

COMMUNICATION UPDATE

то:	Mayor and Members City Council
DATE:	February 1, 2024
SUBJECT:	Longwood Road Bridge (Bridge 282) Upcoming Reconstruction (ENG24001) (City Wide)
WARD(S) AFFECTED:	City Wide
SUBMITTED BY:	Jackie Kennedy Director, Engineering Services Public Works Department
SIGNATURE:	fri fandy

The Longwood Road Bridge, approximately 106 metres long, accommodates four lanes of traffic and one pedestrian sidewalk over Highway 403 in the City of Hamilton.

Since its original construction in 1955, the bridge has undergone numerous repairs and structural modifications, notably in 1969, 1998, 2013 and 2016. In 2020, Bridge 282 underwent significant structural evaluations due to observed deteriorations (detailed in Appendix "A" to Communication Update ENG24001). These evaluations indicated the necessity for minor rehabilitative measures, which were not limited to, but included repairs to expansion joints, concrete, asphalt, and waterproofing, as well as addressing issues with delaminated concrete that posed potential risks to traffic lanes Highway 403.

As a result, in 2022, the City carried out a minor rehabilitation of the bridge. This strategy was envisioned as a holding repair strategy aimed at maintaining the bridge's operational safety for the next 10 years. Therefore, it is anticipated that Longwood Road Bridge (Bridge 282) will require a full replacement by 2032, involving the replacement of both the Superstructure and Substructure components of the bridge.

Following the 2022 rehabilitation, the City conducted another inspection as required by the Ontario Structure Inspection Manual 2008 as outlined in Appendix "B" to Communication Update ENG24001, which re-evaluated the bridge's condition. This assessment confirmed the validity of the 10-year holding strategy, which involves replacing the bridge within the next decade.

SUBJECT: Longwood Road Bridge (Bridge 282) Upcoming Reconstruction (City Wide) - Page 2 of 2

Initially, the Longwood Road bridge was intended to serve as a future access point to the Light Rail Transit Operations, Maintenance and Storage Facility adjacent to the McMaster Innovation Park lands. However, with the recent update in the Light Rail Transit route, it has been determined that the Light Rail Transit will no longer utilize this route, opting instead to operate on Main Street and shifting the run-in track to Frid Street. Consequently, the City is now planning to execute a full replacement of the bridge in 2032.

In line with these revised plans, the City intends to engage a consultant in 2027 to conduct a preliminary design study. This study will encompass cost estimates and explore various options for bridge replacement. Upon completion, the finalized report will be presented to the Council as a Communication Update.

If you require further information, please contact Dipankar Sharma, Manager Infrastructure Renewal, Engineering Services at (905) 546-2424, Extension 3016.

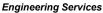
APPENDICES AND SCHEDULES ATTACHED

Appendix "A" to Communication Update ENG24001: BRIDGE 282_2020_OSIM Appendix "B" to Communication Update ENG24001: BRIDGE 282_2022_OS

APPENDIX A - BRIDGE 282_2020_OSIM

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City of Hamilton, Public Works





Struct. ID

2015 - EJ repairs.

282

City of Hamilton

Bridge Inspection Form

Inventory Data											
Structure Name	LONGW	OOD	RD S								
Structure Location	Over HW										
Road Number			On 2	<u> </u>	Under						
Road Name	Longwoo	od Roa								In The State of State	
Watercourse Name											
Crossing Type:	Roa	d 🛛	Rail 🗌	Water	Navigable wa	terway 🔲					
	Rive	r 🗍	Other	Creek [Pede	estrian 🗌	-		A		
Hwy Direction											
Owner Category										2000/10/01 13:41:51	
Maint. Dist.					Northing			43.258	3026		
Region	Central				Easting			-79.90	1932		
District	Central F	Region	l		National High	way Syst	em				
Ward					Highway Desi	ignation					
Township					Hwy Function	nal Classi	fica				
Structure Category	Bridge				AADT	22,5	,562 No. o		Lanes	4	
Main Struct. Subcatg.	Beam/Girder				·			Poste	d Speed	50	
Main Struct. Type	I-beams	/ Gird	ers		District Bridg	e Engine					
Deck Length (Total)			106.40 (m)		Road Authority						
Overall Structure Width			16.70 (m)		Bridge Plan #						
Deck Area (Total)			1,776.88 (Sq.m	1)	Min. Vertical Clearance				9.3	30 (m)	
Width (Traffic)			14.40 (m)		Detour Distar	псе			(km)		
Skew Angle					Speed on Det	our				(kph)	
Number of Spans			7		Fill Height					(m)	
Total Length / Spans (m	Total = 1	105.60	; (1) = 14.7; (2)	= 15.2	4; (3) = 15.24; (4	4) = 15.24	; (5)	= 15.24	; (6) = 15.24; (7)	= 14.7	
IP-(-dIP-(-											
Historical Data											
Year Built		19	969	Eva	luation Year						
Last Biennial Inspection	1	Octo	ber 01, 2020	Cur	rent Load Limit	t					
Last Bridge Master Insp	ection				rent BCI				67.47		
Last Condition Survey				Cur	rent BCU				41.50		
Last Underwater Inspec	tion			Current SI 12.81							
Rehab. History 2015 - Emergency bridge scal	ing.										



Struct. ID	282					
Schedule	d Improvements					
Regional F	Priority Number			Programmed	l Work Year	
Nature of	Programmed Work				,	
Appraisal	Indices			Com	ments	
Load Capa	acity Index					
Flood Inde	ex					
Barrier Inc	lex					
Curb Inde	x					
Seismic In	idex					
Fatigue In	dex					
Scour Inde	ex					
Structure	Index					
0	Performance Deficiencies					
oo oo	None	06	Bearings not uniformly loaded/ur	stable 12	2 Slippery surface	
01	Load carrying capacity		Jammed expansion joint	1;		
02	Excessive deformations (deflections a		Pedistrian/vehicular hazard	14	Undermining of foundation	
03	Continuing settlement	09	Rough riding surface	19	5 Unstable embankments	
04	Continuing movements		Surface ponding	10	6 Other	
05 Maintana	Seized bearings	11	Deck drainage			
	nce Needs Lift and Swing Bridge Maintenance	07	Structural Steel Repair	13	B Erosion Control at Bridges	
01 02	Bridge Cleaning		Concrete Repair	14	<u>-</u>	
03	Railing System Repair		Timber Repair	19	Rout and Seal	
04	Painting Steel Bridge Structures		Works for Modular Bridges	16		
05	Bridge Deck Joint Repair	11	Animal/Pest Control	11	= '	
06	Bridge Bearing Maintenance	12	Bridge Surface Repair	1	8 Other	



Struct. ID		282									
Field Inspection	n Informat	ion									
Inspection Date		October 01, 20	020		Wea	her	Clear /	Sunny	T	emperature	26
Inspector		Morrison Hers	hfield Ltd.		Firn	າ		Morri	son Hershf	ield	
Others in Party		MH - Scott Qu	ach (P.Eng), Tien Nguye	n, Neri	ıjan Sivar	nesan	<u> </u>			
Equipment Used		Digital camera				•					
Access Equipment	t Used	Ladder		Boat ∏			Bucket T	ruck ∏		Hip Waders [7
Trococo Equipinon	. 0004	Access		_	limbin	g Inspect		_	nder Bridge I	nspection Unit	-
Special Notes			· · - , 🗀			,	-	<u> </u>	laoi Bilago I	The section of the se	ш
Bridge is in P-F con end. Severe spall a									evere spall o	n South EJ @ e	east
Upcoming Insp	ections ar	nd Investigation	ons								
Inspection Type			Due Date		Pr	iority		Comment			
Recommended	Inspection	ns and Invest	igations								
Recommended Ins	spection Ty	pe		Due Date	None	Priority Normal		Estimated Cost (\$)	Comm	ents	
Material Condition Sur	vey:										
Detailed Deck Condi	tion Survey										
Non-destructive Dela	amination Sur	vey of Asphalt-Co	vered Deck								
Concrete Substructu	re Condition	Survey									
Detailed Coating Cor	ndition Surve	У									
Detailed Timber Inve	stigation										
Post-Tensioned Strai	nd Investigati	on									
Underwater Investigati	on										
Fatigue Investigation							<u> </u>				\longrightarrow
Seismic Investigation Structure Evaluation					旹						+
Monitoring											
Monitoring of Deform	nations, Settle	ements and Move	ments								
Monitoring Crack Wie	dths										
Overall Structu	re Recom	mendations:									
Work Category	None 🗆		Minor Reh	nab 🗌		Maj	jor Rehal		R	eplacement 🗌	
Timing	None 🗌	L	Irgent □		< 1 y	ear 🔲		1 - 5 yeaı	· 🛛	6 - 10 year	r 🔲
Est. Total Cost	\$ 3,055,08	0									
	wearing sui	tch repair on abutment, pier, soffit, approach slab, sidewalk/curbs and barrier wall. Repave approach and deck aring surface. Construct conc overlay on deck. Recoat end girder and diaphragms. Replace barrier railings and EJ stem, all within 1-5years									

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Struct. ID		282							
Element Da	ta								
Group	Abutme	ents					Length	N/A	(m)
Element	Abutm	ent walls					Width	16	.30 (m)
Span Num							Height	3	.00 (m)
Material	Cast-ir	n-place con	crete				Count	2	.00
Туре	Conve	ntional clos	ed				Quantity	98.0)00 (Sq.m)
Env't	Е	Benign 🗌	Mode	rate 🛚	Sev	ere 🗌	Not Inspected		
Location	North	& South				Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenan	ce Needs
Data	Sq.m	0.000	54.000	32.000	12.000				
							S delam @ central section on both abutments. (Ref Pho	of S abut.	:R = 5
Performance	Deficie	encies							
0-None									
Recommend	ed Wor	k		Catego	ory	Timing	Quantity Un	it Cost Tot	tal Cost (\$)
CO301 Reha	ab Conc	crete (sqm)		Major F	Rehab	1 - 5 year	12.000	650	7800 1



Struct. ID		282							
Element Da	ta								
Group	Abutme	ents					Length	N/A	(m)
Element	Ballast	walls					Width	16.	30 (m)
Span Num						_	Height	0.	90 (m)
Material	Cast-ir	n-place con	crete				Count	2.	00
Туре		N/A					Quantity	29.0	00 (Sq.m)
Env't	Е	Benign 🗌	Mode	rate 🛚	Sev	ere 🗌	Not Inspected		
Location	North	& South Ab	utments			Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenand	e Needs
Data	Sq.m	0.000	19.000	10.000	0.000				
Local wet sta girder from ea Performance 0-None	ast. (Ref	Photo: #62).		cracks on bo	th ballast w	alls. Wooden fo	orm on south ballast wall be	hind 3rd	2
Group	Abutme	ante					Length	N/A	(m)
Element	Bearing						Width	N/A	(m) (m)
Span Num	T	J					Height	N/A	(m)
Material		N/A					Count	16.	
	Rocke						Quantity	16.0	
Type Env't		ı Benign □	Mode	erate 🕅	Sev	ere 🗌	Not Inspected	Π 10.0	(Edoil)
Location		& South Ab		rato <u>K</u>		Description	Not inspected	. Ц	
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenand	e Needs
Data	Each	0.000	14.000	2.000	0.000				
Comments Light to medic of original beau Performance 0-None	arings wi	ith no defects				arings. Galvaniz	zed steel pedestals installed		₹= 3



Struct. ID		282								
Element Da	ta									
Group	Abutme	ents					Length		5.90	(m)
Element	Wingw	alls					Width	N/A		(m)
Span Num							Height		1.40	(m)
Material	Cast-ir	n-place con	crete				Count		4.00	
Туре	Reinfo	rced concre	ete				Quantity		33.000	(Sq.m)
Env't	Е	Benign 🗌	Mode	rate 🛚	Sev	ere 🗌	Not Inspected			
Location	All Qu	adrants				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainte	nance N	leeds
Data	Sq.m	0.000	29.000	4.000	0.000					
Comments									CR =	3
Local wet sta	ining and	d few narrow	to medium	stained verti	cal cracks or	n wingwalls. (R	ef Photos: #66-68).			
		_								
Performance	Deficie	ncies								
0-None										
										4
	^						l			, ,
Group	Approa						Length		6.00	
Element	Approa	ach slabs					Width		16.70	(m)
Span Num							Height			(m)
Material	Cast-ir	n-place con	crete				Count		2.00	<u> </u>
Туре	_	N/A		. 5			Quantity	$\frac{1}{2}$	200.000	(Sq.m)
Env't		Benign 🗌	Mode	rate 🛚	Seve	ere 🗌	Not Inspected			
Location		& South	_			Description		<u> </u>		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainte	nance N	leeds
Data	Sq.m	0.000	185.000	12.000	3.000					
Comments									CR =	4
						uantity assigne tom up defects	ed due to local area of sev s.	/ere pattern	1	
Performance	Deficie	ncies								
0-None										
Recommend	led Wor	k		Catego	ory	Timing	Quantity Unit Cost Total Cost (ost (\$)
CO301 Reh	ab Conc	rete (sqm)		Major F	-	1 - 5 year	15.000	650 9750		
				-						5

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Struct. ID		282								
Element Da	ta									
Group	Approa	ches					Length		6.00	(m)
Element	Curb/g	utters					Width	N/A		(m)
Span Num							Height		0.14	(m)
Material	Cast-ir	n-place cond	crete				Count		2.00	
Туре		N/A					Quantity		12.000	(m)
Env't	Е	Benign 🗌	Mode	rate 🗌	Seve	ere 🛚	Not Inspected			
Location	NW &	SW				Description	width is 0.4m			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainte	nance N	leeds
Data	m	0.000	9.000	2.000	1.000			<u> </u>		
Comments Local medium Performance 0-None			k on west cu	urb at end of	north appro	ach. (Ref Phot	o: #33 and 34).		CR =	4
Recommend	ed Wor	k		Catego	ory	Timing	Quantity Uni	t Cost	Total C	ost (\$)
CO302 Reha	ab Cond	rete (m)		Major F	-	1 - 5 year	1.000	390		390
										6
Group	Approa	iches					Length		6.00	(m)
Element	Sidewa	alk/Curb					Width		1.47	(m)
Span Num							Height		0.14	(m)
Material	Cast-ii	n-place cond	crete				Count		2.00	
Туре		N/A					Quantity		19.000	(Sq.m)
Env't	E	Benign 🗌	Mode	rate 🗌	Seve	ere 🛚	Not Inspected			
Location	NE &	SE				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainte	nance N	leeds
Data	Sq.m	0.000	13.000	4.000	2.000			<u> </u>		
Comments Local asphalt wide cracks o Performance 0-None	n top of	curb face at					n NE approach curb. Few me	∍dium to	CR =	4
Recommend	ed Wor	k		Catego	ory	Timing	Quantity Uni	t Cost	Total Co	ost (\$)
CO301 Reha	ab Conc	rete (sqm)		Major F	Rehab	1 - 5 year	2.000	650		300 7



Struct. ID		282								
Element Dat	ta									
Group	Approa	ches					Length		6.00	(m)
Element	Wearin	ig surface					Width		14.40	(m)
Span Num							Height			(m)
Material	Asphal	lt					Count		2.00	
Туре		N/A					Quantity	1	73.000	(Sq.m)
Env't	В	Benign 🗌	Mode	rate 🗌	Seve	ere 🛚	Not Inspected			
Location	North &	& South				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainte	nance N	leeds
Data	Sq.m	0.000	131.000	30.000	12.000					
Comments Severe patter longitudinal and Performance 0-None	ınd trans	verse cracks					int. Few medium to severe		CR =	<u> </u>
Recommend	led Worl	k		Catego	ory	Timing	Quantity Un	it Cost	Total C	ost (\$)
AS400 Repla	ace Aspl	halt w/s Appr	oaches (sq.)	_	=	1 - 5 year	173.000	98		,
							170.000	30	10	868
							173.000			808
Group	Barriers	3				. cyca.	Length	 T	120.50	8
Group Element		s /Parapet Wal	lls		Inter		T	N/A		8
•		_	lls		Inter		Length			(m)
Element	Barrier/	_			Inter		Length Width		120.50	(m) (m)
Element Span Num	Barrier/	/Parapet Wal	crete		Inter		Length Width Height	N/A	120.50	(m) (m)
Element Span Num Material	Barrier/ Cast-ir	/Parapet Wal	crete two rails	rate 🗌			Length Width Height Count	N/A	120.50 0.81 2.00	(m) (m) (m)
Element Span Num Material Type	Barrier/ Cast-ir	n-place condet Wall with Benign □	crete two rails	rate 🗌		ior	Length Width Height Count Quantity	N/A	120.50 0.81 2.00	(m) (m) (m)
Element Span Num Material Type Env't	Cast-ir Parape Barrier	n-place condet Wall with Benign □	crete two rails	rate 🗌		ior ere 🛚	Length Width Height Count Quantity Not Inspected	N/A 1 U	120.50 0.81 2.00	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location	Cast-ir Parape Barrier	/Parapet Wal	crete two rails Mode		Seve	ere 🛛	Length Width Height Count Quantity Not Inspected includes top of parapet	N/A 1 U	0.81 2.00 95.000	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Severe spall 8	Cast-ir Parape Barrier Parape Barrier Barrier Rarape Bast & Unit Sq.m	n-place condet Wall with Benign wwest Excellent 0.000 on east wall of W Wall beh	crete two rails Mode Good 159.000 in span 3. W	Fair 24.000	Poor 12.000	ere 🛭 Description V. Poor	Length Width Height Count Quantity Not Inspected includes top of parapet	N/A 1 wall Mainte	0.81 2.00 95.000	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Severe spall & W crack on to	Cast-ir Parape Barrier Parape Bast & Unit Sq.m & delam op face of	n-place condet Wall with Benign Excellent 0.000 on east wall of W Wall beh	crete two rails Mode Good 159.000 in span 3. W	Fair 24.000	Poor 12.000 vere delam @reas of L-M s	ere 🛭 Description V. Poor	Length Width Height Count Quantity Not Inspected includes top of parapet Perform. Deficiencies of E wall @ N approach. S dhotos: #31-38).	N/A 1 wall Mainte	0.81 2.00 95.000	8 (m) (m) (m) (Sq.m)



Struct. ID

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City of Hamilton Bridge Inspection Form

Element Dat	ta									
Group	Barriers	S					Length		120.50	(m)
Element	Barrier/	/Parapet Wal	lls		Exte	rior	Width	N/A		(m)
Span Num							Height		0.62	(m)
Material	Cast-ir	n-place cond	crete				Count		2.00	
Туре	Parape	et Wall with	two rails				Quantity	14	49.000	(Sq.m)
Env't	В	Benign 🗌	Mode	erate 🛚	Seve	ere 🗌	Not Inspected			
Location	East &	West				Description		·		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainter	nance N	eeds
Data	Sq.m	0.000	122.000	20.000	7.000					
Comments									CR =	4
Multiple N-M wall over Hwy				lls. Wide ver	tical cracks a	at bottom of ligi	ht pole. Few patched areas	on west		
Performance	Deficie	ncies								
0-None										
Recommend	ed Work	•		Catego	ory	Timing	Quantity Uni	it Cost	Total Co	ost (\$)
CO301 Reha	ab Conc	rete (sqm)		Major F	Rehab	1 - 5 year	7.000	650	4	550 10
Group	Barriers	5					Length		119.30	(m)
Element	Hand R	Railings					Width	N/A		(m)
Span Num							Height	N/A		(m)
Material	Steel						Count		4.00	
Туре	Double	e Railing					Quantity	4	77.000	(m)
Env't	В	Benign 🔲	Mode	rate 🗌	Seve	ere 🛚	Not Inspected			
Location	East &	West				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainter	nance N	eeds
Data	m	0.000	474.000	3.000	0.000					
Comments									CR =	4
Overall light s	urface c	orrosion and	local areas	of light to me	edium surfac	e corrosion. (F	Ref Photos: #31-34).			
Performance	Deficie	ncies								
0-None										
Recommend	ed Worl	ĸ		Catego	ory	Timing	Quantity Uni	it Cost	Total Co	ost (\$)
OT400 D	ace Stee	(m) le		Replace	ement	1 - 5 year	477.000	780	3720	

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Struct. ID		282							
Element Da	ta								
Group	Beams	/MLE's					Length	(r	m)
Element	Diaphra	agms			End		Width	(r	m)
Span Num							Height	(r	m)
Material	Steel						Count	14.00	
Туре	I type						Quantity	14.000 (S	Sq.m)
Env't	В	Benign 🗌	Mode	rate 🛚	Seve	ere 🗌	Not Inspected		
Location	North & South Abutments Description Light Fixed left Cond. Soir Dear V. Boor								
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance Nee	eds
Data	Sq.m	0.000	2.000	7.000	5.000			<u> </u>	
Comments								CR = 4	4
Medium to se coat diaphrag				of diaphrag	ms at north a	and south abut	ments. (Ref Photo: #26). Cle	an and	
Coat diaprirag	Jili elius	as part or rei	nabilitation.						
Performance	Deficie	ncies							
0-None									
Recommend	led Worl	k		Catego	-	Timing	•	t Cost Total Cos	st (\$)
ST302 Reha	ab Steel	(m)		Major F	Rehab	1 - 5 year	14.000	325 455	50 12
Group	Beams	/MLE's					Length	(r	m)
Element	Diaphra	agms			Inter	mediate	Width	(r	m)
Span Num							Height	(r	m)
Material	Steel						Count	55.00	
Туре	I type						Quantity	55.000 (\$	Sq.m)
Env't	В	Benign 🛚	Mode	erate 🗌	Seve	ere 🗌	Not Inspected		
Location	All Spa	ans				Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance Nee	eds
Data	Sq.m	0.000	55.000	0.000	0.000				
Comments								CR = 2	2
Local areas o	of light fla	king of patin	a. (Ref Phot	tos: #12-18).					
Performance	Deficie	ncies							
0-None									

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Struct. ID		282							
Element Da	ta								
Group	Beams	/MLE's					Length	4.00	(m)
Element	Girders	3			End		Width	0.30	(m)
Span Num						_	Height	0.56	(m)
Material	Steel						Count	8.00	
Туре	I type						Quantity	65.000	(Sq.m)
Env't	Е	Benign 🗌	Mode	rate 🛚	Seve	ere 🗌	Not Inspected		
Location	North	& South Ab	utment			Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	Needs
Data	Sq.m	0.000	40.000	15.000	10.000				
Comments								CR =	: 5
Medium to se	vere cor	rosion with d	lelamination	of patina at	north and so	outh abutment	ends. Local perforation @ so	outh end	
of west exteri	or giraer	. (Ref Photo:	#25). Clean	and coat gir	der ends as	part of rehabili	itation.		
Performance	Deficie	ncies							
0-None									
Recommend	led Worl	k		Catego	ory	Timing	Quantity Uni	t Cost Total C	ost (\$)
ST301 Reha	ab Steel	(sqm)		Major F	Rehab	1 - 5 year	65.000	2600 169	9000
Group	Beams	/MLE's					Length	102.40	(m)
Element	Girders	3			Mido	lle	Width	0.30	(m)
Span Num						-	Height	0.56	(m)
Material	Steel						Count	8.00	
Туре	I type						Quantity	1,655.000	(Sq.m)
Env't	Е	Benign 🛛	Mode	rate 🗌	Seve	ere 🗌	Not Inspected		
Location	All Spa	ans				Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	Needs
Data	Sq.m	0.000	1,638.000	17.000	0.000				
Comments								CR =	: 2
						. /D (D) (#40 40)		
Local areas o	of light pa	atina flaking.	Girders are	reinforced at	t abutment e	nas. (Ret Phot	0: #12-18).		
			Girders are	reinforced at	t abutment e	nds. (Ret Phot	0: #12-18).		
Performance			Girders are	reinforced at	abutment e	nas. (Ret Pnot	0. #12-18).		
			Girders are	reinforced at	i abutment e	nds. (Ket Phot	0. #1 <i>2</i> -18).		
Performance			Girders are	reinforced at	i abutment e	nds. (Ket Phot	0. #12-18).		



Struct. ID		282							
Element Da	ta								
Group	Coating	gs					Length	N/A	(m)
Element	Railing	Systems / H	and Railings	;			Width	N/A	(m)
Span Num							Height	N/A	(m)
Material		N/A					Count	N/A	
Туре							Quantity	135.000	(m)
Env't	В	Benign 🗌	Mode	rate 🗌	Seve	ere 🛚	Not Inspected		
Location	West 8	& East Sides	s			Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	m	0.000	0.000	0.000	135.000			<u> </u>	
Comments								CR =	4
Coating on th	e handra	ail has broker	n down. (Ref	f Photos: #3	1-34).				
	D : 61-11-	. •							
Performance	Deficie	ncies							
0-None									
									40
									16
							T	I	
Group	Decks						Length	106.40	(m)
Element	Decks Deck to	pp					Width	106.40 16.70	(m) (m)
Element Span Num	Deck to						Width Height	16.70	(m)
Element	Deck to	n-place cond					Width Height Count	16.70 N/A	(m) (m) (m)
Element Span Num Material Type	Deck to	n-place cond	crete on su	• •			Width Height Count Quantity	16.70	(m) (m)
Element Span Num Material Type Env't	Deck to	n-place cond	crete on su	pports rate ⊠	Seve	ere 🗌	Width Height Count	16.70 N/A	(m) (m) (m)
Element Span Num Material Type	Cast-ir Cast-ir	n-place cond n-place cond Benign 🗍	crete on su Mode	rate ⊠		Description	Width Height Count Quantity Not Inspected	16.70 N/A 1,792.000	(m) (m) (m) (Sq.m)
Span Num Material Type Env't Location Condition	Cast-ir Cast-ir B All Unit	n-place cond n-place cond Benign Excellent	Mode Good	rate 🛚	Poor		Width Height Count Quantity	16.70 N/A	(m) (m) (m) (Sq.m)
Span Num Material Type Env't Location	Cast-ir Cast-ir	n-place cond n-place cond Benign 🗍	crete on su Mode	rate 🛚		Description	Width Height Count Quantity Not Inspected	16.70 N/A 1,792.000	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition	Cast-ir Cast-ir B All Unit	n-place cond n-place cond Benign Excellent	Mode Good	rate 🛚	Poor	Description	Width Height Count Quantity Not Inspected	16.70 N/A 1,792.000	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Rating is base	Cast-ir Cast-ir B All Unit Sq.m	n-place condition of	Mode Good 1,577.00(Fair 150.000 wearing sur	Poor 65.000	Description V. Poor	Width Height Count Quantity Not Inspected Perform. Deficiencies	16.70 N/A 1,792.000 Maintenance N	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Rating is base	Cast-ir Cast-ir B All Unit Sq.m	n-place condition of et to several a	Good 1,577.00(f the asphalt areas of depi	Fair 150.000 wearing sur	Poor 65.000 face.	Description V. Poor cracks on dec	Width Height Count Quantity Not Inspected	16.70 N/A 1,792.000 Maintenance N	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Rating is base Poor qty assig	Cast-ir Cast-ir B All Unit Sq.m ed on the gned due pression	Excellent 0.000 e condition of e to several an areas found	Good 1,577.00(f the asphalt areas of depi	Fair 150.000 wearing sur	Poor 65.000 face.	Description V. Poor cracks on dec	Width Height Count Quantity Not Inspected Perform. Deficiencies	16.70 N/A 1,792.000 Maintenance N	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Rating is base Poor qty assig crack and de	Cast-ir Cast-ir B All Unit Sq.m ed on the gned due pression	Excellent 0.000 e condition of e to several an areas found	Good 1,577.00(f the asphalt areas of depi	Fair 150.000 wearing sur	Poor 65.000 face.	Description V. Poor cracks on dec	Width Height Count Quantity Not Inspected Perform. Deficiencies	16.70 N/A 1,792.000 Maintenance N	(m) (m) (m) (Sq.m)
Element Span Num Material Type Env't Location Condition Data Comments Rating is base Poor qty assig crack and de	Cast-ir Cast-ir B All Unit Sq.m ed on the gned due epression	Excellent 0.000 e condition of e to several an areas found	Good 1,577.00(f the asphalt areas of depi	Fair 150.000 wearing sur	Poor 65.000 face. vere pattern rea on soffit.	Description V. Poor cracks on dec	Width Height Count Quantity Not Inspected Perform. Deficiencies	16.70 N/A 1,792.000 Maintenance N	(m) (m) (m) (Sq.m)



Struct. ID		282							
Element Da	ta								
Group	Decks						Length	N/A	(m)
Element	Draina	ge					Width	N/A	(m)
Span Num						-	Height	N/A	(m)
Material							Count	N/A	
Туре							Quantity	2.000	(Each)
Env't	В	Benign 🗌	Mode	rate 🗌	Seve	ere 🗌	Not Inspected		
Location						Description	New Added - 3/5/2021 6	3:23:11 PM	
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance	Needs
Data	Each	0.000	2.000	0.000	0.000				
Comments								CR	= 2
Minor accumu	ulation o	f debris note	d in deck dra	ains. (Ref Ph	oto: #27).				
Daufaumanaa	Deficie								
Performance 0-None	Deficie	ncies							
0-NONE									
									18
Croun	Decks						Longth	<u> </u>	0 ()
Group Element		Thin Slab			End		Length Width	4.00	
	Oomit -	Tilli Olab			Liid			14.40 N/A	(m) (m)
Span Num	Coat in	nlass son	oroto				Height Count	N/A	(111)
Material	Cast-II	n-place con N/A	crete				Quantity	58.000) (Sq.m)
Type Env't	F	Benign ☐	Mode	rate ⊠	Sevi	ere 🗌	Not Inspected	30.000	(04.111)
Location		& South Ab		Tate M	000	Description	Not inspected	<u> </u>	
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance	Needs
Data	Sq.m	0.000	34.000	16.000	8.000	V. 1 CO1			
Comments	- 4	0.000		101000				CR	- 5
Light delam 8							orth end soffit. Local wet ar gms (Ref Photos: #19, 21ar	eas with	_
Performance	Deficie	ncies							
0-None									
Recommend	ed Worl	k		Catego	ory	Timing	Quantity Un	it Cost Total	Cost (\$)
CO304 Reh	ab deck	soffit		Major F	-	1 - 5 year	8.000	650	5200
									19



Struct. ID		282							
Element Dat	ta								
Group	Decks						Length	102.40	0 (m)
Element	Soffit -	Thin Slab			Exte	rior	Width	1.12	<u>?</u> (m)
Span Num							Height	N/A	(m)
Material	Cast-in	n-place cond	crete				Count	N/A	
Туре		N/A					Quantity	115.000) (Sq.m)
Env't	В	Benign 🗌	Mode	erate 🏻	Seve	ere 🗌	Not Inspected		
Location	West 8	& East Ext S	offit & Fas	cia		Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance	Needs
Data	Sq.m	0.000	83.000	24.000	8.000			<u> </u>	
Comments									= 5
Light delam a	nd spalls	on E fascia	near south	end of deck.	Multiple sev	ere spalls on E	E fascia in Span 2 and 3. Mu Ref Photos:19&20).	ıltiple	
Severe spans	UII VV IG	sola III Opaii	Z. I GW IT-WI	Stairied Grad	NS OII DOLLI C	Klenor sonne (1.61 F 110103. 19020j.		
Performance	Deficie	ncies							
0-None									
Recommend	ed Work	(Catego	orv	Timing	Quantity Unit	t Cost Total	Cost (\$)
·				_	-	•	•		
CO304 Reha	ab deck	soffit		Major F	-	1 - 5 year	8.000	650	5200
CO304 Reha	ab deck	soffit		_	-	•	•		5200
Group	Decks			_	-	•	•		5200 20
	Decks	soffit Thin Slab		_	-	1 - 5 year	8.000	650	5200 ₂₀
Group	Decks			_	Rehab	1 - 5 year	8.000 Length	650	5200 ₂₀
Group Element	Decks Soffit -		prete	_	Rehab	1 - 5 year	8.000 Length Width	650 102.44 13.30	5200 ₂₀ 0 (m)) (m)
Group Element Span Num	Decks Soffit -	Thin Slab	orete	_	Rehab	1 - 5 year	8.000 Length Width Height	102.44 13.30 N/A	5200 ₂₀ 0 (m)) (m) (m)
Group Element Span Num Material	Decks Soffit - Cast-in	Thin Slab n-place cond		_	Rehab	1 - 5 year	8.000 Length Width Height Count	102.40 13.30 N/A N/A	5200 ₂₀ 0 (m) 0 (m)
Group Element Span Num Material Type	Decks Soffit - Cast-in	Thin Slab n-place cond N/A Benign ⊠		Major F	Rehab	1 - 5 year	8.000 Length Width Height Count Quantity Not Inspected	102.40 13.30 N/A N/A	5200 ₂₀ 0 (m) 0 (m)
Group Element Span Num Material Type Env't Location Condition	Decks Soffit - Cast-in B All Spa Unit	Thin Slab n-place cond N/A Benign ⊠	Mode Good	Major F	Inter Seve	1 - 5 year	8.000 Length Width Height Count Quantity	102.40 13.30 N/A N/A	5200 20 0 (m) 0 (m) (m) 0 (Sq.m)
Group Element Span Num Material Type Env't Location	Decks Soffit - Cast-in B All Spa	Thin Slab n-place cond N/A Benign ⊠ ans.	Mode	Major F	Inter	ior ere Description	8.000 Length Width Height Count Quantity Not Inspected	102.44 13.30 N/A N/A 1,362.000	5200 20 0 (m) 0 (m) (m)
Group Element Span Num Material Type Env't Location Condition	Decks Soffit - Cast-in B All Spa Unit	Thin Slab n-place cond N/A Benign ans. Excellent	Mode Good	Major F	Inter Seve	ior ere Description	8.000 Length Width Height Count Quantity Not Inspected	102.40 13.30 N/A N/A 1,362.000 Maintenance	5200 20 0 (m) 0 (m) (m)
Group Element Span Num Material Type Env't Location Condition Data Comments	Decks Soffit - Cast-in B All Spa Unit Sq.m	Thin Slab n-place cond N/A Benign ans. Excellent 0.000	Mode Good 1,152.000	Major F rate Fair 150.000	Seven Poor 60.000 ce stained cr	1 - 5 year ior Description V. Poor	8.000 Length Width Height Count Quantity Not Inspected	102.4 13.30 N/A N/A 1,362.000 Maintenance	5200 20 0 (m) 0 (m) (m) (Sq.m)
Group Element Span Num Material Type Env't Location Condition Data Comments Multiple local	Decks Soffit - Cast-in B All Spa Unit Sq.m wet area ght spall	Thin Slab n-place cond N/A denign ans. Excellent 0.000 as and narrow on soffit in s	Mode Good 1,152.000	Major F rate Fair 150.000	Seven Poor 60.000 ce stained cr	1 - 5 year ior Description V. Poor	8.000 Length Width Height Count Quantity Not Inspected Perform. Deficiencies	102.4 13.30 N/A N/A 1,362.000 Maintenance	5200 20 0 (m) 0 (m) (m) (Sq.m)
Group Element Span Num Material Type Env't Location Condition Data Comments Multiple local watermain. Lie	Decks Soffit - Cast-in B All Spa Unit Sq.m wet area ght spall	Thin Slab n-place cond N/A denign ans. Excellent 0.000 as and narrow on soffit in s	Mode Good 1,152.000	Major F rate Fair 150.000	Seven Poor 60.000 ce stained cr	1 - 5 year ior Description V. Poor	8.000 Length Width Height Count Quantity Not Inspected Perform. Deficiencies	102.4 13.30 N/A N/A 1,362.000 Maintenance	5200 20 0 (m) 0 (m) (m) (Sq.m)
Group Element Span Num Material Type Env't Location Condition Data Comments Multiple local watermain. Lig	Decks Soffit - Cast-in B All Spa Unit Sq.m wet area ght spall	Thin Slab n-place cond N/A Benign ans. Excellent 0.000 as and narrow on soffit in s ncies	Mode Good 1,152.000	Major F rate Fair 150.000	Poor 60.000 ce stained cr.18, 23 and 2	1 - 5 year ior Description V. Poor	8.000 Length Width Height Count Quantity Not Inspected Perform. Deficiencies	102.44 13.30 N/A N/A 1,362.000 Maintenance	5200 20 0 (m) 0 (m) (m) (Sq.m)



Struct. ID		282							
Element Dat	ta								
Group	Decks						Length	106.4	0 (m)
Element	Wearin	g surface					Width	14.40) (m)
Span Num							Height		(m)
Material	Asphal	ıt					Count	N/A	
Туре		N/A					Quantity	1,532.000) (Sq.m)
Env't	В	Benign 🗌	Mode	erate 🗌	Seve	ere 🛚	Not Inspected		
Location	All Spa	ans.				Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance	Needs
Data	Sq.m	0.000	947.000	455.000	130.000				
Multiple M-S t	trans/long	gitudinal crad					aled trans and longitudinal cr n SBLs. (Ref Photos: #3-9).		= 4
9-Rough Ridi									
Recommend			. ,	Catego	-	Timing	•		Cost (\$)
AS401 Repla	ace Aspr	nalt w/s Appr	oaches (sq.	m) Major F	Rehab	1 - 5 year	1532.000	156 23	38992 22
Group		kments & Str	reams				Length	N/A	(m)
Element	Embanl	kments					Width	N/A	(m)
Span Num	<u> </u>						Height	N/A	(m)
Material		N/A					Count	N/A	
Туре	<u> </u>	N/A					Quantity	6.000) (Each)
Env't	В	Benign 🗌	Mode	erate 🗌	Seve	ere 🗌	Not Inspected		
Location	All Qua	adrants & in	ı front of Ab	out	_	Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance	Needs
Data	Each	0.000	6.000	0.000	0.000			<u> </u>	
Comments No scour note	∍d on sid	e slopes. Ri _l	p-rap along ∈	southeast wi	ngwall. (Ref	Photos: #66 ar	nd 67).	CR	= 2
Performance 0-None	Deficier	ncies							23



Struct. ID		282								
Element Da	ta									
Group	Emban	kments & St	reams				Length	N/A		(m)
Element	Slope	orotection					Width	N/A		(m)
Span Num							Height	N/A		(m)
Material		N/A					Count	N/A		
Туре	Other						Quantity		6.000	(Each)
Env't	Е	Benign 🗌	Mode	rate 🗌	Seve	ere 🗌	Not Inspected			
Location	All Qu	adrants & Ir	n front of Al	out		Description		-		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainter	nance N	leeds
Data	Each	0.000	6.000	0.000	0.000					
Comments									CR =	2
Rock protecti	on at no	rth abutment	. No defects	noted. Cond	rete slope p	aving noted at	south abutment, few mediu	m cracks		
in concrete. (l	Ref Phot	os: #69 to 70	0).							
Performance	Deficie	ncies								
0-None										
										0.4
										24
Group	Founda	ations					Length	N/A		(m)
Element	Founda	ation (below	ground level)			Width	N/A		(m)
Span Num							Height	N/A		(m)
Material							Count	N/A		
Туре							Quantity		1.000	(N/A)
Env't	Е	Benign 🗌	Mode	rate 🗌	Seve	ere 🗌	Not Inspected			
Location	Abutm	ents & Pier	s			Description		_		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainter	nance N	leeds
Data	N/A	0.000	1.000	0.000	0.000					
Comments									CR =	2
No observabl	e perfori	mance defec	ts noted.							
		_								
Performance	Deficie	ncies								
0-None										
										25
										

2021/4/28 12:49 **RptInspection**

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Struct. ID		282								
Element Dat	ta									
Group	Joints						Length		16.70	(m)
Element	Armorii	ng/retaining o	devices				Width	N/A		(m)
Span Num							Height	N/A		(m)
Material	Steel						Count		4.00	
Туре		N/A					Quantity	6	67.000	(m)
Env't	В	Benign 🗌	Mode	rate 🗌	Seve	ere 🛚	Not Inspected			
Location	North 6	& South				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	nance Ne	eeds
Data	m	0.000	31.000	32.000	4.000					
Comments				_					CR =	5
Severe dents #28-30).	and abr	asion damag	e from plow	s on original	steel armori	ng angles at bo	oth expansion joint. (Ref Pho	oto:		
Performance	Deficie	ncies								
0-None										
Recommend	ed Worl	K		Catego	orv	Timing	Quantity Uni	t Cost	Total Co	st (\$)
				•	•	5	Qualitity Offi			σε (ψ)
JA401 Repla	ace defa	ult amouring	(m.)	Replac	-	1 - 5 year	•	1300	871	100
JA401 Repla	ace defa	ult amouring	(m.)	_	-	_	•			100
JA401 Repla	Joints	ult amouring	(m.)	_	-	_	•		871	
	Joints	ult amouring		_	-	_	67.000		871 14.40	26
Group	Joints			_	-	_	67.000		14.40 0.20	100 ₂₆
Group Element	Joints			_	-	_	67.000 Length Width	1300	14.40 0.20	(m) (m)
Group Element Span Num	Joints Concre			_	-	_	67.000 Length Width Height	1300 N/A	14.40 0.20 4.00	(m) (m)
Group Element Span Num Material	Joints Concre Other	ete end dams	3	_	ement	_	Length Width Height Count	1300 N/A	14.40 0.20 4.00	(m) (m) (m)
Group Element Span Num Material Type	Joints Concre Other	ete end dams N/A	3	Replac	ement	1 - 5 year	Length Width Height Count Quantity	1300 N/A	14.40 0.20 4.00	(m) (m) (m)
Group Element Span Num Material Type Env't	Joints Concre Other	ete end dams N/A Benign □	3	Replac	ement	1 - 5 year	Length Width Height Count Quantity Not Inspected	1300 N/A 1	14.40 0.20 4.00	(m) (m) (m) (m)
Group Element Span Num Material Type Env't Location	Joints Concre Other B North	N/A Benign & South	Mode	Replac	Seve	1 - 5 year ere 🗵 Description	Length Width Height Count Quantity Not Inspected Wabocrete	1300 N/A 1	14.40 0.20 4.00 12.000	(m) (m) (m) (m)
Group Element Span Num Material Type Env't Location Condition	Joints Concre Other B North 6 Unit	N/A Benign & South Excellent	Mode	Replace	Seve	1 - 5 year ere 🗵 Description	Length Width Height Count Quantity Not Inspected Wabocrete	1300 N/A 1	14.40 0.20 4.00 12.000	(m) (m) (Sq.m)
Group Element Span Num Material Type Env't Location Condition Data Comments	Joints Concre Other North Unit Sq.m	N/A Benign & South Excellent 0.000	Mode Good 6.000	Replace Fair 4.000	Seven Poor 2.000	1 - 5 year ere 🛛 Description V. Poor	Length Width Height Count Quantity Not Inspected Wabocrete	N/A 1 Mainten	14.40 0.20 4.00 12.000	(m) (m) (Sq.m)
Group Element Span Num Material Type Env't Location Condition Data Comments Severely spal	Joints Concre Other North Unit Sq.m	N/A Benign & South Excellent 0.000 fragmented chenever a vel	Mode Good 6.000	Replace Fair 4.000	Seven Poor 2.000	1 - 5 year ere 🛛 Description V. Poor	Length Width Height Count Quantity Not Inspected Wabocrete Perform. Deficiencies	N/A 1 Mainten	14.40 0.20 4.00 12.000	(m) (m) (Sq.m)
Group Element Span Num Material Type Env't Location Condition Data Comments Severely spal the spalled se	Joints Concre Other North of Unit Sq.m	N/A Benign & South Excellent 0.000 fragmented chenever a velocies	Mode Good 6.000	Replace Fair 4.000	Seven Poor 2.000	1 - 5 year ere 🛛 Description V. Poor	Length Width Height Count Quantity Not Inspected Wabocrete Perform. Deficiencies	N/A 1 Mainten	14.40 0.20 4.00 12.000	(m) (m) (Sq.m)
Group Element Span Num Material Type Env't Location Condition Data Comments Severely spal the spalled se	Joints Concre Other North Unit Sq.m	N/A Benign & South Excellent 0.000 fragmented chenever a velocies ace	Mode Good 6.000	Replace Fair 4.000	Seven Poor 2.000 t end of sout btos: #28-30)	1 - 5 year ere 🛛 Description V. Poor	Length Width Height Count Quantity Not Inspected Wabocrete Perform. Deficiencies	N/A Mainten noted at	14.40 0.20 4.00 12.000	(m) (m) (m) (Sq.m)



Struct. ID		282							
Element Da	ta								
Group	Joints						Length	16.70) (m)
Element	Seals/s	sealants					Width	N/A	(m)
Span Num						-	Height	N/A	(m)
Material		N/A					Count	2.00	
Туре	Compr	ression seal					Quantity	2.000	(m)
Env't	Е	Benign 🗌	Mode	rate 🗌	Seve	ere 🛚	Not Inspected		
Location	North	& South				Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance I	Needs
Data	m	0.000	0.000	0.000	2.000			<u> </u>	
Comments								CR =	= 5
Loose expans be leaking. (R			north expar	nsion joint. W	Vet stains an	d deterioration	on abutment indicates sea	l could	
. .		,							
Performance	Deficie	encies							
0-None Recommend	ad War	k		Catago	>m/	Timing	Overetific II :	. O	2 ((4)
JS400 Repla			al (m.)	Catego Replac	-	1 - 5 year	-		Cost (\$) 2600
30400 Nepia	ace Dele			Теріас	ement	year	2.000	1300	28
0	D:						I	I NI/A	()
Group Element	Piers Bearing	ae					Length	N/A	(m)
	Dearing	ys 					Width	N/A N/A	(m)
Span Num		N1/A					Height		(m)
Material		N/A					Count	36.00	
Type		meric pad	Mada	rate □	South	 ere 🏻	Quantity	36.000	(Each)
Env't Location	At Pie	Benign 🛚	Mode	таке 🔲	Seve	Description	Not Inspected	<u>l</u>	
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance I	Needs
Data	Each	0.000	20.000	16.000	0.000	V. F001	T CHOITI. Deliciences	Walliteriance	NCCU3
Comments	Lucii	0.000	20.000	10.000	0.000			CR =	- 2
	n mediui	m cracks in d	ırout nads. I	ocal wide cr	acks in grout	t nad at Pier Pa	4. (Ref Photos: #54-56).	OIX -	
i on narrow a	, modiai	in ordono in g	rout pado. L	ocal mas of	aono in grou	i pad at i ioi i	(r.e. r metee. #e r ee).		
Performance	Deficie	ncies							
0-None									



Struct. ID		282						
Element Dat	ta							
Group	Piers						Length	2.00 (m)
Element	Caps						Width	11.00 (m)
Span Num							Height	0.80 (m)
Material	Cast-ir	n-place cond	crete				Count	6.00
Туре		N/A					Quantity	389.000 (Sq.m)
Env't	В	Benign 🛚	Mode	rate 🗌	Seve	ere 🗌	Not Inspected	
Location	at Pier	s				Description		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance Needs
Data	Sq.m	0.000	365.000	20.000	4.000			
Comments								CR = 5
Multiple areas	of medi	ium to severe	e spalls cond	crete on pier	cap at pier 2	2. Local mediu	m delamination on north face	e of pier
	Je LVV CC	Woot oolaiiii	13. (11011110	.03. π τ Σ το _j				
Performance	Deficie	ncies						
0-None								
Recommend	ed Work	•		Catego	ry	Timing	Quantity Unit	t Cost Total Cost (\$)
,						_	,	
CO301 Reha	ab Conc	rete (sqm)		Major F	Rehab	1 - 5 year	4.000	650 2600
CO301 Reh	ab Conc	rete (sqm)		Major F	Rehab	1 - 5 year	,	650 2600
CO301 Reha	ab Conc	rete (sqm)		Major F	Rehab	1 - 5 year	,	650 2600
	Piers	rete (sqm)	Bents	Major F	Rehab	1 - 5 year	4.000	650 2600 30
Group	Piers	,	Bents	Major F	Rehab	1 - 5 year	4.000 Length	2.00 (m)
Group Element	Piers Shafts/	,		Major F	Rehab	1 - 5 year	4.000 Length Width	2.00 (m) 1.20 (m)
Group Element Span Num	Piers Shafts/ Cast-ir	columns/Pile	crete	,		1 - 5 year	4.000 Length Width Height	2.00 (m) 1.20 (m) 8.00 (m)
Group Element Span Num Material	Piers Shafts/	columns/Pile	crete columns wi	,	m	1 - 5 year	4.000 Length Width Height Count	2.00 (m) 1.20 (m) 8.00 (m) 24.00
Group Element Span Num Material Type	Piers Shafts/	columns/Pile n-place cond rectangular	crete columns wi	ith cap bear	m		4.000 Length Width Height Count Quantity	2.00 (m) 1.20 (m) 8.00 (m) 24.00
Group Element Span Num Material Type Env't Location Condition	Piers Shafts/	columns/Pile n-place cond rectangular	crete columns wi	ith cap bear	m	ere 🗌	4.000 Length Width Height Count Quantity	2.00 (m) 1.20 (m) 8.00 (m) 24.00
Group Element Span Num Material Type Env't Location	Piers Shafts/	columns/Pilen-place condectangular ☐	crete columns wi Mode	ith cap bear	m Seve	ere Description	4.000 Length Width Height Count Quantity Not Inspected	2.00 (m) 1.20 (m) 8.00 (m) 24.00 1,229.000 (Sq.m)
Group Element Span Num Material Type Env't Location Condition	Piers Shafts/ Cast-ir Conc r B	columns/Pilen-place condectangular Benign	crete columns wi Mode Good	ith cap bear rate ⊠ Fair	m Seve	ere Description	4.000 Length Width Height Count Quantity Not Inspected	2.00 (m) 1.20 (m) 8.00 (m) 24.00 1,229.000 (Sq.m)
Group Element Span Num Material Type Env't Location Condition Data Comments	Piers Shafts/ Cast-ir Conc r B Unit Sq.m	n-place condectangular Benign Excellent 0.000	crete columns wi Mode Good 880.000	ith cap bear rate \(\big \) Fair 300.000	m Seve Poor 49.000	ere ☐ Description V. Poor 3. Multiple are	4.000 Length Width Height Count Quantity Not Inspected	2.00 (m) 1.20 (m) 8.00 (m) 24.00 1,229.000 (Sq.m) Maintenance Needs CR = 5
Group Element Span Num Material Type Env't Location Condition Data Comments Extensive nar	Piers Shafts/ Cast-ir Conc r B Unit Sq.m	columns/Pile n-place condectangular Benign Excellent 0.000 ned shrinkag	crete columns wi Mode Good 880.000	ith cap bear rate \(\big \) Fair 300.000	m Seve Poor 49.000	ere ☐ Description V. Poor 3. Multiple are	Length Width Height Count Quantity Not Inspected Perform. Deficiencies	2.00 (m) 1.20 (m) 8.00 (m) 24.00 1,229.000 (Sq.m) Maintenance Needs CR = 5
Group Element Span Num Material Type Env't Location Condition Data Comments Extensive nar delamination	Piers Shafts/ Cast-ir Conc r B Unit Sq.m	columns/Pile n-place condectangular Benign Excellent 0.000 ned shrinkag	crete columns wi Mode Good 880.000	ith cap bear rate \(\big \) Fair 300.000	m Seve Poor 49.000	ere ☐ Description V. Poor 3. Multiple are	Length Width Height Count Quantity Not Inspected Perform. Deficiencies	2.00 (m) 1.20 (m) 8.00 (m) 24.00 1,229.000 (Sq.m) Maintenance Needs CR = 5
Group Element Span Num Material Type Env't Location Condition Data Comments Extensive nar delamination Performance	Piers Shafts/ Cast-ir Conc r B Unit Sq.m	columns/Pile n-place condectangular Benign Excellent 0.000 ned shrinkag lling on Pier o	crete columns wi Mode Good 880.000	ith cap bear rate \(\big \) Fair 300.000	Poor 49.000 s at Pier 1 to	ere ☐ Description V. Poor 3. Multiple are	Length Width Height Count Quantity Not Inspected Perform. Deficiencies	2.00 (m) 1.20 (m) 8.00 (m) 24.00 1,229.000 (Sq.m) Maintenance Needs CR = 5

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Struct. ID		282							
Element Dat	ta								
							1		
Group	Sidewa	lks/curbs					Length	106.4	10 (m)
Element	Curbs						Width	0.4	0 (m)
Span Num							Height	0.1	4 (m)
Material	Cast-in	n-place cond	crete				Count	1.0	0
Туре		N/A					Quantity	57.00	0 (Sq.m)
Env't	В	Benign 🗌	Mode	rate 🗌	Seve	ere 🛚	Not Inspected		
Location	West s	ide				Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance	Needs
Data	Sq.m	0.000	51.000	4.000	2.000				
Comments								 CR	= 5
Few light spal #34).	lls and d	elamination (on west curb	in span 3, 5	and 7. Loca	al areas of light	t scaling along curb face. (Re	ef Photo:	
,									
Performance	Deficie	ncies							
0-None									
Recommend				Catego	ory	Timing	Quantity Unit	t Cost Tota	Cost (\$)
CO301 Reha	oh Con-								
COOOT Ren	au Conc.	rete (sqm)		Major F	Rehab	1 - 5 year	2.000	650	1300 32
CCCOT ITEM	an Conc	rete (sqm)		Major F	Rehab	1 - 5 year	2.000	650	
Group		rete (sqm)		Major F	Rehab	1 - 5 year	2.000 Length	650	32
	Sidewa		ans	Major F	Rehab	1 - 5 year		1	32 40 (m)
Group	Sidewa	ılks/curbs	ans	Major F	Rehab	1 - 5 year	Length	106.4	32 40 (m) 7 (m)
Group Element	Sidewa Sidewa	ılks/curbs		Major F	Rehab	1 - 5 year	Length Width	106.4	32 40 (m) 7 (m) 4 (m)
Group Element Span Num	Sidewa Sidewa	llks/curbs alk and media		Major F	Rehab	1 - 5 year	Length Width Height	106.4 1.4 0.1	32 40 (m) 7 (m) 4 (m)
Group Element Span Num Material	Sidewa Sidewa Cast-in	ilks/curbs alk and media n-place cond	crete	Major F		1 - 5 year	Length Width Height Count	106.4 1.4 0.1 1.0	32 40 (m) 7 (m) 4 (m)
Group Element Span Num Material Type	Sidewa Sidewa Cast-in	alks/curbs alk and media n-place cond N/A Benign □	crete				Length Width Height Count Quantity	106.4 1.4 0.1 1.0	32 40 (m) 7 (m) 4 (m)
Group Element Span Num Material Type Env't Location Condition	Sidewa Sidewa Cast-in B East si	alks/curbs alk and media n-place cond N/A Benign □	crete			ere 🛚	Length Width Height Count Quantity	106.4 1.4 0.1 1.0	32 40 (m) 7 (m) 4 (m) 0 0 (Sq.m)
Group Element Span Num Material Type Env't Location	Sidewa Sidewa Cast-in B East si	alks/curbs alk and media n-place cond N/A Benign □	crete Mode	erate 🗌	Seve	ere 🛚	Length Width Height Count Quantity Not Inspected	106.4 1.4 0.1 1.0 171.00	32 40 (m) 7 (m) 4 (m) 0 0 (Sq.m)
Group Element Span Num Material Type Env't Location Condition	Sidewa Sidewa Cast-in B East si Unit	n-place cond N/A Benign Dide	crete Mode Good	rate □ Fair	Seve	ere 🛚	Length Width Height Count Quantity Not Inspected	106.4 1.4 0.1 1.0 171.00	32 40 (m) 7 (m) 4 (m) 0 0 (Sq.m)
Group Element Span Num Material Type Env't Location Condition Data Comments Very severe s	Sidewa Sidewa Cast-in B East si Unit Sq.m	alks/curbs alk and media n-place cond N/A Benign ide Excellent 0.000	Good 121.000 end of deck.	Fair 40.000	Seve Poor 10.000 udinal crack	ere 🛚 Description V. Poor	Length Width Height Count Quantity Not Inspected Perform. Deficiencies	106.4 1.4 0.1 1.0 171.00	32 40 (m) 7 (m) 4 (m) 0 0 (Sq.m)
Group Element Span Num Material Type Env't Location Condition Data Comments Very severe sasphalt patch	Sidewa Sidewa Cast-in B East si Unit Sq.m	n-place cond N/A Senign Excellent 0.000	Good 121.000 end of deck.	Fair 40.000	Seve Poor 10.000 udinal crack	Description V. Poor	Length Width Height Count Quantity Not Inspected Perform. Deficiencies	106.4 1.4 0.1 1.0 171.00	32 40 (m) 7 (m) 4 (m) 0 0 (Sq.m)
Group Element Span Num Material Type Env't Location Condition Data Comments Very severe sasphalt patch Performance	Sidewa Sidewa Cast-in B East si Unit Sq.m	n-place cond N/A Senign Excellent 0.000	Good 121.000 end of deck.	Fair 40.000	Seve Poor 10.000 udinal crack	Description V. Poor	Length Width Height Count Quantity Not Inspected Perform. Deficiencies	106.4 1.4 0.1 1.0 171.00	32 40 (m) 7 (m) 4 (m) 0 0 (Sq.m)
Group Element Span Num Material Type Env't Location Condition Data Comments Very severe sasphalt patch	Sidewa Sidewa Sidewa Cast-in B East si Unit Sq.m	alks/curbs alk and media n-place cond N/A Benign Excellent 0.000 elam near N 6 6. Few N-M I	Good 121.000 end of deck.	Fair 40.000 Wide longitt cracks at spa	Poor 10.000 udinal crack an 3. (Ref Ph	Description V. Poor near south end otos: #31,32,3	Length Width Height Count Quantity Not Inspected Perform. Deficiencies	106.4 0.1 1.0 171.00 Maintenance	32 40 (m) 7 (m) 4 (m) 0 0 (Sq.m) e Needs
Group Element Span Num Material Type Env't Location Condition Data Comments Very severe sasphalt patch Performance 0-None	Sidewa Sidewa Sidewa Cast-in B East si Unit Sq.m	alks/curbs alk and media n-place cond N/A Benign ide Excellent 0.000 elam near N 6 6. Few N-M I	Good 121.000 end of deck.	Fair 40.000	Poor 10.000 udinal crack an 3. (Ref Pr	Description V. Poor	Length Width Height Count Quantity Not Inspected Perform. Deficiencies	106.4 0.1 1.0 171.00 Maintenance	32 40 (m) 7 (m) 4 (m) 0 0 (Sq.m)



				Time			Fatimata
<u>Element</u>	Repair / Rehabilitation	None	Urgent	< 1 year	1 - 5 year	6 - 10 year	Estimated (S)
Decks / Wearing surface	AS401 Replace Asphalt w/s Approaches (sq.m)				Х		238,99
Decks / Deck top / Cast-in-place concrete on supports	CO303B NC Overlay, w/p, and pave				Х		1,863,68
Piers / Shafts/columns/Pile Bents / Conc rectangular columns with	CO301 Rehab Concrete (sqm)				Х		31,85
Abutments / Abutment walls / Conventional closed	CO301 Rehab Concrete (sqm)				Х		7,80
Approaches / Curb/gutters	CO302 Rehab Concrete (m)				Х		39
Approaches / Sidewalk/Curb	CO301 Rehab Concrete (sqm)				Х		1,30
Barriers / Hand Railings / Double Railing	ST402 Replace Steel (m)				Х		372,06
Beams/MLE's / Diaphragms / I type	ST302 Rehab Steel (m)				Х		4,55
Beams/MLE's / Girders / I type	ST301 Rehab Steel (sqm)				Х		169,00
Decks / Soffit - Thin Slab	CO304 Rehab deck soffit				Х		5,20
Decks / Soffit - Thin Slab	CO304 Rehab deck soffit				Х		5,20
Decks / Soffit - Thin Slab	CO204 Patch deck soffit				Х		2,73
Joints / Concrete end dams	JE401 Replace End Dams (sq.m.)				Х		11,70
Joints / Seals/sealants / Compression seal	JS400 Replace Default Joint Seal (m.)				Х		2,60
Piers / Caps	CO301 Rehab Concrete (sqm)				Х		2,60
Sidewalks/curbs / Curbs	CO301 Rehab Concrete (sqm)				Х		1,30
Sidewalks/curbs / Sidewalk and medians	CO301 Rehab Concrete (sqm)				Х		6,50
Approaches / Approach slabs	CO301 Rehab Concrete (sqm)				Х		9,75
Barriers / Barrier/Parapet Walls / Parapet Wall with two rails	CO301 Rehab Concrete (sqm)				Х		4,55
Approaches / Wearing surface	AS400 Replace Asphalt w/s Approaches (sq.m)				Х		16,86
Barriers / Barrier/Parapet Walls / Parapet Wall with two rails	CO201 Repair Concrete (sqm)				Х		9,36
Joints / Armoring/retaining devices	JA401 Replace default amouring (m.)				Х		87,10

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Struct. ID	282	
Recommended	Work (Structure Level)	
Associated Work	Comments	Estimated Cost (\$)
Approaches		
Detours		
Other	Access and Protection.	80,000
Traffic Control	Assume 1 lane closed at a time.	120,000
Utilities		
	Total Cost	200,000
	Grand Total Cost:	\$3,055,080

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Description

East Elevation

Elem Grp/Class **Elem Type Sub Element Material Type** Locator **Defect Descript1 Defect Descript2**

General

File Name

01 East Elevation.JPG



Description

Defect Other

West Elevation

Elem Grp/Class **Elem Type Sub Element Material Type** Locator **Defect Descript1 Defect Descript2**

Defect Other

General

File Name

02 West Elevation.JPG



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Description

Bridge Deck From Southeast Corner. Note: M-S unsealed longitudinal cracks and M-S pattern cracks.

Elem Grp/Class Decks/Wearing surface **Elem Type Sub Element**

Material Type Asphalt Locator General **Defect Descript1**

Defect Descript2

Defect

Other

Cracks

Poor condition

File Name

03 Bridge Deck From Southeast Corner.JPG



Description

Bridge Deck From Southwest Corner. Note: Sealed longitudinal cracks and M-S unsealed longitudinal cracks.

Decks/Wearing surface Elem Grp/Class **Elem Type**

Asphalt

Sub Element **Material Type**

Locator General **Defect Descript1** Poor condition

Defect Descript2

Defect Cracks

Other

File Name 04 Bridge Deck From Southwest Corner.JPG

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Description

Bridge Deck From Northeast Corner

Elem Grp/Class Elem Type Sub Element **Material Type** Locator **Defect Descript1 Defect Descript2** Defect

Asphalt

Decks/Wearing surface

File Name

05 Bridge Deck From Northeast Corner.JPG



Description

Other

Bridge Deck From Northwest Corner. Note: Large asphalt patches and m-s pattern cracks.

Elem Grp/Class Decks/Wearing surface **Elem Type** Sub Element Material Type Asphalt Locator General **Defect Descript1** Poor condition **Defect Descript2 Defect** Cracks

File Name

06 Bridge Deck From Northwest Corner.JPG



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Description

M-S Pattern Cracks on Deck Wearing Surface @ Pier P3, Looking W

Elem Grp/Class Decks/Wearing surface
Elem Type

Material Type Asphalt Locator General

Defect Descript1
Defect Descript2

Sub Element

Defect Crac

Other

Cracks

Poor condition

File Name 07 M-S Pattern Cracks on Deck Wearing Surface @ Pier P3, Looking W.JPG



Description

Asphalt Patches, M-S Pattern Cracks & Longit Cracks in SBL (TYP)

Elem Grp/Class Decks/Wearing surface
Elem Type

Poor condition

Sub Element

Material Type

Locator

Defect Descript1

Asphalt

Typical

Poor co

Defect Descript2

Defect Other

Cracks

File Name 08 Asphalt Patches, M-S Pattern Cracks & Longit Cracks in SBL (TYP).JPG



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Description

Sealed & Unsealed Trans&Longit Cracks @ Pier 3, Looking West

Elem Grp/Class Elem Type Sub Element Material Type Locator

Defect Descript1
Defect Descript2

Defect Other Decks/Wearing surface

Asphalt

Poor condition

Cracks

File Name

09 Sealed & Unsealed Trans&Longit Cracks @ Pier 3, Looking West.JPG



Description

West Exterior Soffit at North Abutment, Looking South

Elem Grp/Class

Elem Type

Decks/Soffit - Thin Slab

Sub Element Exterior

Material Type Cast-in-place concrete

Defect Descript1 Defect Descript2

Defect Other

Locator

General

File Name 10 West Exterior Soffit at North Abutment, Looking South.jpg



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Description

East Exterior Soffit at South Abutment, Looking North. Note: Local areas of light delamination on soffit.

Elem Grp/Class Decks/Soffit - Thin Slab
Elem Type

Sub Element Exterior

Material Type Cast-in-place concrete
Locator General

Defect Descript1
Defect Descript2

Defect

Delamination

Poor condition

Other

File Name

11 East Exterior Soffit at South Abutment, Looking North.JPG



Description

Interior Soffit and Girders @ Pier 1, Looking South. Note: N-M efflorescence stained transverse cracks.

Elem Grp/Class

Elem Type
Sub Element

Decks/Soffit - Thin Slab

Material Type Cast-in-place concrete
Locator General

Defect Descript1 Poor condition
Defect Descript2

Defect Cracks
Other

File Name 12 Interior Soffit and Girders @ Pier 1, Looking South.JPG



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Description

Interior Soffit and Girders @ Pier 1, Looking North. Note: N-M efflorescence stained transverse cracks.

Elem Grp/Class Decks/Soffit - Thin Slab Elem Type

Interior **Sub Element**

Material Type Cast-in-place concrete

Locator General **Defect Descript1** Poor condition **Defect Descript2** Transverse Defect

Other

Cracks

File Name

13 Interior Soffit and Girders @ Pier 1, Looking North.JPG



Description

Other

Interior Soffit and Girders @ Pier 3, Looking South. Note: N-M efflorescence stained transverse cracks.

Decks/Soffit - Thin Slab Elem Grp/Class **Elem Type**

Interior Sub Element **Material Type** Cast-in-place concrete

Locator General **Defect Descript1** Poor condition **Defect Descript2** Transverse **Defect** Cracks

File Name 14 Interior Soffit and Girders @ Pier 3, Looking South.JPG



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Description

Interior Soffit at Pier 3, Looking North. Note: N-M efflorescence stained transverse cracks.

Elem Grp/Class Decks/Soffit - Thin Slab Elem Type Sub Element Interior

Material Type Cast-in-place concrete

Locator General **Defect Descript1** Poor condition **Defect Descript2**

Defect Cracks Other

File Name

File Name

15 Interior Soffit at Pier 3, Looking North.JPG



Description

Defect

Interior Soffit and Girders at Pier 4 (Span 5), Looking West. Note: N-M transverse cracks.

Decks/Soffit - Thin Slab Elem Grp/Class **Elem Type**

Cracks

Interior Sub Element **Material Type** Cast-in-place concrete

Locator General **Defect Descript1** Poor condition

Defect Descript2

Other

16 Interior Soffit and Girders at Pier 4 (Span 5), Looking West.JPG

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Description

Interior Soffit and Girders at Pier 6, Looking South. Note: Local wet areas and N-M stained cracks.

Elem Grp/Class

Elem Type

Sub Element

Decks/Soffit - Thin Slab

Material Type Cast-in-place concrete

Locator General

Defect Descript1 Poor condition

Defect Descript2 Defect

Cracks

File Name

17 Interior Soffit and Girders at Pier 6, Looking South.JPG



Description

Other

Other

Interior Soffit and Girders at Pier 7, Looking North. Note: N-M stained cracks on soffit.

Elem Grp/Class Decks/Soffit - Thin Slab
Elem Type

Sub Element Interior

Material Type Cast-in-place concrete

Locator General

Defect Descript1 Poor condition

Defect Descript2

Defect Cracks

File Name 18 Interior Soffit and Girders at Pier 7, Looking North.JPG



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Description

Delams & Spalls on West Fascia @ South Abut, looking North

Elem Grp/Class Elem Type Sub Element **Material Type** Locator **Defect Descript1 Defect Descript2**

Poor condition Delamination

End

Decks/Soffit - Thin Slab

Cast-in-place concrete

File Name

19 Delams & Spalls on West Fascia @ South Abut, looking North.JPG



Description

Defect

Other

Severe Spalls on East Fascia Over Hwy 403 EB

Elem Grp/Class **Elem Type Sub Element Material Type** Locator **Defect Descript1 Defect Descript2**

Defect

Other

Decks/Soffit - Thin Slab

Exterior Cast-in-place concrete

Poor condition

Spalling

20 Severe Spalls on East Fascia Over Hwy 403 EB.JPG



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Description

N-M Wet Stained Diagonal Crack @ SW Corner of Soffit

Elem Grp/Class **Elem Type** Sub Element **Material Type**

Cast-in-place concrete Locator **Defect Descript1**

Defect Descript2 Defect Other

Poor condition

Decks/Soffit - Thin Slab

Cracks

End

File Name

21 N-M Wet Stained Diagonal Crack @ SW Corner of Soffit.JPG



Description

Light Spall & N-M Stain Crack @ NW Corner of Soffit in Span 7

Decks/Soffit - Thin Slab Elem Grp/Class **Elem Type** End Sub Element **Material Type** Cast-in-place concrete

Locator **Defect Descript1 Defect Descript2 Defect**

Poor condition

Spalling Other

File Name

22 Light Spall & N-M Stain Crack @ NW Corner of Soffit in Span 7.JPG



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Description

Severe Spall @ Central NW Section in Span 2 over Hwy 403EB

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Decks/s
Decks/s
Interior
Cast-in

Defect Descript2
Defect
Other

Decks/Soffit - Thin Slab

Cast-in-place concrete

Poor condition

Spalling

File Name

23 Severe Spall @ Central NW Section in Span 2 over Hwy 403EB.JPG



Description

Other

N-M Efflorescence Stained Transverse Cracks in Span 2 (TYP)

Elem Grp/Class Decks/Soffit - Thin Slab
Elem Type

Sub Element Interior

Material Type Cast-in-place concrete

Locator Typical

Defect Descript1Poor conditionDefect Descript2TransverseDefectCracks

File Name 24 N-M Efflorescence Stained Transverse Cracks in Span 2 (TYP).JPG



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Description

M-S Corrosion (TYP) & Local Perforation @ S End of West Girder

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator

Beams/MLE's/Girders
I type
End
Steel

Defect Descript1
Defect Descript2

Defect

Poor condition

Corrosion

File Name

25 M-S Corrosion (TYP) & Local Perforation @ S End of West Girder.JPG



Description

Other

Severe Corrosion @ S Abut Diaphragm Btwn Girders 2&3 from East

Elem Grp/Class

Elem Type
Sub Element
Material Type
Locator

Beams/MLE's/Diaphragms
I type
End
Steel

Defect Descript1
Defect Descript2

Defect Other Poor condition

Corrosion

File Name

26 Severe Corrosion @ S Abut Diaphragm Btwn Girders 2&3 from East.JPG

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Description

Deck Drain with Basin at Deck Surface at Span 5, East Drain Shown. Note: Debris filled in deck drain.

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect

Decks/Drainage

Good condition

File Name

27 Deck Drain with Basin at Deck Surface at Span 5, East Drain Shown.JPG



Description

Other

Other

South Expansion Joint, Looking West. Note: Severe spalling on end dam.

Elem Grp/Class
Elem Type
Sub Element
Material Type
Other

Locator General

Defect Descript1 Poor condition

Defect Descript2

Defect Spalling

File Name 28 South Expansion Joint, Looking West.JPG



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Description

North Expansion Joint, Looking East. Note: Dents in steel armoring.

Elem Grp/Class Joints/Armoring/retaining devic Elem Type Sub Element **Material Type** Steel Locator **Defect Descript1** Poor condition **Defect Descript2 Defect**

Damaged

File Name

29 North Expansion Joint, Looking East.JPG



Description

Other

Loose Seal @ Central Section of North EJ and Dents in steel armoring.

Joints/Seals/sealants Elem Grp/Class Compression seal **Elem Type** Sub Element **Material Type** Locator **Defect Descript1** Poor condition **Defect Descript2 Defect** Damaged Other

File Name

30 Loose Seal @ Central Section of North EJ.JPG



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Description

East Parapet Wall and Sidewalk, Looking North. Note: N-M cracks and local staining on barrier walls.

Elem Grp/Class Barriers/Barrier/Parapet Walls Parapet Wall with two rails Elem Type Interior Sub Element Material Type Cast-in-place concrete Locator General **Defect Descript1** Fair condition **Defect Descript2** Defect Staining Other

File Name

31 East Parapet Wall and Sidewalk, Looking North.JPG



Description

East Parapet Wall and Sidewalk, Looking South. Note: Very severe delamination along top section of barrier wall.

Barriers/Barrier/Parapet Walls Elem Grp/Class Parapet Wall with two rails **Elem Type** Interior Sub Element **Material Type** Cast-in-place concrete Locator General **Defect Descript1** Poor condition **Defect Descript2 Defect** Delamination Other

File Name

32 East Parapet Wall and Sidewalk, Looking South.JPG



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Description

West Parapet Wall, Looking North. Note: Local areas of light to medium scaling.

Elem Grp/Class Barriers/Barrier/Parapet Walls Parapet Wall with two rails **Elem Type** Interior **Sub Element Material Type** Cast-in-place concrete Locator General **Defect Descript1** Fair condition **Defect Descript2** Defect Scaling Other

File Name

33 West Parapet Wall, Looking North.JPG



Description

West Parapet Wall, Looking South. Note: Wide crack on curb face at end of approach slab.

Barriers/Barrier/Parapet Walls Elem Grp/Class Parapet Wall with two rails **Elem Type** Interior Sub Element **Material Type** Cast-in-place concrete Locator General **Defect Descript1** Poor condition **Defect Descript2 Defect** Cracks Other

File Name

34 West Parapet Wall, Looking South.JPG



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Description

Severe Spall and Delam on East Wall in North Section of Span 3

Elem Grp/Class Barriers/Barrier/Parapet Walls Parapet Wall with two rails **Elem Type** Interior Sub Element **Material Type** Cast-in-place concrete Locator **Defect Descript1** Poor condition **Defect Descript2 Defect** Spalling Other

File Name

35 Severe Spall and Delam on East Wall in North Section of Span 3.JPG



Description

Delam on W Wall behind Thrie-Beam @ S Section of N Span 7 (TYP)

Elem Grp/Class Barriers/Barrier/Parapet Walls Parapet Wall with two rails **Elem Type** Interior Sub Element **Material Type** Cast-in-place concrete Locator **Defect Descript1** Poor condition **Defect Descript2 Defect** Delamination Other

File Name

37 Delam on W Wall behind Thrie-Beam @ S Section of N Span 7 (TYP).JPG

2021/4/28 12:49 **RptInspection**



Struct. ID

282



Description

Wide Crack on Top Face of West Wall Over Hwy 403

Elem Grp/Class **Elem Type** Sub Element **Material Type** Locator **Defect Descript1 Defect Descript2 Defect** Other

Barriers/Barrier/Parapet Walls Parapet Wall with two rails

Interior

Cast-in-place concrete

Poor condition

Cracks

File Name

38 Wide Crack on Top Face of West Wall Over Hwy 403 WB.JPG



Description

Wide Longitudinal Crack on East Sidewalk near South End of Deck (TYP)

Sidewalks/curbs/Sidewalk and Elem Grp/Class Elem Type Sub Element **Material Type** Cast-in-place concrete Locator **Typical Defect Descript1** Poor condition **Defect Descript2 Defect** Cracks Other

File Name

39 Wide Longitudinal Crack on East Sidewalk near South End of Deck (TYP).JPG

2021/4/28 12:49 **RptInspection**



Struct. ID

282



Description

Very Severe Spall & Delam on East Curb @ North End of Deck

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Spalling

File Name

40 Very Severe Spall & Delam on East Curb @ North End of Deck.JPG



Description

Wide Vertical Cracks on Bottom of Light Pole over Hwy 403 Median

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Other

Barriers/Barrier/Parapet Walls
Parapet Wall with two rails
Exterior
Cast-in-place concrete
Poor condition
Cracks

File Name

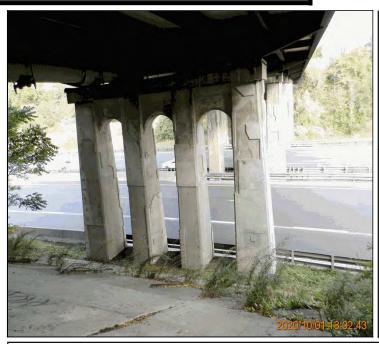
41 Wide Vertical Cracks on Bottom of Light Pole over Hwy 403 Median.JPG

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Struct. ID

282



Description

South Elevation of Pier 1. Note: Narrow stained shrinkage cracks on patch repairs.

Elem Grp/Class

Elem Type

Sub Element

Material Type

Locator

Defect Descript1

Defect

Other

Piers/Shafts/columns/Pile Bent

Conc rectangular columns with

Cast-in-place concrete

General

Fair condition

Cracks

File Name

42 South Elevation of Pier 1.JPG



Description

South Elevation of Pier 2. Note: Narrow stained shrinkage cracks.

Elem Grp/Class

Elem Type

Sub Element

Material Type

Locator

Defect Descript1

Defect

Defect

Other

File Name

43 South Elevation of Pier 2.JPG

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Struct. ID

282



Description

North Elevation of Pier 3. Note: Narrow stained shrinkage cracks on patch repairs.

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Other

Piers/Shafts/columns/Pile Bent
Conc rectangular columns with
Cast-in-place concrete
General
Fair condition

Cracks

File Name

44 North Elevation of Pier 3.JPG



Description

North Elevation of Pier 4. Note: Very severe spalls on pier column.

Elem Grp/Class

Elem Type

Sub Element

Material Type

Locator

Defect Descript1

Defect
Defect
Other

Piers/Shafts/columns/Pile Bent
Conc rectangular columns with

Cast-in-place concrete
General
Poor condition

Spalling

File Name

45 North Elevation of Pier 4.JPG

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Struct. ID

282



Description

South Elevation of Pier 5. Note: Local severe spall on 2nd column from west.

Elem Grp/Class

Elem Type

Sub Element

Material Type

Locator

Defect Descript1

Defect

Defe

File Name

46 South Elevation of Pier 5.JPG



Description

South Elevation of Pier 6. Note: Graffiti on pier columns.

Elem Grp/Class
Elem Type
Conc rectangular columns with

Sub Element
Material Type
Locator
Defect Descript1
Defect Conc rectangular columns with

Cast-in-place concrete
General

Defect Descript2
Defect
Other

File Name

47 South Elevation of Pier 6.JPG



Struct. ID

282



Description

M-S Spalls on South Face of Pier 2 Columns and Cap

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Defect
Other
Piers/Caps

Piers/Caps

Passin-place concrete

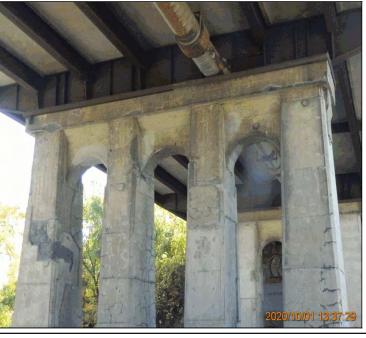
Cast-in-place concrete

Poor condition

Spalling

File Name

48 M-S Spalls on South Face of Pier 2 Columns and Cap.JPG



Description

Severe Spalls on N Face of Pier 2 Columns and Cap

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Other

File Name

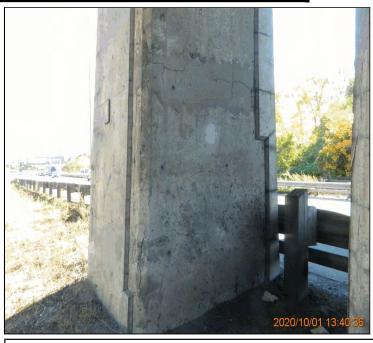
49 Severe Spalls on N Face of Pier 2 Columns and Cap.JPG

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Struct. ID

282



Description

Very Severe Dealm on Column 4 From West @ Pier P3 (TYP)

Elem Grp/Class

Elem Type

Sub Element

Material Type

Locator

Defect Descript1

Defect

Defect

Other

Piers/Shafts/columns/Pile Bent

Conc rectangular columns with

Cast-in-place concrete

Poor condition

Delamination

File Name

51 Very Severe Delam on Column 4 From West @ Pier P3 (TYP).JPG



Description

Very Severe Spalls on South & West Face of Column @ Pier 4 (TYP).

Elem Grp/Class

Elem Type

Sub Element

Material Type

Locator

Defect Descript1

Defect

Defect

Defect

Defect

Defect

Defect

Other

File Name

52 Very Severe Spalls on South & West Face of Column @ Pier 4 (TYP).JPG



Struct. ID

282



Description

Severe Delam on North Face of Column 2 From West @ Pier P6

Elem Grp/Class Piers/Shafts/columns/Pile Bent Conc rectangular columns with **Elem Type** Sub Element **Material Type** Cast-in-place concrete Locator **Defect Descript1** Poor condition **Defect Descript2 Defect** Delamination Other

File Name

53 Severe Delam on North Face of Column 2 From West @ Pier P6.JPG



Description

Typical Guide Assembly at Piers P1, P2, P3, P5, & P6, Pier 6 Shown

Piers/Bearings Elem Grp/Class Elastomeric pad **Elem Type** Sub Element **Material Type** Locator General **Defect Descript1 Defect Descript2 Defect** Other

File Name

54 Typical Guide Assembly at Piers P1, P2, P3, P5, & P6, Pier 6 Shown.JPG

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Description

Typical Expansion Bearing, Pier 6 Bearing Shown. Note: Narrow to medium cracks in grout pad.

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Cracks
Piers/Bearings
Elastomeric pad
Fair condition

File Name

55 Typical Expansion Bearing, Pier 6 Bearing Shown.JPG



Description

Elem Grp/Class

Other

Other

Typical Fixed Bearing at Pier 4. Note: Wide cracks in grout pad.

Piers/Bearings

Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Cracks

Elastomeric pad

General
Fair condition

File Name

56 Typical Fixed Bearing at Pier 4.JPG



Struct. ID

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Description

South Abutment, Looking East. Note: Severe spalls on top section of abutment.

Elem Grp/Class Abutments/Abutment walls
Elem Type Conventional closed

Sub Element Material Type Cast-in-place concrete
Locator General
Defect Descript1 Poor condition

Defect Descript2
Defect Spalling
Other

File Name

57 South Abutment, Looking East.JPG



Description

North Abutment, Looking West. Note: Graffiti markings.

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Class
Defect
Other

Abutments/Abutment walls
Conventional closed
Cast-in-place concrete
General
Cast-in-place concrete
General

File Name

58 North Abutment, Looking West.JPG



Struct. ID

282



Description

Very Severe Spall @ East Section of South Abutment

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Other

Abutments/Abutment walls
Conventional closed

Cast-in-place concrete
Poor condition

Spalling

File Name

59 Very Severe Spall @ East Section of South Abutment.JPG



Description

Severe Shallow Spalls @ West Section of South Abutment

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Defect
Other

Abutments/Abutment walls
Conventional closed
Cast-in-place concrete
Poor condition
Spalling

File Name

60 Severe Shallow Spalls @ West Section of South Abutment.JPG



Struct. ID

282



Description

Severe Delam @ West End of North Abutment.

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Other

Abutments/Abutment walls
Conventional closed

Cast-in-place concrete

Poor condition

Delamination

File Name

61 Severe Delam @ West End of North Abutment.JPG



Description

Wooden Form on South Ballast Wall & Spalls on Soffit below EJ

Elem Grp/Class

Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Other

Decks/Soffit - Thin Slab

End
Cast-in-place concrete

Poor condition

Spalling

File Name

62 Wooden Form on South Ballast Wall & Spalls on Soffit below EJ.JPG



Struct. ID

282



Description

South Abutment Bearing (East Bearing Shown). Note: Light to medium surface corrosion on original bearing.

Elem Grp/Class **Elem Type Sub Element Material Type**

Locator General **Defect Descript1** Fair condition

Defect Descript2 Defect Other

Corrosion

Rocker

Abutments/Bearings

File Name

63 South Abutment Bearing (East Bearing Shown).JPG



Description

North Abutment Bearing (West Bearing Shown). Note: L-M surface corrosion on original bearing, reinforced girder ends and graffiti markings.

Elem Grp/Class Abutments/Bearings Rocker **Elem Type**

Sub Element **Material Type** Locator **Defect Descript1**

Fair condition

Defect Descript2 Defect

Corrosion

General

Other

64 North Abutment Bearing (West Bearing Shown).JPG



Struct. ID

282



Description

Tilting of Orig Rocker Bearing @ Girder 2 from W @ N Abut(TYP)

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect

Abutments/Bearings

Rocker

Fair condition

File Name

65 Tilting of Orig Rocker Bearing @ Girder 2 from W @ N Abut(TYP).JPG



Description

Other

Southeast Wingwall. Note: Wet staining.

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Defect
Other

Abutments/Wingwalls
Reinforced concrete
Cast-in-place concrete
Fair condition
Staining

File Name

66 Southeast Wingwall.JPG



Struct. ID

282



Description

Northwest Wingwall. Note: Wet staining and graffiti markings.

Elem Grp/Class Abutments/Wingwalls Reinforced concrete **Elem Type** Sub Element **Material Type** Cast-in-place concrete Locator General **Defect Descript1** Fair condition **Defect Descript2** Defect Staining Other

File Name

67 Northwest Wingwall.JPG



Description

Narrow Wet Stained Vertical Cracks and Wet Staining on SW Wingwall

Elem Grp/Class Abutments/Wingwalls Reinforced concrete **Elem Type** Sub Element Material Type Cast-in-place concrete Locator **Defect Descript1** Fair condition **Defect Descript2 Defect** Cracks Other

File Name

68 Narrow Wet Stained Cracks and Wet Staining on SW Wingwall.JPG



Struct. ID

282



Description

Concrete Slope Paving on South Embankment. Note: Few medium cracks.

Elem Grp/Class **Elem Type** Sub Element **Material Type** Locator

General

Other

Defect Descript1 Defect Descript2 Defect

Good condition

Embankments & Streams/Slop

Other

Cracks

File Name

69 Concrete Slope Paving on South Embankment.JPG



Description

Rock Slope Protection @ North Embankment

Elem Grp/Class **Elem Type** Sub Element **Material Type** Locator **Defect Descript1 Defect Descript2**

Defect Other

Embankments & Streams/Slop

Other

General

File Name

70 Rock Slope Protection @ North Embankment.JPG



Struct. ID

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Description

South Approach. Note: M-S Pattern and longitudinal cracks. Severe spalling of end dam.

Elem Grp/Class Approaches/Wearing surface **Elem Type Sub Element Material Type** Asphalt Locator General **Defect Descript1** Poor condition **Defect Descript2**

Cracks

File Name

71 South Approach.JPG



Description

Defect

Other

Other

North Approach. Note: M-S longitudinal cracks on wearing surface.

Approaches/Wearing surface Elem Grp/Class **Elem Type** Sub Element **Material Type** Asphalt Locator General **Defect Descript1** Poor condition **Defect Descript2 Defect** Cracks

File Name

72 North Approach.JPG



Struct. ID



282

Description

L-M Scaling on East Wall Near South End of Deck

Elem Grp/Class Barriers/Barrier/Parapet Walls Parapet Wall with two rails Elem Type Sub Element Interior Cast-in-place concrete Material Type Locator **Defect Descript1** Fair condition **Defect Descript2** Defect Scaling Other

File Name

36 L-M Scaling on East Wall Near South End of Deck.JPG



|--|

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APPENDIX B - BRIDGE 282_2022_OSIM

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Engineering Services

City of Hamilton, Public Works



Struct. ID

282

2013 - Bearing Pedestal, 2016 - Reinforce Girders, 2015 - EJ repairs, 2021 - Replace 2 Light Poles, 2022 - Deck repairs, new EJ, new asphalt

City of Hamilton

Bridge Inspection Form

Inventory Data												
Structure Name	LONGW	OOD	RD S					Wisk:				
Structure Location	Over HW	VY 403	3						10		- 2/2	
Road Number			Or	า 🔲		Under 🗵		1			CAN A	
Road Name	Highway	403								100	In any	
Watercourse Name								4				
Crossing Type:	Road	d 🛛	Rail 🗌	Wa	ater	Navigable wat	erway					
	Rive	r 🗌	Other	Cr	eek	Pede	estrian [and the state of		
Hwy Direction	1-NORT	H/SOI	UTH							2500		
Owner Category											712912002 1000150	
Maint. Dist.						Northing			43.258	3026		
Region	Central					Easting			-79.90	1932		
District	Bancroft					National High		tem				
Ward	01					Highway Desi						
Township						Hwy Functional Classifica						
Structure Category	Bridge	Bridge				AADT	22	,		Lanes		
Main Struct. Subcatg.	Beam/G	irder				Trucks (%)			Poste	d Speed	90	
Main Struct. Type	I-beams	/ Gird				District Bridg		eer				
Deck Length (Total)			106.40 (m	<u> </u>		Road Authori	ty					
Overall Structure Width			16.70 (m	1)		Bridge Plan #	i					
Deck Area (Total)			1,776.88 (Sc	q.m)		Min. Vertical (Clearanc	e		9.30 (m)		
Width (Traffic)			14.40 (m))		Detour Distar	nce			(km)		
Skew Angle						Speed on Detour					(kph)	
Number of Spans			7			Fill Height				(m)		
Total Length / Spans (m	tal Length / Spans (m Total = 105.60; (1) = 14.7; (2) =				15.24	; (3) = 15.24; (4	1) = 15.2	4; (5)	= 15.24	; (6) = 15.24; (7)	= 14.7	
Historical Data												
Year Built			1969 Eva			aluation Year						
Last Biennial Inspection			December 02, 2022 Cur			ent Load Limit	•					
Last Bridge Master Inspection					Current BCI			68.94				
Last Condition Survey					Current BCU			43.30				
Last Underwater Inspec	tion				Current SI				12.56			
Rehab. History			_									



Struct. ID	2	82					
Schedule	d Improvements						
Regional P	Priority Number				Programm	ed V	Vork Year
Nature of	Programmed Wor	k					•
			_				
Appraisal	Indices				Co	mme	ents
Load Capa	acity Index						
Flood Inde	ex						
Barrier Inc							
Curb Index	x						
Seismic In	idex						
Fatigue In	dex						
Scour Inde	ex						
Structure	Index						
Supported	Performance Deficiencies						
00	None	06	6 F	Bearings not uniformly loaded/un	stable	12	Slippery surface
	Load carrying capacity	07		Jammed expansion joint		13	Flooding/channel blockage
02	Excessive deformations (deflection	ons and rotations) 08	8 F	Pedistrian/vehicular hazard		14	Undermining of foundation
03	Continuing settlement	09	9 F	Rough riding surface		15	Unstable embankments
04	Continuing movements	10		Surface ponding		16	Other
05 Maintona	Seized bearings	11	1 [Deck drainage			
	nce Needs	20	, -	Denoise to Character of Character			
01 02	Lift and Swing Bridge Maintenand Bridge Cleaning			Repairs to Structural Steel		13	Erosion Control at Bridges
03	Bridge Cleaning Bridge Handrail Maintenance	08		Repair of Bridge Concrete Repair of Bridge Timber		14	Concrete Sealing
04	Painting Steel Bridge Structures	10		Bailey bridges - Maintenance		15	Rout and Seal
05	Bridge Deck Joint Repair	11	1 4	Animal/Pest Control		16	Bridge Deck Drainage
06	Bridge Bearing Maintenance	1:	2 E	Bridge Surface Repair		17	Other



Struct. ID	2	82										
Field Inspectio	n Informatio	on										
Inspection Date		December 02, 2022				Weather	•		Cloudy			
Inspector		Morrison Hershfield	Ltd.			Temper	ature		3			
Others in Party		Paul Locham (CET)	, Greg Morrisor	1								
Equipment Used		Digital camera, ham										
Access Equipmen	it Used	Ladder 🗌	Boat 🔲			Bucket 7	ruck 🔲		Hip Waders □			
		Access Key [1	Climbir	ng Inspec	tion 🔲	Un	der Br	ridge Inspection Unit 🏻			
Special Notes									<u> </u>			
	e is in Fair to Good condition. Bridge elements exhibiting severe defects include west parapet wall, abutments, and piers. Bridge rs in 2022 included patch repairs on deck/sidewalk/curb/approach slabs, new exp joints, & new asphalt.											
Upcoming Insp	ections and	I Investigations										
Inspection Type		Due D	ate	Р	riority		Comment					
Recommended	Inspections	s and Investigatio	ns									
Recommended Ins	spection Type	9	Due Date	None	Priorit Normal		Estimated Cost (\$)	C	Comments			
Material Condition Sui	rvey:											
Detailed Deck Cond	ition Survey											
Non-destructive Dela	amination Surve	ey of Asphalt-Covered D	eck									
Concrete Substructu		ırvey		 								
Detailed Coating Co				 								
Detailed Timber Inve				 								
Post-Tensioned Stra Underwater Investigat		I		$+ \vdots$								
Fatigue Investigation	1011			+ =								
Seismic Investigation												
Structure Evaluation												
Monitoring												
		nents and Movements		 								
Monitoring Crack Wi								_				
Overall Structu	ire Recomm	endations:										
Work Category	None 🗌	Minor	Rehab 🔲		Ma	ijor Rehal			Replacement 🛛			
Timing	None	Urgent		< 1 y	/ear □	-	1 - 5 year		6 - 10 year 🛛			
Est. Total Cost	\$ 10,000,000			<u>-</u>			•		· -			
Comments	Bridge plann	ed for replacement ir	5-10 yrs.									



Struct. ID		282										
Element Da	ta											
								1				
Group	Abutme						Length	N/A	(m)			
Element	Abutme	ent walls					Width	16.30	(m)			
Span Num							Height	3.00	(m)			
Material	Cast-ir	n-place cond	crete				Count	2.00				
Туре	Conve	ntional close	ed				Quantity	98.000	(Sq.m)			
Env't	В	Benign ☐ Moderate ☑ Severe ☐ Not Inspected ☐										
Location	North 8	& South				Description						
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds			
Data	Sq.m	0.000	50.000	36.000	12.000			<u> </u>				
Performance 0-None	tion as b	oridge planned			spails on bo	ith walls (Rei i	Photos 49-53). No immediat	ie	1			
Group	Abutme	ents					Length	N/A	(m)			
Element	Ballast	walls					Width	16.30	(m)			
Span Num							Height	0.90	(m)			
Material	Cast-ir	n-place cond					Count	2.00				
Туре		N/A					Quantity	29.000	(Sq.m)			
Env't	H P	Benign 🗌	Mode	erate 🛛	Seve	ere 🗌	Not Inspected	+				
Location		& South Abu				Description		<u> </u>				
Condition	 	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	 Veeds			
Data	Sq.m	0.000	16.000	12.000	1.000							
Comments Typical heavy bridge planne Performance 0-None	ed to be r	replaced.	severe dela	mination and	່ງ spalls (Ref	Photo 54). No	immediate recommendation	CR =	4			



Struct. ID		282							
Element Da	ta								
	A1 1	,					l	1	, ,
Group	Abutme						Length	N/A	(m)
Element	Bearing	gs					Width	N/A	(m)
Span Num							Height	N/A	(m)
Material		N/A					Count	16.00	
Туре	Rocke						Quantity	16.000	(Each)
Env't	В	Benign 🗌	Mode	rate 🛚	Seve	ere 🗌	Not Inspected		
Location	North 8	& South Abu	utments			Description		1	
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	Each	0.000	14.000	2.000	0.000			<u> </u>	
	ndary be	earing in fron					it. Galvanized steel pedesta lefects (Ref Photos 50, 54-56		3
Group	Abutme	ents					Length	5.90	(m)
Element	Wingwa	alls					Width	N/A	(m)
Span Num						_	Height	1.40	(m)
Material	Cast-ir	n-place cond	crete				Count	4.00	
Туре		rced concre					Quantity	33.000	(Sq.m)
Env't		Benign 🔲		rate 🏻	Seve	ere 🗌	Not Inspected		
Location	All Qua	adrants				Description		<u> </u>	
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	Sq.m	0.000	27.000	6.000	0.000				
Comments Few narrow to Performance 0-None			t area on SV	V wall (Ref F	hotos 57-60).		CR =	
									4

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Struct. ID		282			_							
Element Da	ta											
Group	Approa	ches					Length	6.00	(m)			
Element	Approa	ich slabs					Width	16.70 (m)				
Span Num							Height		(m)			
Material	Cast-ir	n-place con	crete				Count	2.00				
Туре		N/A					Quantity	200.000	(Sq.m)			
Env't	В	Benign ☐ Moderate ☒ Severe ☐ Not Inspected ☐										
Location	North 8	& South				Description						
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds			
Data	Sq.m	0.000	200.000	0.000	0.000							
Comments								CR =	4			
Approach sla	bs repair	red in 2022.										
D. 6	D . C	•										
Performance 0-None	Deticle	ncies										
0-NONE												
									5			
Cuarin	Approa	shoc					Longth	T 6.00	()			
Group Element	Curb/gi						Length Width	6.00 N/A	` ,			
	Curb/g							0.14	(m) (m)			
Span Num	Cootin		t-				Height	-	(111)			
Material	Cast-ii	n-place con	crete				Count	2.00	/m)			
Type	В	N/A	Mada	roto 🗆	Sov	ere 🏿	Quantity	12.000	(m)			
Env't		Benign 🔲	Mode	rate 🗌	<u> </u>	 -	Not Inspected					
Location	West S	Excellent	Good	Fair	Door	Description V. Poor	width is 0.4m Perform. Deficiencies	Maintenance N	loods			
Condition Data	Unit	0.000	10.000	2.000	Poor 0.000	V. Poor	Perioriii. Deliciericies	Iviaintenance iv	eeus			
	m	0.000	10.000	2.000	0.000			<u> </u>				
Comments					/D - f Db -	t- 00\		CR =	2			
Several narro	ow-mean	um cracks ar	na iew isolat	ed smaii spa	alis (Ref Pho	10 33).						
Performance	Deficie	ncies										
0-None												
									6			

 RptInspection
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Struct. ID		282									
Element Da	ta										
Group	Approa	ches					Length	6.00	(m)		
Element	Sidewa	alk/Curb					Width	dth 1.47 (m)			
Span Num							Height	0.14	(m)		
Material	Cast-in	n-place con	crete				Count	2.00			
Туре		N/A					Quantity	19.000	(Sq.m)		
Env't	В	Benign 🗌	Mode	rate 🗌	Sev	ere 🛚	Not Inspected				
Location	East S	ide				Description	Pedestrian Sidewalk				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds		
Data	Sq.m	0.000	17.000	2.000	0.000						
Comments								CR =	2		
Few medium	cracks, I	arge concret	te patches o	n sidewalk a	t both appro	aches (Ref Ph	otos 32, 35).				
Performance	Deficie	ncies									
0-None											
									7		
							1				
Group	Approa						Length	6.00	(m)		
Element	Wearin	g surface					Width	14.40	(m)		
Span Num							Height		(m)		
Material	Asphal	lt					Count	2.00			
Туре		N/A					Quantity	173.000	(Sq.m)		
Env't	В	Benign 🗌	Mode	rate 🗌	Sev	ere 🛛	Not Inspected				
Location	North 8	& South				Description					
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds		
Data	Sq.m	173.000	0.000	0.000	0.000						
Comments								CR =	1		
New asphalt	pavemer	nts on both a	pproaches (Ref Photos 6	63, 64).						
		_									
Performance	Deficie	ncies									
0-None											
									8		

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Struct. ID		282								
Element Da	ta									
Group	Attachr	nents, Signs	, and Utilities	S			Length	N/A		(m)
Element	Electric	cal					Width	N/A		(m)
Span Num							Height	N/A		(m)
Material		N/A					Count	N/A		• •
Туре		N/A					Quantity		4.000	(Each)
Env't	Е	Benign 🔲	Mode	rate [Seve	ere 🗌	Not Inspected			
Location	West S	Side				Description	Light Poles			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance N	eeds
Data	Each	2.000	2.000	0.000	0.000					
Comments									CR =	1
4 Light Poles	on Wes	t parapet wa	II. Few narro	ow-medium o	cracks at bot	tom of original	concrete light poles at North	า Pier		
and SW Wing	gwall loca	ations; new a	lluminum po	les at Pier 2	and 4 location	ons.				
Performance	Deficie	ncies								
0-None										
										9
Group	Attachr	nents, Signs	, and Utilities	S			Length	N/A		(m)
Element	Signs						Width	N/A		(m)
Span Num							Height	N/A		(m)
Material		N/A					Count	N/A		
Туре		N/A					Quantity		2.000	(Each)
Env't	Е	Benign 🗌	Mode	rate 🗌	Seve	ere 🗌	Not Inspected			
Location	NW &	SW				Description	Hazard marker signs	_		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	nance N	eeds
Data	Each	0.000	2.000	0.000	0.000					
Comments									CR =	2
Hazard mark	er signs	at north & so	uth ends of	West parape	et wall (Ref. l	Photos 2, 33).				
Performance	Deficie	ncies								
0-None										
										10

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Struct. ID		282								
Element Da	ta									
Group	Attachr	nents, Signs	, and Utilitie	S			Length	N/A		(m)
Element	Utilities	3					Width	N/A		(m)
Span Num							Height	N/A		(m)
Material		N/A					Count	N/A		
Туре		N/A					Quantity		1.000	(Each)
Env't	Е	Benign 🗌	Mode	rate 🗌	Sev	ere 🗌	Not Inspected			
Location	Below	Deck				Description	Insulated Watermain	_		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainter	nance N	leeds
Data	Each	0.000	1.000	0.000	0.000					
Comments Insulated wat corrugated street Performance 0-None	eel wrap	ping (Ref. Pl	Typical local notos 10-165	light surface 5, 31).	e rust on ste	el hangers sup	ports and local areas of light	t rust on	CR =	11



Struct. ID		282			,				
Element Da	ta								
Group	Barrier	S					Length	120.50	(m)
Element	Barrier	/Parapet Wa	lls		Inte	rior	Width	N/A	(m)
Span Num							Height	0.81	(m)
Material	Cast-ir	n-place con	crete				Count	2.00	
Туре	Parap	et Wall with	two rails				Quantity	195.000	(Sq.m)
Env't	Е	Benign 🗌	Mode	rate 🗌	Sev	ere 🛚	Not Inspected		
Location	East 8	East & West				Description	includes top of parapet v	vall	
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	Sq.m	0.000	170.000	15.000	10.000				
	hrie-bea d.	ım (no defect					mination & spalls on west w ecommendation as bridge p		4
									12



Struct. ID		282							
Element Da	ta								
Group	Barrier	S					Length	120.50	(m)
Element	Barrier	/Parapet Wa	lls		Exte	rior	Width	N/A	(m)
Span Num						-	Height	0.62	(m)
Material	Cast-ir	n-place con	crete				Count	2.00	
Туре	Parape	et Wall with	two rails				Quantity	149.000	(Sq.m)
Env't	Е	Benign 🗌	Mode	rate 🛚	Seve	ere 🗌	Not Inspected		
Location	East &	West				Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	Sq.m	0.000	120.000	21.000	8.000				
Comments								CR =	5
						ose concrete d	operation over Hwy 403 (Re	f Photo	
37). No imme	ediate re	commendation	on as bridge	planned to	be replaced.				
Performance	Deficie	ncies							
0-None									
									40
									13
Group	Barrier	S					Length	119.30	(m)
Element	Hand F	Railings					Width	N/A	(m)
Span Num							Height	N/A	(m)
Material	Steel						Count	4.00	
Туре	Double	Railing					Quantity	477.000	(m)
Env't	Е	Benign 🔲	Mode	rate 🗌	Seve	ere 🛚	Not Inspected		
Location	East &	West				Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	m	0.000	465.000	12.000	0.000				
Comments								CR =	4
Overall light s	surface c	orrosion and	l local areas	of light to m	edium surfac	e corrosion (R	Ref Photos 32-36).		
Performance	Deficie	ncies							
0-None									
									14



Struct. ID		282						
Element Da	ta							
Group	Beams	/MLE's					Length	(m)
Element	Diaphr	agms			End		Width	(m)
Span Num							Height	(m)
Material	Weath	ering steel					Count	14.00
Туре	I type						Quantity	14.000 (Sq.m
Env't	E	Benign 🗌	Mode	rate 🏻	Seve	ere 🗌	Not Inspected	
Location	North	& South Ab	utments			Description		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance Needs
Data	Sq.m	0.000	1.000	8.000	5.000			<u> </u>
Comments								CR = 6
							side of diaphragms facing ba	allast wall
(Rei Pilotos	17, 19, 2	o). No inime	liate recomi	nendation as	s bridge plan	ned to be repla	aceu.	
Performance	Deficie	ncies						
0-None								
								1.
Group	Beams	/MLE's					Length	(m)
Element	Diaphr	agms			Inter	mediate	Width	(m)
Span Num							Height	(m)
Material	Weath	ering steel						` '
Туре	I type						Count	55.00
Env't	, ,,						Count Quantity	` '
		Benign 🛚	Mode	rate 🗌	Seve	ere 🗌		55.00
Location			Mode	rate 🗌	Seve	ere Description	Quantity	55.00
Location Condition	All Spa		Mode Good	rate □ Fair	Seve		Quantity	55.00
Location	All Spa	ans				Description	Quantity Not Inspected	55.00 (Sq.m
Location Condition	All Spa Unit	ens Excellent	Good	Fair	Poor	Description	Quantity Not Inspected	55.00 (Sq.m
Location Condition Data	All Spa Unit Sq.m	Excellent 0.000	Good 55.000	Fair 0.000	Poor	Description	Quantity Not Inspected	55.00 (Sq.m
Comments Local areas of	All Spa Unit Sq.m	Excellent 0.000 aking of patin	Good 55.000	Fair 0.000	Poor	Description	Quantity Not Inspected	55.00 (Sq.m
Comments Local areas of	All Spa Unit Sq.m	Excellent 0.000 aking of patin	Good 55.000	Fair 0.000	Poor	Description	Quantity Not Inspected	55.00 (Sq.m
Comments Local areas of	All Spa Unit Sq.m	Excellent 0.000 aking of patin	Good 55.000	Fair 0.000	Poor	Description	Quantity Not Inspected	55.00 (Sq.m
Comments Local areas of	All Spa Unit Sq.m	Excellent 0.000 aking of patin	Good 55.000	Fair 0.000	Poor	Description	Quantity Not Inspected	55.00 (Sq.m

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Struct. ID		282							
Element Date	ta								
	_						T	1	
Group	Beams						Length	4.00	(m)
Element	Girders	5			End	_	Width	0.30	(m)
Span Num							Height	0.56	(m)
Material	Weath	ering steel					Count	8.00	
Туре	I type						Quantity	65.000	(Sq.m)
Env't	В	Benign 🗌	Mode	rate 🛚	Seve	ere 🗌	Not Inspected		
Location	North 8	& South Ab	utment			Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	Sq.m	0.000	38.000	16.000	11.000				
Performance 0-None			eer r-Section	TOT TEITHOLG	ement noted	on all gliders ((Ref Photos 17, 19, 23, 54-56	J).	17
Group	Beams	/MLE's					Length	102.40	(m)
Element	Girders	3			Midd	le	Width	0.30	(m)
Span Num							Height	0.56	(m)
Material	Weath	ering steel					Count	8.00	
Туре	I type						Quantity	1,655.000	(Sq.m)
Env't	В	Benign 🛛	Mode	rate 🗌	Seve	ere 🗌	Not Inspected		
Location	All Spa	ans				Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	Sq.m	0.000	1,655.000	0.000	0.000				
Comments Light patina fl Performance 0-None			ge surface(Ref Photo 6	-16).			CR =	2

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Struct. ID		282							
Element Da	ta								
Group	Coating	gs					Length	N/A	(m)
Element	Railing	Systems / H	land Railings	s			Width	N/A	(m)
Span Num						_	Height	N/A	(m)
Material		N/A					Count	N/A	
Туре	Hot dip	galvanizin	g				Quantity	135.000	(m)
Env't	В	Benign 🗌	Mode	rate 🗌	Seve	ere 🛚	Not Inspected		
Location	West 8	& East Side	s			Description		_	
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	m	0.000	0.000	35.000	100.000				
Comments								CR =	4
		eak-down of	galvanize co	ating (Ref P	hotos 32-35)	. No immediate	e recommendation as bridge	planned	
to be replace	a.								
Performance	Deficie	ncies							
0-None									
									19
Group	Decks						Length	106.40	(m)
Element	Deck to	ор					Width	16.70	(m)
Span Num							Height		(m)
Material	Cast-ir	n-place con	crete				Count	N/A	
Туре	Cast-ir	n-place con	crete on su	pports			Quantity	1,792.000	(Sq.m)
Env't	В	Benign 🗌	Mode	erate 🛚	Seve	ere 🗌	Not Inspected		
Location	All					Description		_	
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	Sq.m	0.000	1,792.000	0.000	0.000				
Comments								CR =	1
Local repairs	complet	ed on deckto	p in 2022.						
		_							
		nciae							
Performance	Delicie	iicies							
Performance 0-None	Delicie	licies							
	: Delicie	iicies							



Struct. ID		282								
Element Da	ta									
Group	Decks						Length	N/A		(m)
Element	Draina	ge					Width	N/A		(m)
Span Num	5					-	Height	N/A		(m)
Material	Steel						Count	N/A		
Туре	Drain _I	pipes with b	asins				Quantity		2.000	(Each)
Env't	Е	Benign 🗌	Mode	rate 🗌	Seve	ere 🛚	Not Inspected			
Location	Span	5, East & W	est Side			Description	Deck Drains			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainte	nance N	leeds
Data	Each	0.000	2.000	0.000	0.000					
Comments									CR =	2
Accumulation	of debr	is on deck su	rface cloggi	ng drains, no	defects on	drain downspo	out (Ref Photos 29, 30).			
Maintenance	Needs					Nee	d Timing			
2-Bridge Cle	eaning					1 Ye	ar			
Performance	Deficie	encies								
0-None										
										21
										21

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Struct. ID		282			_					
Element Da	ta									
Group	Decks						Length		4.00	(m)
Element		Thin Slab			End		Width		14.40	(m)
Span Num							Height	N/A		(m)
Material	Cast-ir	n-place con	crete				Count	N/A		
Туре		N/A					Quantity	5	8.000	(Sq.m)
Env't	Е	Benign 🗌	Mode	rate 🛚	Sev	ere 🗌	Not Inspected			
Location	North	& South Ab	utments			Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainten	ance N	leeds
Data	Sq.m	0.000	40.000	15.000	3.000					
	terior se	ection of soffi					r sections, stained crack with 3). No recommendation as b		CR =	5
l										



Struct. ID		282							
Element Da	ta								
								1	
Group	Decks						Length	102.4) (m)
Element	Soffit -	Thin Slab			Exte	erior	Width	1.12	(m)
Span Num							Height	N/A	(m)
Material	Cast-ii	n-place con	crete				Count	N/A	
Туре		N/A					Quantity	115.000	(Sq.m)
Env't	Е	Benign 🗌	Mode	rate 🛚	Sev	ere 🗌	Not Inspected		
Location	West	& East Ext S	Soffit & Fas	cia		Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance	Needs
Data	Sq.m	0.000	82.000	25.000	8.000				
	ed in Sp e replace	oan 2 & 3 ove					s. Spall from loose concrete iate recommendation as brid	removal	= 5
									23



Struct. ID		282							
Element Da	ta								
Group	Decks						Length	102.40	(m)
Element	Soffit -	Thin Slab			Inter	ior	Width	13.30	(m)
Span Num						-	Height	N/A	(m)
Material	Cast-ir	n-place con	crete				Count	N/A	
Туре		N/A					Quantity	1,362.000	(Sq.m)
Env't	В	Benign 🛛	Mode	rate 🗌	Seve	ere 🗌	Not Inspected		
Location	All Spa	ans.				Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	Sq.m	0.000	1,152.000	160.000	50.000				
operation Spa planned to be Performance 0-None	an 2 and e replace	3 over Hwy ed.	403, light sp	all in span 6	(Ref Photos	10-16). No im	rom loose concrete removal mediate recommendation as	s bridge	24
Group	Decks						Length	106.40	(m)
Element	Wearin	ig surface					Width	14.40	(m)
Span Num						-	Height		(m)
Material	Aspha	lt					Count	N/A	
Туре		N/A					Quantity	1,532.000	(Sq.m)
Env't	В	Benign 🔲	Mode	rate 🗌	Seve	ere 🛚	Not Inspected		
Location	All Spa	ans.				Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	Sq.m	1,532.000	0.000	0.000	0.000				
Comments New asphalt	pavemer		Ref Photos 3	, 4)				CR =	1

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Struct. ID		282								
Element Da	ta									
Group	Emban	kments & St	reams				Length	N/A		(m)
Element	Embar	kments					Width	N/A		(m)
Span Num							Height	N/A		(m)
Material		N/A					Count	N/A		
Туре		N/A					Quantity		6.000	(Each)
Env't	E	Benign 🗌	Mode	erate 🗌	Sev	ere 🗌	Not Inspected			
Location	All Qu	adrants & ir	n front of Al	out		Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainter	nance N	leeds
Data	Each	0.000	6.000	0.000	0.000					
Comments									CR =	2
No scour note	ed (Ref F	Photos 57-62	?).							
		_								
Performance	Deficie	encies								
0-None										
										26
							T			
Group		kments & St	reams				Length	N/A		(m)
Element	Slope _l	protection				_	Width	N/A		(m)
Span Num							Height	N/A		(m)
Material		N/A					Count	N/A		
Туре	Concre	ete					Quantity		6.000	(Each)
Env't	E	Benign 🗌	Mode	erate 🗌	Sev	ere 🗌	Not Inspected			
Location	North	and South A	Abutments			Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Mainte	nance N	leeds
Data	Each	0.000	6.000	0.000	0.000					
Comments									CR =	2
Rock protecti in concrete. (l			. No defects	noted. Cond	rete slope p	aving noted at	south abutment, few mediur	n cracks		
Performance	Deficie	encies								
0-None										
										27

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Struct. ID		282							
Element Da	ta								
Group	Founda	ations					Length	N/A	(m)
Element	Founda	ation (below (ground level)			Width	N/A	(m)
Span Num							Height	N/A	(m)
Material	Cast-ir	n-place cond	crete				Count	N/A	
Туре	Combi	nation					Quantity	1.000	(N/A)
Env't	Е	Benign 🗌	Mode	rate 🗌	Seve	ere 🗌	Not Inspected		
Location	Abutm	ents & Pier	S			Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance	Needs
Data	N/A	0.000	1.000	0.000	0.000				
Comments								CR =	= 2
No observabl	e perforr	mance defec	ts noted.						
D. 6	D . C								
Performance 0-None	Deficie	ncies							
0-None									
									28
	1-:-4-						I	10.7	
Group	Joints	ng/retaining o	dovisos				Length	+) (m)
Element	Amon	ng/retaining t	<u> </u>			_	Width	N/A	(m)
Span Num	0						Height	N/A	(m)
Material	Steel						Count	4.00	
Туре	_	N/A		. —			Quantity	67.000	(m)
Env't		Benign 🗌	Mode	rate 🗌	Seve	ere 🛛	Not Inspected		
Location		& South	_	1		Description			
Condition Data	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance	Needs
	m	67.000	0.000	0.000	0.000				
Comments								CR =	= 1
Expansion joi	ints repla	aced in 2022	(Ref. Photos	s 26, 27)					
Performance	Doficio	naina							
0-None	Delicie	ncies							
0-NONE									
									29

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Struct. ID		282							
Element Da	ta								
Group	Joints						Length	14.40	(m)
Element	Concre	ete end dams	;				Width	0.23	(m)
Span Num							Height	N/A	(m)
Material	Cast-ir	n-place con	crete				Count	4.00	
Туре		N/A					Quantity	12.000	(Sq.m)
Env't	Е	Benign 🗌	Mode	rate 🗌	Sev	ere 🛚	Not Inspected		
Location	North	& South				Description			
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	Sq.m	12.000	0.000	0.000	0.000				
Comments								CR =	5
New concrete	end-da	ms installed	in 2022 (Ref	Photos 26,	27).				
		_							
Performance	Deficie	ncies							
0-None									
									30
							T		
Group	Joints						Length	16.70	(m)
Element	Seals/s	sealants					Width	N/A	(m)
Span Num							Height	N/A	(m)
Material		N/A					Count	2.00	
Туре	Other						Quantity	2.000	(m)
Env't		Benign 🗌	Mode	rate 🗌	Sev	ere 🛚	Not Inspected		
Location	North	& South				Description	Silicoflex Seals	•	
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	m	2.000	0.000	0.000	0.000			<u></u>	
								CR =	2
Comments									
New expansi					s in 2022. G	Saps noted bet	ween the caulking atop of se	eals	
					s in 2022. G	aps noted bet	ween the caulking atop of se	eals	
New expansi	d the ste	eel armour ar			s in 2022. G	aps noted bet	ween the caulking atop of se	eals	
New expansion (Silicoflex) and	d the ste	eel armour ar			s in 2022. G	aps noted bet	ween the caulking atop of se	eals	
New expansion (Silicoflex) and Performance	d the ste	eel armour ar			s in 2022. G	aps noted bet	ween the caulking atop of se	eals	



Struct. ID		282								
Element Data										
Group	Piers				Length	N/A	(m)			
Element	Bearing	gs					Width	N/A	(m)	
Span Num							Height	N/A	(m)	
Material		N/A					Count	36.00		
Туре	Elasto	meric pad					Quantity	36.000	(Each)	
Env't	Е	Benign 🛚	Mode	rate 🗌	Sev	ere 🗌	Not Inspected			
Location	All Pie	ers				Description				
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds	
Data	Each	0.000	20.000	16.000	0.000					
Comments								CR =	2	
No significant	defects	noted on be	aring pads e	except for so	me cracking	on the grout pa	ads (Ref Photo 48).			
Performance	Doficio	maiaa								
0-None	Delicie	HICIES								
0-None										
									32	
Group	Piers						Length	2.00	(m)	
Element	Caps						Width	11.00	(m)	
Span Num	<u> </u>						Height	0.80	(m)	
Material	Cast-ir	n-place con	crete				Count	6.00		
Туре		 N/A					Quantity	389.000	(Sq.m)	
Env't	Benign ☑ Moderate ☐ Severe ☐						Not Inspected		(1 /	
Location						Description	'	<u>. – – </u>		
Condition	Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds	
Data	Sq.m	0.000	363.000	22.000	4.000					
Comments								CR =	5	
Spalls from loose concrete removal operation on Hwy 403 noted at Piers 1 to 3. Local delamination on cap beams at										
Piers 4- 6 (Re	ef Photos	s 38-44). No	immediate r	ecommenda	tion as bridg	e planned to b	e replaced.			
Performance	Performance Deficiencies									
0-None										
									33	



Struct. ID 282												
Element Data												
Piers						Length	2.00 (m)					
Shafts/	columns/Pile	Bents				Width	1.20	(m)				
						Height	8.00	(m)				
Cast-in	ı-place con	crete				Count	24.00					
Conc r	ectangular	columns wi	th cap bear	m		Quantity	1,229.000	(Sq.m)				
В	enign 🗌	Mode	rate 🛚	Seve	ere 🗌	Not Inspected						
All 6 Pi	iers				Description	4 Columns per Pier						
Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	cies Maintenance Needs					
Sq.m	0.000	869.000	310.000	50.000								
Spalls from loose concrete removal operation on Hwy 403 noted at Piers 1 to 3. Extensive severe delamination & spall at Pier 4, several local severe delam & spalls at Pier 5 and 6 (Ref Photos 38-47). No immediate recommendation as bridge to be replaced. Performance Deficiencies 0-None												
Sidewalks/curbs Length 10								(m)				
Curbs						Width		(m)				
							0.14	(m)				
	N/A	-	-	-		Quantity	57.000	(Sq.m)				
В	enign 🔲	Mode	rate 🗌	ere 🛚	Not Inspected							
West side Description												
Unit	Excellent	Good	Fair	Poor	V. Poor	Perform. Deficiencies	Maintenance N	leeds				
Sq.m	0.000	55.000	2.000	0.000								
Comments Few narrow-medium cracks, light scaling, and several local patch-repaired areas (Ref Photos 4, 33). Performance Deficiencies 0-None												
	Piers Shafts/o Cast-in Conc re B All 6 Pi Unit Sq.m Doose concal local sed al local sed Curbs Cast-in B West s Unit Sq.m	Piers Shafts/columns/Pile Cast-in-place cond Conc rectangular Benign	Piers Shafts/columns/Pile Bents Cast-in-place concrete Conc rectangular columns wi Benign	Piers Shafts/columns/Pile Bents Cast-in-place concrete Conc rectangular columns with cap bear Benign Moderate Unit Excellent Good Fair Sq.m 0.000 869.000 310.000 Dose concrete removal operation on Hwy 403 ral local severe delam & spalls at Pier 5 and 6 (d. Deficiencies Sidewalks/curbs Curbs Cast-in-place concrete N/A Benign Moderate West side Unit Excellent Good Fair Sq.m 0.000 55.000 2.000	Piers Shafts/columns/Pile Bents Cast-in-place concrete Conc rectangular columns with cap beam Benign Moderate Several Several Incar Several I	Piers Shafts/columns/Pile Bents Cast-in-place concrete Conc rectangular columns with cap beam Benign Moderate Severe Unit Excellent Good Fair Poor V. Poor Sq.m 0.000 869.000 310.000 50.000 Dose concrete removal operation on Hwy 403 noted at Piers 1 to 3. External local severe delam & spalls at Pier 5 and 6 (Ref Photos 38-47). No immedia. Deficiencies Sidewalks/curbs Curbs Cast-in-place concrete N/A Benign Moderate Severe Mest Severe Mest Side Unit Excellent Good Fair Poor V. Poor Sq.m 0.000 55.000 2.000 0.000 Description West side Unit Excellent Good Fair Poor V. Poor Sq.m 0.000 55.000 2.000 0.000	Piers Shafts/columns/Pile Bents Length Width Height Cast-in-place concrete Conc rectangular columns with cap beam Benign Moderate Severe Description All 6 Piers Unit Excellent Good Fair Poor V. Poor Perform. Deficiencies Sq.m 0.000 869.000 310.000 50.000 Dose concrete removal operation on Hwy 403 noted at Piers 1 to 3. Extensive severe delamination & al local severe delam & spalls at Pier 5 and 6 (Ref Photos 38-47). No immediate recommendation as Id. Deficiencies Sidewalks/curbs Curbs Length Width Height Cast-in-place concrete N/A Benign Moderate Severe Moderate Description West side Unit Excellent Good Fair Poor V. Poor Perform. Deficiencies Sq.m 0.000 55.000 2.000 0.000 medium cracks, light scaling, and several local patch-repaired areas (Ref Photos 4, 33).	Piers				



Struct. ID		282							
Element Da	ta								
Group	Sidewa	alks/curbs					Length	106.40	(m)
Element	Sidewa	alk and medi	ans				Width	1.47	(m)
Span Num							Height	0.14	(m)
Material	Cast-in-place concrete						Count	1.00	
Туре	N/A						Quantity	171.000	(Sq.m)
Env't	Benign ☐ Moderate ☐ Severe ☒						Not Inspected		
Location	East s	ide							
Condition	Unit Excellent Good Fair Poor					V. Poor	Perform. Deficiencies	Maintenance N	leeds
Data	Sq.m	0.000	131.000	40.000	0.000				
Comments Several narro patch-repaire Performance 0-None	d areas	(Ref Photos			n-wide longi	tudinal cracks ((near curb face), and severa	CR =	
									36



Struct. ID 282								
Recommended Work (Element Level)								
<u>Element</u>	Repair / Rehabilitation	None	Urgent	Time < 1 year		6 - 10 year	Estimated Cost (\$)	
						Total Cost		

Associated Work	Comments	Estimated Cost (\$)
Approaches		
Detours		
Other		
Traffic Control		
Utilities		
	Tota	al Cost
	Grand Tota	l Cost:



Struct. ID

282



Description

East Elevation

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript

Defect Descript1 Defect Descript2 Defect General

File Name

01 East Elevation.JPG



Description

Other

General View of Bridge Deck from South Approach

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2

Defect Other General

File Name

02 General View of Bridge Deck from South Approach.JPG



Struct. ID

282



Description

Bridge Deck from Southeast Corner

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2

Asphalt South

Excellent condition

Decks/Wearing surface

File Name

03 Bridge Deck from Southeast Corner.JPG



Description

Defect Other

Bridge Deck from Northwest Corner

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1

Decks/Wearing surface
Asphalt
Locator
North
Excellent condition

Defect Descript2

Defect Other

File Name

04 Bridge Deck from Northwest Corner.JPG



Struct. ID

282



Description

General View of Deck Underside at Hwy 403 from SW Corner

Elem Grp/Class Elem Type

Sub Element Exterior

Material Type Locator Cast-in-place concrete

Decks/Soffit - Thin Slab

Defect Descript1
Defect Descript2

Defect Other General

File Name

05 General View of Deck Underside at Hwy 403 from SW Corner.JPG



Description

Elem Type

Defect

Other

East Exterior Soffit from South

Elem Grp/Class Decks/Soffit - Thin Slab

Sub Element Exterior

Material Type Cast-in-place concrete

Locator East

Defect Descript1 Fair condition

Defect Descript2

File Name 06 East Exterior Soffit from South.JPG



Struct. ID

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Description

West Exterior Soffit from North

Elem Grp/Class Elem Type Sub Element

Sub Element Exterior

Material Type Cast-in-

Locator
Defect Descript1

Defect Descript2

Defect Other Decks/Soffit - Thin Slab

Cast-in-place concrete

West

Good condition

File Name

07 West Exterior Soffit from North.JPG



Description

Local Delamination & Spalls on South Section of East Fascia

Elem Grp/Class

Decks/Soffit - Thin Slab

Sub Element Exterior

Material Type Cast-in-place concrete

Locator East

Defect Descript1 Fair condition

Defect Descript2

Defect Spalling
Other

File Name 08 Local Delamination & Spalls on South Section of East Fascia.JPG



Struct. ID

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Description

Removed Loose Concrete Areas over Hwy 403, East Edge at Span 2 Shown

Elem Grp/Class Decks/Soffit - Thin Slab

Elem Type

Elelli Type

Sub Element Exterior

Material Type
Locator

Cast-in-place concrete
East

Defect Descript1

Defect Descript2

Poor condition

Defect Other Spalling

File Name

09 Removed Loose Concrete Areas over Hwy 403, East Edge at Span 2 Shown.JPG



Description

Elem Type

Defect Other

South Span (Span 1), Interior Soffit, looking South

Elem Grp/Class Decks/Soffit - Thin Slab

Sub Element Interior

Material Type Cast-in-place concrete

Locator Interior

Defect Descript1 Good condition
Defect Descript2

File Name 10 South Span (Span 1), Interior Soffit, looking South.JPG



Struct. ID

282



Description

South Intermediate Span (Span 2), Interior Soffit over 403EB, looking North

Elem Grp/Class Elem Type **Sub Element Material Type** Locator **Defect Descript1 Defect Descript2**

Cast-in-place concrete

Decks/Soffit - Thin Slab

Good condition

Interior

Interior

File Name

11 South Intermediate Span (Span 2), Interior Soffit over 403EB, looking North.JPG



Description

Defect

Other

Defect Other

Span 3, Interior Soffit over 403WB, looking South

Decks/Soffit - Thin Slab Elem Grp/Class **Elem Type** Interior Sub Element Material Type Cast-in-place concrete Locator Interior **Defect Descript1** Good condition **Defect Descript2**

File Name

12 Span 3, Interior Soffit over 403WB, looking South.JPG



Struct. ID

282



Description

Span 4, Interior Soffit, looking South

Elem Grp/Class Decks/Soffit - Thin Slab Elem Type **Sub Element** Interior Cast-in-place concrete **Material Type** Locator Interior **Defect Descript1** Good condition **Defect Descript2** Defect

File Name

13 Span 4, Interior Soffit, looking South.JPG



Description

Span 5, Interior Soffit, looking North

Decks/Soffit - Thin Slab Elem Grp/Class **Elem Type** Interior Sub Element Material Type Cast-in-place concrete Locator Interior **Defect Descript1** Good condition **Defect Descript2 Defect** Other

File Name

14 Span 5, Interior Soffit, looking North.JPG



Struct. ID

282



Description

North Intermediate Span (Span 6), Interior Soffit, looking North

Elem Grp/Class Decks/Soffit - Thin Slab Elem Type Interior **Sub Element**

Material Type Cast-in-place concrete

Locator **Defect Descript1**

Defect Descript2 Defect

Stained

Interior

Good condition

Other

15 North Intermediate Span (Span 6), Interior Soffit, looking North.JPG





Description

North Span (Span 7), Interior Soffit, looking North

Elem Grp/Class Decks/Soffit - Thin Slab **Elem Type** Interior **Sub Element**

Material Type Locator **Defect Descript1 Defect Descript2**

Good condition

Interior

Cast-in-place concrete

Defect

Other

16 North Span (Span 7), Interior Soffit, looking North.JPG



Struct. ID

282



Description

Local Small Delam and Heavy Corrosion below South Expansion Joint, looking West

Elem Grp/Class Decks/Soffit - Thin Slab **Elem Type** End

Sub Element Material Type Cast-in-place concrete

Locator South **Defect Descript1** Fair condition

Defect Descript2 Defect

Stained Other

File Name 17 Local Small Delam and Heavy Corrosion below South Expansion Joint, looking West.JPG



Description

Other

Severe Spall on East Exterior Soffit between Pier 1 and

Decks/Soffit - Thin Slab Elem Grp/Class **Elem Type**

Exterior Sub Element

Material Type Cast-in-place concrete

Locator Exterior **Defect Descript1** Poor condition

Defect Descript2

Defect Spalling

File Name 18 Severe Spall on East Exterior Soffit between Pier 1 and 2.JPG



Struct. ID

282



Description

Heavy Corrosion on End-Diaphragm & Bottom of Girders at SE Corner of South Span Soffit

Elem Grp/Class

Beams/MLE's/Girders

I type

Sub Element End

Material Type Weathering steel

Locator South

Defect Descript1
Defect Descript2

Defect

Corrosion

Poor condition

File Name

19 Heavy Corrosion on End-Diaphragm & Bottom of Giders at SE Corner of South Span Soffit.JPG

Other



Description

Elem Type

Stained Crack with Wet Area at SW Corner of South Span Soffit

Elem Grp/Class Decks/Soffit - Thin Slab

Sub Element End

Material Type Cast-in-place concrete

Locator South

Defect Descript1 Fair condition
Defect Descript2

Defect Crack
Other

File Name 20 Stained Crack with Wet Area at SW Corner of South Span Soffit.JPG



Struct. ID

282



Description

Local Spalls at NW Corner of North Span Soffit

Elem Grp/Class **Elem Type** Sub Element **Material Type** Locator North

Defect Descript1

Defect Descript2 Defect

Other

Decks/Soffit - Thin Slab

End

Cast-in-place concrete

Poor condition

Spalling

File Name

21 Local Spalls at NW Corner of North Span Soffit.JPG



Description

Local Delam, Spalls, and Narrow-Medium Stained Cracks on NW Section of North Span Soffit

Elem Grp/Class Decks/Soffit - Thin Slab **Elem Type**

End Sub Element

Material Type Cast-in-place concrete

Locator North

Defect Descript1 Fair condition **Defect Descript2**

Defect Crack

File Name 22 Local Delam, Spalls, and Narrow-Medium Stained Cracks on NW Section of North Span Soffit.JF

Other



Struct. ID

282



Description

Severe Delam on Soffit & Heavy Corrosion on End-Diaphragm at NE Corner of North Span Soffit

Elem Grp/Class Elem Type End Sub Element

Material Type

Locator **Defect Descript1**

Defect Descript2 Defect

Other

Decks/Soffit - Thin Slab

Cast-in-place concrete

North

Poor condition

Delamination

File Name

23 Severe Dalam on Soffit & Heavy Corrosion on End-Diaphragm at NE Corner of North Span Soffit



Description

Wet Areas with Local Spalls on NE Seciton of Soffit at Span 6

Elem Grp/Class Decks/Soffit - Thin Slab **Elem Type**

Interior Sub Element **Material Type**

Locator **Defect Descript1**

Defect Descript2 Defect

Other

Cast-in-place concrete

Interior

Fair condition

Staining

File Name

24 Wet Areas with Local Spalls on NE Seciton of Soffit at Span 6.JPG



Struct. ID

282



Description

Typical Narrow Stained Cracks on Interior Soffit, Span 4 Shown

Elem Grp/Class Decks/Soffit - Thin Slab **Elem Type**

Interior **Sub Element Material Type** Cast-in-place concrete

Interior

Defect Descript1 Good condition

Defect Crack

File Name

25 Typical Narrow Stained Cracks on Interior Soffit, Span 4 Shown.JPG



Description

Locator

Other

Defect Descript2

South Expansion Joint, looking East

Joints/Concrete end dams Elem Grp/Class **Elem Type** Sub Element **Material Type** Cast-in-place concrete Locator South **Defect Descript1 Excellent condition Defect Descript2 Defect** Other

File Name

26 South Expansion Joint, looking East.JPG



Struct. ID

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Description

North Expansion Joint, looking West

Elem Grp/Class Joints/Armoring/retaining devic **Elem Type Sub Element Material Type** Steel Locator North **Defect Descript1**

Defect Descript2 Defect Other

Excellent condition

File Name

27 North Expansion Joint, looking West.JPG



Description

South Expansion Joint, Gaps from Debonded Caulking atop Joint Seal (TYP)

Elem Grp/Class **Elem Type Sub Element Material Type** Locator **Defect Descript1 Defect Descript2 Defect**

Joints/Seals/sealants

Other

South

Good condition

File Name

28 South Expansion Joint, Gaps from Debonded Caulking atop Joint Seal (TYP).JPG

Other



Struct. ID

282



Description

Typical Debris CLogging Deck Drain, West Drain Shown

Elem Grp/Class Decks/Drainage Drain pipes with basins **Elem Type**

Sub Element Steel **Material Type** Locator West

Defect Descript1 Defect Descript2 Defect Other

Good condition

File Name

29 Typical Debris CLogging Deck Drain, West Drain Shown.JPG



Description

Typical Drain Downspout, East Drain in Span 5 Shown

Decks/Drainage Elem Grp/Class Drain pipes with basins **Elem Type** Sub Element Steel Material Type Locator East **Defect Descript1** Good condition **Defect Descript2 Defect** Other

File Name

30 Typical Drain Downspout, East Drain in Span 5 Shown.JPG



Struct. ID

282



Description

Insulated Watermain below Bridge deck, looking North

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2

Attachments, Signs, and Utilitie

Good condition

South

File Name

31 Insulated Watermain below Bridge deck, looking North.JPG



Description

Defect Other

Defect Other

East Sidewalk & Parapet Wall from South

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2

Sidewalks/curbs/Curbs
Cast-in-place concrete
East
Good condition

File Name

32 East Sidewalk & Parapet Wall from South.JPG



Struct. ID

282



Description

West Curb & Parapet Wall from North

Elem Grp/Class **Elem Type** Sub Element **Material Type** Locator **Defect Descript1 Defect Descript2** Defect

Sidewalks/curbs/Curbs

Cast-in-place concrete

Sidewalks/curbs/Curbs

West

Good condition

File Name

33 West Curb & Parapet Wall from North.JPG



Description

Other

Other

Wide Longitudinal Crack on South Section of East Sidewalk, looking North

Elem Grp/Class **Elem Type** Sub Element **Material Type** Cast-in-place concrete Locator East

Defect Descript1 Fair condition **Defect Descript2**

Defect Crack

File Name 34 Wide Longitudinal Crack on South Section of East Sidewalk, looking North.JPG



Struct. ID

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Description

Large Patched Area on East Sidewalk at North Expansion Joint (TYP)

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect

Sidewalks/curbs/Curbs

Cast-in-place concrete

North

Good condition

File Name

35 Large Patched Area on East Sidewalk at North Expansion Joint (TYP).JPG



Description

Other

West Parapet Wall, Severe Delamination on Wall behind Thrie-Beam Guardrail

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Def

File Name

36 West Parapet Wall, Severe Delamination on Wall behind Thrie-Beam Guardrail.JPG

Other



Struct. ID

282



Description

Scaled Exterior Face of West Parapet Wall over 403WB

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect

Attachments, Signs, and Utilitie

West Fair condition

File Name

37 Scaled Exterior Face of West Parapet Wall over 403WB.JPG



Description

Other

South Pier (Pier 1), South Elevation

Elem Grp/Class	Piers/Shafts/columns/Pile Bent
Elem Type	Conc rectangular columns with
Sub Element	
Material Type	Cast-in-place concrete
Locator	South
Defect Descript1	Good condition
Defect Descript2	
Defect	
Other	

File Name

38 South Pier (Pier 1), South Elevation.JPG



Struct. ID

282



Description

South Intermediate Pier (Pier 2), South Elevation

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Other

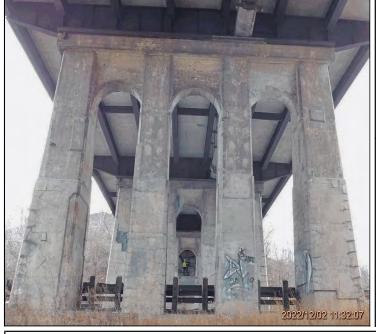
Piers/Shafts/columns/Pile Bent Conc rectangular columns with

Cast-in-place concrete

Intermediate
Fair condition

File Name

39 South Intermediate Pier (Pier 2), South Elevation.JPG



Description

Pier 3, North Elevation

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Other
Piers/Shafts/columns/Pile Bent
Conc rectangular columns with
Cast-in-place concrete
Intermediate
Fair condition

File Name

40 Pier 3, North Elevation.JPG



Struct. ID

282



Description

Pier 4, South Elevation

Elem Grp/Class Piers/Shafts/columns/Pile Bent Conc rectangular columns with **Elem Type** Sub Element Cast-in-place concrete **Material Type** Locator Intermediate **Defect Descript1** Poor condition **Defect Descript2** Defect Spalling Other

File Name

41 Pier 4, South Elevation.JPG



Description

North Intermediate Pier (Pier 5), North Elevation

Elem Grp/Class Piers/Caps **Elem Type** Sub Element Material Type Cast-in-place concrete Locator Intermediate **Defect Descript1** Good condition **Defect Descript2 Defect** Other

File Name

42 North Intermediate Pier (Pier 5), North Elevation.JPG



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Description

North Pier (Pier 7), South Elevation

Elem Grp/Class Elem Type Sub Element **Material Type** Locator **Defect Descript1 Defect Descript2 Defect** Other

Piers/Caps

Cast-in-place concrete

North

Good condition

File Name

43 North Pier (Pier 7), South Elevation.JPG



Description

Pier 2, Spalls from Concrete Removal Operation in areas adjacent to Hwy 403 Traffic Lanes (TYP)

Elem Grp/Class Piers/Shafts/columns/Pile Bent Conc rectangular columns with **Elem Type** Sub Element **Material Type** Cast-in-place concrete Locator Intermediate **Defect Descript1** Fair condition **Defect Descript2 Defect** Other

File Name

44 Pier 2, Spalls from Concrete Removal Operation in areas adjacent to Hwy 403 Traffic Lanes (TYI



Struct. ID

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Description

Pier 4, Severe Delam & Spalls on Columns at Pier, looking East

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Descript2
Defect
Sub Element
Material Type
Cast-in-place concrete
Bottom
Poor condition
Spalling

File Name

45 Pier 4, Severe Delam & Spalls on Columns at Pier, looking East.JPG



Description

Other

Pier 5, Severe Delamination & Spalls on Bottom Section of East Column

Elem Grp/Class	Piers/Shafts/columns/Pile Bent
Elem Type	Conc rectangular columns with
Sub Element	
Material Type	Cast-in-place concrete
Locator	Bottom
Defect Descript1	Poor condition
Defect Descript2	
Defect	Delamination
Other	

File Name

46 Pier 5, Severe Delamination & Spalls on Bottom Section of East Column.JPG

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Struct. ID

282



Description

Pier 6, Severe Delam on Bottom Section of East Column, looking East

Elem Grp/Class

Elem Type

Sub Element

Material Type

Locator

Defect Descript1

Defect Descript2

Piers/Shafts/columns/Pile Bent
Conc rectangular columns with
Cast-in-place concrete
Bottom
Poor condition

Defect Descript2
Defect
Other

Delamination

File Name

47 Pier 6, Severe Delam on Bottom Section of East Column, looking East.JPG



Description

Other

Typical Bearing at Sout Piers, South Pier Shown

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect

File Name

48 Typical Bearing at Sout Piers, South Pier Shown.JPG



Struct. ID

282



Description

South Abutment

Elem Grp/Class **Elem Type Sub Element Material Type** Locator **Defect Descript1 Defect Descript2** Defect

Abutments/Abutment walls

Conventional closed

Cast-in-place concrete

South

Fair condition

File Name

49 South Abutment.JPG



Description

Other

North Abutment, looking West

Elem Type Sub Element Material Type Locator **Defect Descript1 Defect Descript2 Defect**

Other

Elem Grp/Class

Abutments/Abutment walls

Conventional closed

Cast-in-place concrete

North

Fair condition

File Name 50 North Abutment, looking West.JPG



Struct. ID

282



Description

South Abutment, Local Severe Delamination & Spalls at Top West Section

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Descript2
Defect
South
Poor condition
Spalling

File Name

51 South Abutment, Local Severe Delamination & Spalls at Top West Section.JPG



Description

Other

South Abutment, Severe Spalls on East Section, looking East

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Other

Abutments/Ballast walls

Cast-in-place concrete
South
Poor condition
Spalling

File Name

52 South Abutment, Severe Spalls on East Section, looking East.JPG



Struct. ID

282



Description

North Abutment, Severe Delam on West Section

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Defect
Other

Abutments/Ballast walls
Cast-in-place concrete
North
Poor condition
Delamination

File Name

53 North Abutment, Severe Delam on West Section.JPG



Description

Local Severe Spalls on North Ballast Wall at Central Section of North Abutment

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Other

Abutments/Ballast walls

Cast-in-place concrete
North
Poor condition

Spalling

File Name

54 Local Severe Spalls on North Ballast Wall at Central Section of North Abutment.JPG



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Description

Typical Bearings at Abutments, West Bearing at South Abutment Shown

Elem Grp/Class **Elem Type**

Sub Element **Material Type**

Locator **Defect Descript1**

Defect Descript2

Defect Other

Abutments/Bearings

Rocker

South

Fair condition

File Name

55 Typical Bearings at Abutments, West Bearing at South Abutment Shown.JPG



Description

Typical Bearings Abutments, West Bearing at North Abutment Shown

Abutments/Bearings Elem Grp/Class Rocker **Elem Type**

Sub Element **Material Type**

Locator North

Defect Descript1 Defect Descript2

Defect Other

Fair condition

File Name

56 Typical Bearings Abutments, West Bearing at North Abutment Shown.JPG



Struct. ID

282



Description

Southeast Wingwall

Elem Grp/Class Elem Type Sub Element **Material Type** Locator **Defect Descript1 Defect Descript2** Defect Other

Abutments/Wingwalls Reinforced concrete

Cast-in-place concrete

South

Good condition

File Name

57 Southeast Wingwall.JPG



Description

Southwest Wingwall

Elem Grp/Class **Elem Type** Sub Element **Material Type** Locator **Defect Descript1 Defect Descript2 Defect** Other

Abutments/Wingwalls Reinforced concrete

Cast-in-place concrete

South

Good condition

File Name

58 Southwest Wingwall.JPG



Struct. ID

282



Description

Northwest Wingwall

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Other

Abutments/Wingwalls
Reinforced concrete

Cast-in-place concrete

North

Good condition

File Name

59 Northwest Wingwall.JPG



Description

Northeast Wingwall

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect Descript2
Defect
Other

Abutments/Wingwalls
Reinforced concrete

Cast-in-place concrete

North

Good condition

File Name

60 Northeast Wingwall.JPG



Struct. ID

282



Description

South Embankment Slope Protection

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1

Defect Descript2
Defect
Other

Embankments & Streams/Slop

Concrete

South

Good condition

File Name

61 South Embankment Slope Protection.JPG



Description

Other

Rock Protection at North Embankment Slope, looking North

Elem Grp/Class
Elem Type
Sub Element
Material Type
Locator
Defect Descript1
Defect
Def

File Name

62 North Slope Protection, looking North.JPG



Struct. ID

282



Description

South Approach, looking South

Elem Type Sub Element **Material Type** Asphalt Locator

Defect Descript1 Defect Descript2 Defect

Excellent condition

South

Approaches/Wearing surface

Approaches/Wearing surface

File Name

63 South Approach, looking South.JPG



Description

Elem Grp/Class

Defect Descript2

Defect Other

Other

North Approach, looking North

Elem Type Sub Element Asphalt Material Type Locator North **Defect Descript1 Excellent condition**

File Name

64 North Approach, looking North.JPG



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 RptInspection
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