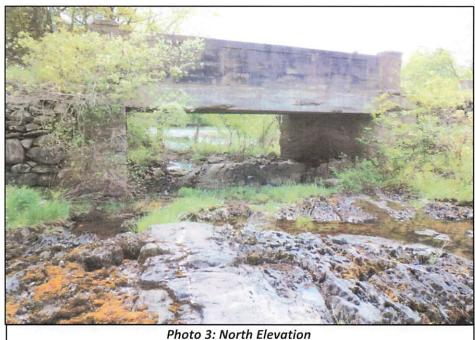


Photo 1: Pothole Formation on Deck Top Looking East



BRIDGE PHOTOGRAPHS

Owner: Municipality Of Tweed Hwy/Road Name: Black River Road Structure Name: East Red Bridge



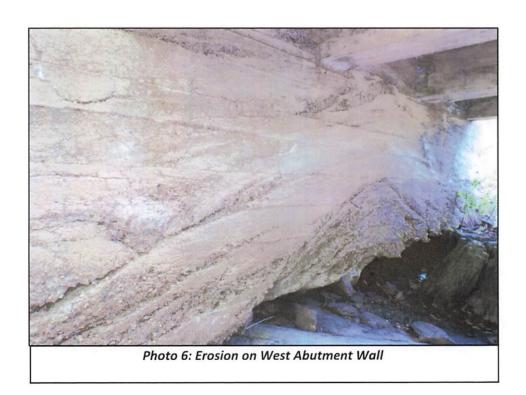




BRIDGE PHOTOGRAPHS

Owner: Municipality Of Tweed Hwy/Road Name: Black River Road Structure Name: East Red Bridge





BRIDGE PHOTOGRAPHS

Owner: Municipality Of Tweed Structure Name: East Red Bridge

Hwy/Road Name: Black River Road Location: 1.36 km north of North Hawkins Bay Road



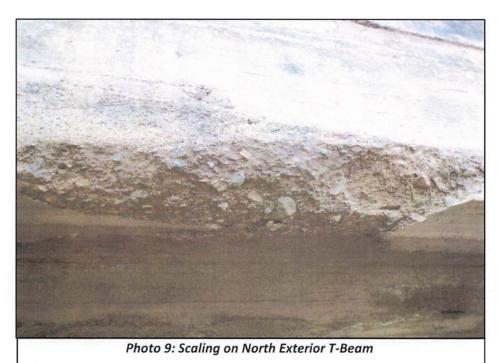
Photo 7: Spalling with Corrosion Staining in Soffit

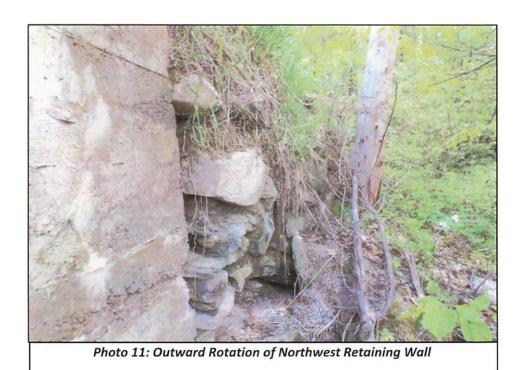


East Red Bridge

BRIDGE PHOTOGRAPHS

Owner: Municipality Of Tweed Hwy/Road Name: Black River Road Structure Name: East Red Bridge





Last Underwater Inspection

Inventory Data:				A PARTY					
Structure Name	#31 West F	ed Brid	ge Elze	evir					
Main Hwy/Road#	nsi westi	On X	Unde	Crossing Navig.			ater Road	Non-Nav Ped.	ig. Water Other
Hwy/Road Name	Black River I	Road							
Structure Location	1.38 km W o	f North Ha	wkins B	ay Road					
Latitude	44.536632°N			Longitude		77.37035	58°W		
Owner(s)	Municipality of	of Tweed		Heritage Designation:	Not Co	ons. X Desig./no	Cons./not ot List	App. 1 Desig. &	List/not Desig.
MTO Region	Eastern			Road Class:	Freewa		Arterial	Collect	
MTO District	Kingston			Posted Speed	80		No, of	Lanes	1
Old County				AADT			% Truc	eks	
Geographic Twp.				Inspection Rou	ite Sequen	nce			
Structure Type	T-beam			Interchange Nu	umber				
Total Deck Length	14.6		(m)	Interchange Structure Number					
Overall Str. Width	5.4		(m)	Min. Vertical Clearance			2		(m)
Total Deck Area	79		(sq.m)) Special Routes Transit Tr			Truck	School	Bicycle
Roadway Width	4.2		(m)	Detour Length Around Bridge 3			3		(km)
Skew Angle	0		(Deg.)	Direction of Str	ructure		E-W		
No. of Spans	1			Fill on Structur	re		0		(m)
Span Lengths	13.7								(m)
Historical Data:									
Year Built	1930)		Last Evaluat	ion				
Last Biennial Inspect	ion 2020	0-09-10		Current Load Limit			13		(tonnes)
Last BridgeMaster Inspection				Load Limit By-Law#			2020-68		
Last Condition Surve			By-Law Expiry Date						

Ontario	Structure	Inspection	Manual -	Inspection	Form
Omano	Structure	mspection	manual -	mapeemon	1 OIIII

Rehab History: (Date/descr	ription)		
Cahadulad Immunariam antai			
Scheduled Improvements:			
Regional Priority Number		Programmed Work Year	
		Programmed Work Year	

MTO Site Number 011-0000-

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

011-0000-

Field Inspection In	formation:
Date of Inspection:	May 17, 2022
Inspector:	Abdul Rahman Stott
Others in Party:	Cody Chambers
Equipment Used:	Camera and hand tools
Weather:	Sun and Cloud
Temperature:	13°C

Priority					
None	Normal	Urgent			
X					
X					
X					
X					
X					
X					
X					
	X				
X					
	X X X X X X	None			

The structure is generally in fair condition on account of deterioration of major substructure and superstructure elements.

Recommended actions:

- Complete major rehabilitation (1-5 yrs.), consisting of:
 - o Abutment refacing and patch repairs
 - o Deck soffit patch repairs and deck top overlay or patch repairs
 - o T-beam patch repairs
 - o Barrier wall removal and replacement with guiderail system
 - o Rehabilitation and re-stabilization of retaining walls
- Implement approach guiderail (NOW)

BCI (2020): 49.47 BCI (2022): 41.54

Next Detailed Visual Inspection:

Justification for significant BCI change: General deterioration of all structural elements

Susp	ected Performance Deficiencies				
00	None	06	Bearing not uniformly loaded/unstable	12	Slippery surfaces
01	Load carrying capacity	07	Jammed expansion joint	13	Flooding/channel blockage
02	Excessive deformations (deflections & rotations)	08	Pedestrian/vehicular hazard	14	Undermining of foundation
03	Continuing settlement	09	Rough riding surface	15	Unstable embankments
04	Continuing movements	10	Surface ponding	16	Other
05	Seized bearings	11	Deck drainage		
Mair	ntenance Needs				
01	Lift and Swing Bridge Maintenance	07	Repair of Structural Steel	13	Erosion Control at Bridges
02	Bridge Cleaning	08	Repair of Bridge Concrete	14	Concrete Sealing
03	Bridge Handrail Maintenance	09	Repair of Bridge Timber	15	Rout and Seal
04	Painting Steel Bridge Structures	10	Bailey bridges - Maintenance	16	Bridge Deck Drainage

 05
 Bridge Deck Joint Repair
 11
 Animal/Pest Control
 17
 Other

 06
 Bridge Bearing Maintenance
 12
 Bridge Surface Repair

Element Data

Element Group		Abutments		Length		-	N/A				
Element Name:		Abutment Wall		Width		-	6.2m				
Location:		Either end of st		Height		-	1m				
Material:		Cast-in-place C	oncrete	Count		-	2				
Element Type:				Total Qua		_	2.4m ²				
Environment:		Benign		Limited I	nspection]				
Protection Syst	em:	None						Perform.	Maint.		
Condition		Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs		
Data:		m ²	0	2.4	9		1	00			
Comments: Ver the walls. Medi		delaminati	on.	Separation at con	nstruction joints at th	ne edges of					
Recommended Work: None			X 6-10	years	1-5	years <1	year Urge	nt			
Elamont Graun		Abutmanta		Langth		1	m				
Element Group		Abutments		Length Width			m I/A				
Element Name:		Wingwalls				-					
Location:		All four quadra		Height		_	.1m				
Material:		Cast-in-place C	oncrete	Count		4					
Element Type:				Total Qua		_	.4m ²				
Environment:		Moderate		Limited I	nspection]	T			
Protection Syst	em:	None						Perform.	Maint.		
Condition		Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs		
Data:		m ²	0	2	2 3.1		3	00			
Comments: Wi retaining wall b		s and disintegrat	ion at constru	ction joints.	Full-width	sep	paratory cracking	at southwest abutme	ent due to		
Recommended repairs and rein			None	6-10	years	1-5	years X <1	year Urge	nt		
Element Group		Retaining Wall	S	Length		6	m				
Element Name:	: 25	Walls		Width							
Location:		All four quadra	ints	Height		1	.5m				
Material:		Masonry		Count		4					
Element Type:		Stacked Stone	Gravity Wall	Total Qua	antity:	3	6m ²				
Environment:		Moderate		Limited I	nspection						
Protection Syst	em:	None			16			Perform.	Maint.		
Condition		Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs		
Data:		m ²	0	0	9		27	02/03/04			
Comments: No All walls are ro			outheast walls	is failing w	ith washout	s o	n shoulders above	e and loss of backfill	material.		
Recommended walls as part of		Reinstate retainir chabilitation	ng None	6-10	years	1-5	years X <1	year Urge	nt		

MTO Site Number

011-0000-

Element Group: Approac		Approaches		Length	Length		6m			
Element Name	e:	Wearing Surfa	ce	Width		4.2m				
Location:		Either end of d		Height						
Material:		Gravel		Count		2				
Element Type	:			Total Qua	intity:	50.4m ²				
Environment:		Severe		Limited In	Limited Inspection					
Protection Sys	stem:	None						Perform.	Maint.	
Condition		Units	Exc.	Good	Fair	Poor*	k	Deficiencies	Needs	
Data:		m ²	0	48.4	0	2		00		
Comments: Pothole formation at both approaches										
Recommended Work: None			6-10	years	1-5 years	<1	year Urge	ent		
Element Grou	p:	Barriers		Length		14.6m				
Element Name		Barriers/Parap	et Walls	Width		0.2m				
Location:		Along deck ed		Height		1.2m				
Material:		Cast-in-place (Count		2				
Element Type:				Total Qua	ntity:	38m ²				
Environment:	Severe	Limited I								
Protection Sys	stem:	None				-	-	Perform.	Maint.	
Condition		Units	Exc.	Good	Fair	Poor*		Deficiencies	Needs	
Data:		m ²	0	22	11	5		00		
		thwest and north				ing and spalling	ng on a	ill posts. Wide crack	ing at	
Recommended with code-con		Remove and replailing system	lace None	6-10	years	1-5 years X	<1	year Urge	ent	
Element Grou	p:	Beams/MLEs		Length		14.6m				
Element Name		Girders		Width		0.48m				
Location:		Underside of d	leck	Height		0.89m				
Material:		Cast-in-place (Count		4				
Element Type		June 111 prince		Total Qua	antity:	132m ²				
Environment:		Benign		Limited I						
Protection Sys	stem:	None						Perform.	Maint.	
Condition		Units	Exc.	Good	Fair	Poor	ķ	Deficiencies	Needs	
Data:		m ²	0	64.5	57.5	10		00		
_ L15 NC 5287.63000 17	ocalized		light to severe				interi	or girder on south si	de.	
Localized spal	lls and de	elamination with	exposed and c	orroded reba	ar					
		Complete patch rehabilitation	None	6-10	years	1-5 years X	<1	year Urge	ent	

011-0000-

Element Grou	p:	Decks		Length		14.0	6m		
Element Name	e:	Deck Top - Th	nin Slab	Width		5.41	m		
Location:		Spanning betwabutments	reen	Height					
Material:		Cast-in-place (Concrete	Count		1			
Element Type	:	•		Total Qua	ntity:	79n	n^2		
Environment:		Severe		Limited Ir		×			
Protection Sys	tem:	None						Perform.	Maint.
Condition		Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs
Data:		m ²	0	0	63.8	\neg	15	09	02
Comments: M	edium to	severe scaling a	nd spalling. Si	gnificant acc	cumulation	of de	ebris		
Recommended Work: Clean bridge deck as part of regular maintenance. Complete patch repairs as part of major rehabilitation								ent	
F1				T .1		111			
Element Group		Decks	4 4	Length		14.0			
Element Name	e:	Soffit - Thin S		Width		5.41	m		
Location:		Underside of d		Height					
Material:		Cast-in-place (oncrete	Count		1	2		
Element Type	:	D :		Total Qua		79n	n-		
Environment:		Benign		Limited In	nspection			D C	M-:
Protection Sys	item:	None	E	Card	T-i-		D*	Perform. Deficiencies	Maint. Needs
Condition Data:		Units m ²	Exc.	Good 44.8	Fair 17		Poor*	00	Needs
8070.103.07.0000	1:1	17/7/7	0	17 0.597.0	mination. Localized spalls with exposed				F
cracking with	effloresc	ence and corrosi		oisture accur	mulation at	sout	h end with efflo	prescence	
		Complete patch	None	6-10	6-10 years 1-5 years X			year Urge	ent 🗌
repairs as part	of major	rehabilitation						_	
							-		
						1			
Element Grou		Embankments	& Streams	Length		N/A			
Element Name	e:	Embankments		Width		N/A			
Location:		Slide slopes of	abutments	Height		N/A	A		
Material:				Count		4			
Element Type	:			Total Qua		4			
Environment:				Limited In	nspection				
Protection Sys	stem:	None						Perform.	Maint.
Condition		Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs
Data:		Each	0	4	0		0	00	
Comments:									
Recommende	d Work:		None	X 6-10	years	1-5 ye	ears <1	year Urgo	ent

MTO	Site Number	011-0000-

Element Group:	Embankmen	ts & Streams	Length		N/	A			
Element Name:	Streams and	Streams and Waterways		Width		N/A			
Location:	Below Struct	ure	Height		N/	A			
Material:			Count		N/	A			
Element Type:			Total Qua	ntity:	Al	1			
Environment:			Limited In	nspection					
Protection System:	None						Perform.	Maint.	
Condition	Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs	
Data:	All		All				00		
Comments: Stream	flows north				·				
Recommended Wor	·k:	None	X 6-10	years	1-5 y	/ears <	year Urge	ent	
Element Group:	Foundations		Length		N/	A			
Element Name:		below grnd lvl)	Width		N/				
Location:	Buried subst		Height		N/				
Material:			Count		N/				
Element Type:			Total Qua	ntity.	N/				
Environment:			Limited In						
Protection System:	None		Limited ii	пэресноп			Perform.	Maint.	
Condition	Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs	
Data:	N/A	Date.	Seed	T un		1001	00	1.0000	
Comments: Bedroc		nosed							
Comments. Bedroe	x foundation is ex	posed							
Recommended Wor	·k:	None	X 6-10	years	1-5 y	/ears <	year Urge	ent	
					1				
Element Group:	Accessories		Length		N/	237			
Element Name:	Signs		Width		N/				
Location:	All four quad	irants	Height		N/	A			
Material:	Steel		Count		4				
Element Type:	Phillippen shifteness contraction	Hazard Marker and Maximum Tonnes Signs		Total Quantity:					
Environment:	Severe		Limited In	nspection					
Protection System:	None						Perform.	Maint.	
Condition	Units	Exc.	Good	Fair		Poor*	Deficiencies	Needs	
Data:	Each	0	4	0		0	00		
Comments: Max. to		end is bent		•	-				
Recommended Wor	·k:	None	X 6-10	years	1-5 y	/ears <	year Urge	ent	

Municipal Site Number: 31

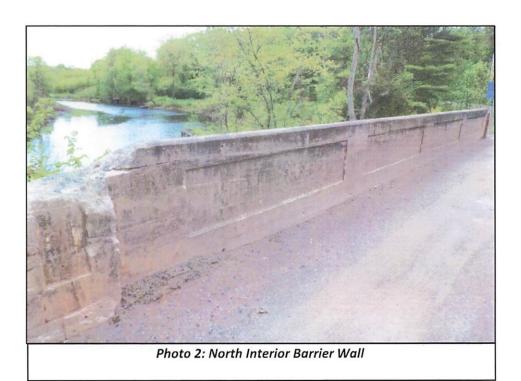
Ontario Structure Inspection Form

BRIDGE PHOTOGRAPHS

Owner: Municipality Of Tweed Hwy/Road Name: Black River Road

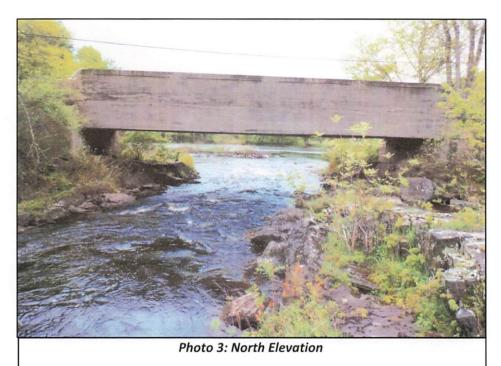
Structure Name: West Red Bridge

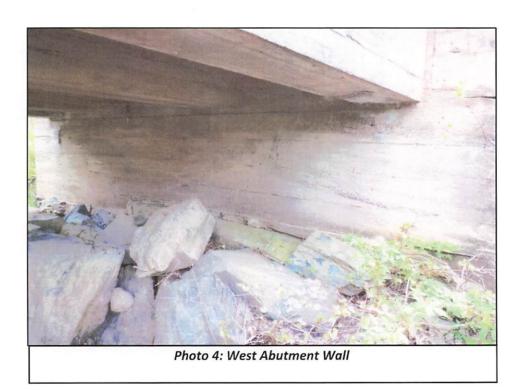




BRIDGE PHOTOGRAPHS

Owner: Municipality Of Tweed Hwy/Road Name: Black River Road Structure Name: West Red Bridge





BRIDGE PHOTOGRAPHS

Owner: Municipality Of Tweed Hwy/Road Name: Black River Road Structure Name: West Red Bridge

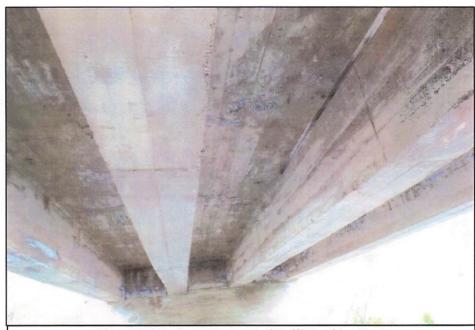


Photo 5: Interior T-Beams and Soffit Looking East

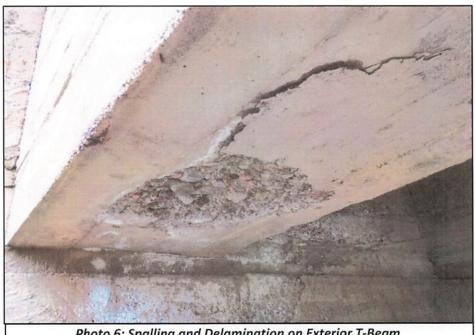


Photo 6: Spalling and Delamination on Exterior T-Beam

BRIDGE PHOTOGRAPHS

Owner: Municipality Of Tweed Hwy/Road Name: Black River Road Structure Name: West Red Bridge

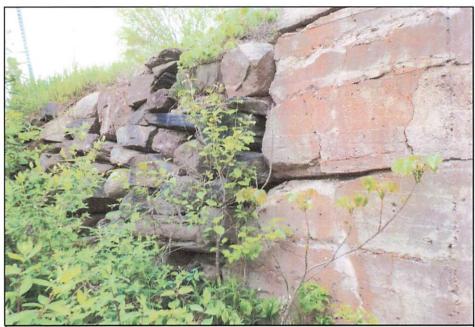
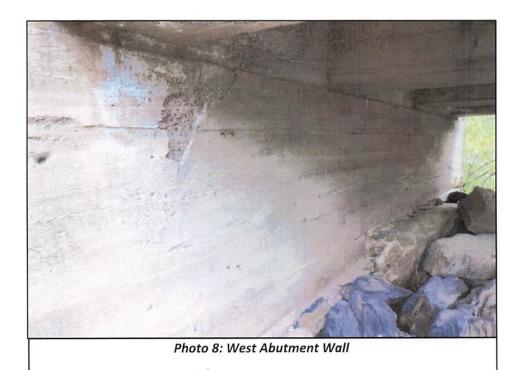


Photo 7: Bulging of Retaining Wall and Seperatory Cracking on Wingwall at Southwest Quadrant



West Red Bridge

BRIDGE PHOTOGRAPHS

Owner: Municipality Of Tweed

Hwy/Road Name: Black River Road

Structure Name: West Red Bridge

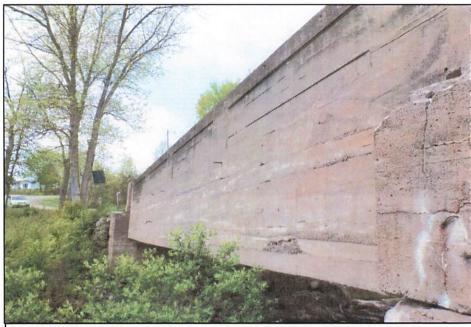


Photo 9: South Exterior Fascia and Barrier Wall Looking West



Photo 10: Spall on Northeast Barrier Wall

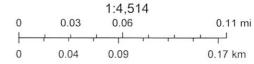
Red Bridges E & W Locations



2/8/2023, 3:47:25 PM

Civic Addresses

Property Information



Hastings County, Province of Ontario, Ontario MNR, Esri Canada, Esri, HERE, Garmin, INCREMENT P. USGS, EPA, USDA, AAFC, NRCan

East & West Red Bridges Detour

