

Rhode Island Department of Transportation

Bridge Inspection Report

Structure Inventory and Appraisal Sheet (English Units)

Name: Washington Bridge North	Agency ID: 070001	Inspec Date: 07/24/2019
		Inspected By: AECOM

IDENTIFICATION

Rte.(On/Under) 5A: Route On Structure	State 1: 44 Rhode Island
Rte. Signing Prefix 5B: 1 Interstate Hwy	Facility Carried 7: I-195 WB
Level of Service 5C: 1 Mainline	Municipality 4: East Providence
Route Number 5D: 00195	SHD District 2: District 3
Directional Suffix 5E: 4 West	Feature Intersected 6: SEEKONK RIVER
Border Bridge Code 98: Not Applicable (P)	County Code 3: Providence
Border Bridge Number 99:	Location 9: 0.2 Mi W of JCT US 6
Mile Post 11: 2.423 mi	Latitude 16: 41° 49' 09"
Struc Num 8: 00000000007000	Longitude 17: 071° 23' 12"
% Responsibility:	

INSPECTION

Inspection Date 90: 7/24/2019	Frequency 91: 24 months	Next Inspection:	7/24/2021
FC Inspection Date 93A: NA	FC Frequency 92A:	Next FC Inspection:	NA
UW Inspection Date 93B: 7/24/2017	UW Frequency 92B: 48 months	Next UW Inspection:	7/24/2021
SI Date 93C: 7/24/2019	SI Frequency 92C: 12 months	Next SI:	7/24/2020
Element Insp. Date:	7/24/2019	Element Frequency:	12 months
		Next Elem. Insp.:	7/24/2020

CONDITION

CONDITION Poor

Deck 58: 6 Satisfactory	Super 59: 4 Poor	Sub 60: 4 Poor	SD/FO: SD
Culvert 62: N N/A (NBI)	Channel/Channel Protection 61:	6 Bank Slumping	SUFF RATE: 52.0

LOAD RATING AND POSTING

Inventory Rating Method 65: 8 LRFR (HL93)	Operating Rating Method 63: 8 LRFR (HL93)
Inventory Rating 66: MS22.2	Operating Rating 64: MS28.8
Design Load 31: 6 MS18(HS20)+mod	Posting 70: 5 At/Above Legal Loads
Posting Status 41: A Open, no restriction	

GEOMETRIC DATA

Length Max Span 48: 130.60 ft	Structure Length 49: 1,903.87 ft
Width Curb to Curb 51: 71.85 ft	Curb/Sdwik Width L 50A: 0.00 ft
Approach Roadway width 32: 61.00 ft (w/ shoulders)	Curb/Sidewalk Width R 50B: 0.00 ft
Deck Area: 145.531.82ft ²	Width Out to Out 52: 76.44 ft
Skew 34: 0.00°	Median 33: 0 No median
Vertical Clearance 10: 99.99 ft	Structure Flared 35: 1 Yes, flared
	Horizontal Clearance 47: 59.71 ft
Minimum Vertical Clearance Over Bridge 53: 18.33 ft	
Minimum Vertical Underclearance Reference 54A: H Hwy beneath struct	
Minimum Vertical Underclearance 54B: 14.17 ft	
Minimum Lateral Underclearance Reference R 55A: H Hwy beneath struct	
Minimum Lateral Underclearance R 55: 6.00 ft	
Minimum Lateral Underclearance L 56: 0.00 ft	

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AGE AND SERVICE

Year Built	27:	1969	ADT	29:	76,700
Type of Service on	42A:	1 Highway	Year Reconstructed	106:	1998
Type of Service under	42B:	8 Hwy-waterway-RR	Detour Length	19:	2.0 mi
Lanes on	28A:	5	Truck ADT	109:	10%
Lanes under	28B:	8	Year of ADT	30:	2008

STRUCTURE TYPE AND MATERIALS

Number of Approach Spans	46:	20	Number of Spans Main Unit	45:	1
Wearing Surface	108A:	6 Bituminous	Main Span Material Design	43A:	3 Steel
Membrane	108B:	2 Prefomed Fabric	Main Span Material Design	43B:	02 Stringer/Girder
Deck protection	108C:	8 Unknown	Deck Type	107:	1 Concrete-Cast-ir

APPRAISAL

Bridge Rail	36A:	1 Meets Standards	Approach Rail	36C:	0 Substandard
Transition	36B:	0 Substandard	Approach Rail Ends	36D:	0 Substandard
Str Evaluation	67:	4 Minimum Tolerable	Deck Geometry	68:	4 Tolerable
Waterway Adequacy	71:	7 Above Minimum	Approach Alignment	72:	6 Equal Min Criteria
Scour Critical	113:	3 SC - Unstable			
Underclearance, Vertical and Horizontal	69:	4 Tolerable			

CLASSIFICATION

Defense Highway	100:	1 On Interstate STRAHNE	Parallel Structure	101:	Left of bridge
Direction of Traffic	102:	1 1-way traffic	Temporary Structure	103:	Not Applicable (P)
Highway System	104:	3 On free road	NBIS Length	112:	Long Enough
Defense Hwy	110:	1 On the NHS	Functional Class	26:	11 Urban Interstate
Toll Facility	20:	1 On Interstate STRAHNE	Historical Significance	37:	5 Not eligible for NRHP
Owner	22:	01 State Highway Agency	Custodian	21:	01 State Highway Agency

PROPOSED IMPROVEMENTS

Bridge Cost	94:	\$29,571,332	Type of Work	75:	35 Rehabilitate-gen.
Roadway Cost	95:	\$2,957,133	Length of Improvement	76:	1,903.87
Total Cost	96:	\$44,356,998	Future ADT	114:	92,040
Year of Cost Estimate	97:	2007	Year of Future ADT	115:	2036

NAVIGATION DATA

Navigation Control	38:	Permit Not Required	Horizontal Clearance	40:	99.7 ft
Vertical Clearance	39:	42.0 ft	Lift Bridge Vertical Clearance	116:	
Pier Protection	111:	2 In-Place, Functioning			

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0	12/3	Re Concrete Deck	142,889.00	94%	134,317.00	5%	7,144.00	1%	1,428.00	0%	0.00
	510/3	Wearing Surfaces	142,889.00	94%	134,317.00	5%	7,144.00	1%	1,428.00	0%	0.00
	3210/3	Del/Spall/Patch/Pot(Wear Surf)	4,286.00	0%	0.00	83%	3,572.00	17%	714.00	0%	0.00
	3220/3	Crack (Wearing Surface)	4,286.00	0%	0.00	83%	3,572.00	17%	714.00	0%	0.00
	1080/3	Delamination/Spall/Patched Area	2,143.00	0%	0.00	83%	1,786.00	17%	357.00	0%	0.00
	1090/3	Exposed Rebar	2,143.00	0%	0.00	83%	1,786.00	17%	357.00	0%	0.00
	1120/3	Efflorescence/Rust Staining	2,143.00	0%	0.00	83%	1,786.00	17%	357.00	0%	0.00
	1130/3	Cracking (RC and Other)	2,143.00	0%	0.00	83%	1,786.00	17%	357.00	0%	0.00
0	16/3	Re Conc Top Flange	7,336.00	81%	5,911.00	16%	1,150.00	4%	275.00	0%	0.00
	510/3	Wearing Surfaces	7,336.00	100%	7,336.00	0%	0.00	0%	0.00	0%	0.00
	1080/3	Delamination/Spall/Patched Area	200.00	0%	0.00	100%	200.00	0%	0.00	0%	0.00
	1090/3	Exposed Rebar	25.00	0%	0.00	0%	0.00	100%	25.00	0%	0.00
	1120/3	Efflorescence/Rust Staining	1,000.00	0%	0.00	75%	750.00	25%	250.00	0%	0.00
	1130/3	Cracking (RC and Other)	200.00	0%	0.00	100%	200.00	0%	0.00	0%	0.00
0	105/3	Re Clsd Box Girder	922.00	8%	78.00	55%	505.00	37%	339.00	0%	0.00
	1080/3	Delamination/Spall/Patched Area	100.00	0%	0.00	80%	80.00	20%	20.00	0%	0.00
	1090/3	Exposed Rebar	5.00	0%	0.00	0%	0.00	100%	5.00	0%	0.00
	1120/3	Efflorescence/Rust Staining	244.00	0%	0.00	50%	122.00	50%	122.00	0%	0.00
	1130/3	Cracking (RC and Other)	495.00	0%	0.00	61%	303.00	39%	192.00	0%	0.00
0	107/3	Steel Opn Girder/Beam	1,320.00	60%	787.00	38%	496.00	3%	37.00	0%	0.00
	515/3	Steel Protective Coating	19,385.00	38%	7,350.00	32%	6,300.00	30%	5,735.00	0%	0.00
	3410/3	Chalk(Steel Protect Coatings)	6,300.00	0%	0.00	100%	6,300.00	0%	0.00	0%	0.00
	3420/3	Peel/Bub/Crack(Stl Protect Coat)	5,735.00	0%	0.00	0%	0.00	100%	5,735.00	0%	0.00
	1000/3	Corrosion	390.00	0%	0.00	91%	353.00	10%	37.00	0%	0.00
	1900/3	Distortion	143.00	0%	0.00	100%	143.00	0%	0.00	0%	0.00
0	109/3	Pre Opn Conc Girder/Beam	14,543.00	81%	11,733.00	9%	1,268.00	10%	1,407.00	1%	135.00
	521/3	Conc Prot Coating	5,000.00	85%	4,250.00	0%	0.00	8%	375.00	8%	375.00
	3510/3	Wear (Concrete Protect Coat)	750.00	0%	0.00	0%	0.00	50%	375.00	50%	375.00
	1080/3	Delamination/Spall/Patched Area	1,150.00	0%	0.00	78%	900.00	22%	250.00	0%	0.00
	1090/3	Exposed Rebar	175.00	0%	0.00	0%	0.00	29%	50.00	71%	125.00
	1100/3	Exposed Prestressing	25.00	0%	0.00	0%	0.00	60%	15.00	40%	10.00
	1110/3	Cracking (PSC)	727.00	0%	0.00	0%	0.00	100%	727.00	0%	0.00
	1120/3	Efflorescence/Rust Staining	730.00	0%	0.00	50%	365.00	50%	365.00	0%	0.00
	7000/3	Damage	3.00	0%	0.00	100%	3.00	0%	0.00	0%	0.00
	8368/3	Graffiti	200.00	100%	200.00	0%	0.00	0%	0.00	0%	0.00
0	110/3	Re Conc Opn Girder/Beam	2,880.00	33%	954.00	41%	1,188.00	24%	688.00	2%	50.00
	521/3	Conc Prot Coating	14,800.00	100%	14,800.00	0%	0.00	0%	0.00	0%	0.00
	1080/3	Delamination/Spall/Patched Area	800.00	0%	0.00	75%	600.00	25%	200.00	0%	0.00
	1090/3	Exposed Rebar	100.00	0%	0.00	0%	0.00	50%	50.00	50%	50.00
	1120/3	Efflorescence/Rust Staining	450.00	0%	0.00	67%	300.00	33%	150.00	0%	0.00
	1130/3	Cracking (RC and Other)	576.00	0%	0.00	50%	288.00	50%	288.00	0%	0.00
0	205/3	Re Conc Column	92.00	43%	40.00	22%	20.00	35%	32.00	0%	0.00
	1080/3	Delamination/Spall/Patched Area	42.00	0%	0.00	48%	20.00	52%	22.00	0%	0.00
	1120/3	Efflorescence/Rust Staining	5.00	0%	0.00	0%	0.00	100%	5.00	0%	0.00
	1130/3	Cracking (RC and Other)	5.00	0%	0.00	0%	0.00	100%	5.00	0%	0.00
	8368/3	Graffiti	300.00	0%	0.00	100%	300.00	0%	0.00	0%	0.00
0	210/3	Re Conc Pier Wall	1,151.00	58%	666.00	25%	290.00	15%	172.00	2%	23.00
	521/3	Conc Prot Coating	25,200.00	100%	25,200.00	0%	0.00	0%	0.00	0%	0.00
	1080/3	Delamination/Spall/Patched Area	175.00	0%	0.00	43%	75.00	44%	77.00	13%	23.00
	1120/3	Efflorescence/Rust Staining	80.00	0%	0.00	50%	40.00	50%	40.00	0%	0.00
	1130/3	Cracking (RC and Other)	115.00	0%	0.00	52%	60.00	48%	55.00	0%	0.00
	6000/3	Scour	115.00	0%	0.00	100%	115.00	0%	0.00	0%	0.00
	8368/3	Graffiti	400.00	0%	0.00	100%	400.00	0%	0.00	0%	0.00
0	215/3	Re Conc Abutment	230.00	34%	78.00	19%	44.00	47%	108.00	0%	0.00
	521/3	Conc Prot Coating	2,300.00	100%	2,300.00	0%	0.00	0%	0.00	0%	0.00
	1080/3	Delamination/Spall/Patched Area	103.00	0%	0.00	28%	29.00	72%	74.00	0%	0.00
	1120/3	Efflorescence/Rust Staining	30.00	0%	0.00	50%	15.00	50%	15.00	0%	0.00
	1130/3	Cracking (RC and Other)	19.00	0%	0.00	0%	0.00	100%	19.00	0%	0.00

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	8368/3	Graffiti	200.00	0%	0.00	100%	200.00	0%	0.00	0%	0.00
0	220/3	Re Conc Pile Cap/Ftg	1,151.00	100%	1,150.00	0%	1.00	0%	0.00	0%	0.00
	1130/3	Cracking (RC and Other)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
0	234/3	Re Conc Pier Cap	388.00	13%	52.00	81%	313.00	6%	23.00	0%	0.00
	1080/3	Delamination/Spall/Patched Area	308.00	0%	0.00	95%	293.00	5%	15.00	0%	0.00
	1090/3	Exposed Rebar	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
	1120/3	Efflorescence/Rust Staining	15.00	0%	0.00	47%	7.00	53%	8.00	0%	0.00
	1130/3	Cracking (RC and Other)	12.00	0%	0.00	100%	12.00	0%	0.00	0%	0.00
0	300/3	Strip Seal Exp Joint	93.00	0%	0.00	95%	88.00	5%	5.00	0%	0.00
	2310/3	Leakage	5.00	0%	0.00	100%	5.00	0%	0.00	0%	0.00
	2330/3	Seal Damage	10.00	0%	0.00	100%	10.00	0%	0.00	0%	0.00
	2350/3	Debris Impaction	5.00	0%	0.00	100%	5.00	0%	0.00	0%	0.00
	2370/3	Metal Deterioration or Damage	5.00	0%	0.00	0%	0.00	100%	5.00	0%	0.00
0	301/3	Pourable Joint Seal	1,151.00	44%	507.00	47%	544.00	7%	85.00	1%	15.00
	2310/3	Leakage	344.00	0%	0.00	100%	344.00	0%	0.00	0%	0.00
	2320/3	Seal Adhesion	300.00	0%	0.00	67%	200.00	28%	85.00	5%	15.00
0	310/3	Elastomeric Bearing	401.00	34%	136.00	47%	190.00	19%	75.00	0%	0.00
	2220/3	Alignment	4.00	0%	0.00	0%	0.00	100%	4.00	0%	0.00
	2230/3	Bulging, Splitting or Tearing	200.00	0%	0.00	75%	150.00	25%	50.00	0%	0.00
	2240/3	Loss of Bearing Area	61.00	0%	0.00	66%	40.00	34%	21.00	0%	0.00
0	311/3	Moveable Bearing	11.00	0%	0.00	64%	7.00	36%	4.00	0%	0.00
	515/3	Steel Protective Coating	132.00	0%	0.00	0%	0.00	33%	44.00	67%	88.00
	3420/3	Peel/Bub/Crack(Stl Protect Coat)	132.00	0%	0.00	0%	0.00	33%	44.00	67%	88.00
	1000/3	Corrosion	9.00	0%	0.00	78%	7.00	22%	2.00	0%	0.00
	2220/3	Alignment	1.00	0%	0.00	0%	0.00	100%	1.00	0%	0.00
	2240/3	Loss of Bearing Area	1.00	0%	0.00	0%	0.00	100%	1.00	0%	0.00
0	313/3	Fixed Bearing	11.00	0%	0.00	73%	8.00	27%	3.00	0%	0.00
	515/3	Steel Protective Coating	110.00	0%	0.00	0%	0.00	60%	66.00	40%	44.00
	3420/3	Peel/Bub/Crack(Stl Protect Coat)	110.00	0%	0.00	0%	0.00	60%	66.00	40%	44.00
	1000/3	Corrosion	11.00	0%	0.00	73%	8.00	27%	3.00	0%	0.00
0	321/3	Re Conc Approach Slab	2,352.00	0%	0.00	100%	2,352.00	0%	0.00	0%	0.00
	510/3	Wearing Surfaces	2,352.00	57%	1,352.00	21%	500.00	21%	500.00	0%	0.00
	3220/3	Crack (Wearing Surface)	2,352.00	57%	1,352.00	21%	500.00	21%	500.00	0%	0.00
0	331/3	Re Conc Bridge Railing	3,808.00	89%	3,396.00	11%	411.00	0%	1.00	0%	0.00
	1080/3	Delamination/Spall/Patched Area	10.00	0%	0.00	100%	10.00	0%	0.00	0%	0.00
	1120/3	Efflorescence/Rust Staining	1.00	0%	0.00	0%	0.00	100%	1.00	0%	0.00
	1130/3	Cracking (RC and Other)	351.00	0%	0.00	100%	351.00	0%	0.00	0%	0.00
	7000/3	Damage	50.00	0%	0.00	100%	50.00	0%	0.00	0%	0.00
0	8060/3	Scupper	27.00	0%	0.00	11%	3.00	74%	20.00	15%	4.00
	1000/3	Corrosion	4.00	0%	0.00	0%	0.00	0%	0.00	100%	4.00
0	8107/1	Steel Opn Girder/Beam ENDS	110.00	0%	0.00	0%	0.00	100%	110.00	0%	0.00
	515/1	Steel Protective Coating	1,615.00	0%	0.00	0%	0.00	38%	615.00	62%	1,000.00
	3420/1	Peel/Bub/Crack(Stl Protect Coat)	1,615.00	0%	0.00	0%	0.00	38%	615.00	62%	1,000.00
0	8213/3	R/C Return Wall	175.00	0%	0.00	86%	150.00	14%	25.00	0%	0.00
	1080/3	Delamination/Spall/Patched Area	44.00	0%	0.00	100%	44.00	0%	0.00	0%	0.00
	1120/3	Efflorescence/Rust Staining	110.00	0%	0.00	77%	85.00	23%	25.00	0%	0.00
	1130/3	Cracking (RC and Other)	21.00	0%	0.00	100%	21.00	0%	0.00	0%	0.00
	8368/3	Graffiti	100.00	100%	100.00	0%	0.00	0%	0.00	0%	0.00
0	8218/3	Backwall, All Types	230.00	45%	104.00	35%	80.00	20%	46.00	0%	0.00
	1080/3	Delamination/Spall/Patched Area	80.00	0%	0.00	88%	70.00	13%	10.00	0%	0.00
	1120/3	Efflorescence/Rust Staining	23.00	0%	0.00	43%	10.00	57%	13.00	0%	0.00
	1130/3	Cracking (RC and Other)	23.00	0%	0.00	0%	0.00	100%	23.00	0%	0.00
0	8305/3	Asphaltic Joint Material	1,438.00	69%	987.00	31%	451.00	0%	0.00	0%	0.00
	2310/3	Leakage	430.00	0%	0.00	100%	430.00	0%	0.00	0%	0.00
	2340/3	Seal Cracking	21.00	0%	0.00	100%	21.00	0%	0.00	0%	0.00
0	8335/3	Guardrail, Vehicular	700.00	79%	550.00	21%	150.00	0%	0.00	0%	0.00
	515/3	Steel Protective Coating	3,150.00	57%	1,800.00	0%	0.00	43%	1,350.00	0%	0.00
	1000/3	Corrosion	100.00	0%	0.00	100%	100.00	0%	0.00	0%	0.00
	1020/3	Connection	10.00	0%	0.00	100%	10.00	0%	0.00	0%	0.00

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	7000/3	Damage	40.00	0%	0.00	100%	40.00	0%	0.00	0%	0.00
0	8336/3	Conc Bridge Parapet	700.00	50%	350.00	46%	320.00	4%	30.00	0%	0.00
	1080/3	Delamination/Spall/Patched Area	100.00	0%	0.00	100%	100.00	0%	0.00	0%	0.00
	1090/3	Exposed Rebar	100.00	0%	0.00	70%	70.00	30%	30.00	0%	0.00
	1130/3	Cracking (RC and Other)	150.00	0%	0.00	100%	150.00	0%	0.00	0%	0.00
0	8366/3	Rip Rap	1,000.00	94%	940.00	3%	30.00	3%	30.00	0%	0.00
	4000/3	Settlement	60.00	0%	0.00	50%	30.00	50%	30.00	0%	0.00
0	8367/3	Slope Blocks	700.00	85%	595.00	0%	0.00	15%	105.00	0%	0.00
0	8370/3	Steel Diaphragms	70.00	19%	13.00	51%	36.00	24%	17.00	6%	4.00
	515/3	Steel Protective Coating	1,800.00	21%	378.00	63%	1,125.00	12%	207.00	5%	90.00
	3410/3	Chalk(Steel Protect Coatings)	900.00	0%	0.00	100%	900.00	0%	0.00	0%	0.00
	3420/3	Peel/Bub/Crack(Stl Protect Coat)	522.00	0%	0.00	43%	225.00	40%	207.00	17%	90.00
	1000/3	Corrosion	55.00	0%	0.00	64%	35.00	29%	16.00	7%	4.00
	1020/3	Connection	2.00	0%	0.00	50%	1.00	50%	1.00	0%	0.00
0	8371/3	Conc Diaphragms	221.00	16%	35.00	31%	68.00	51%	113.00	2%	5.00
	1080/3	Delamination/Spall/Patched Area	52.00	0%	0.00	0%	0.00	100%	52.00	0%	0.00
	1090/3	Exposed Rebar	12.00	0%	0.00	50%	6.00	8%	1.00	42%	5.00
	1120/3	Efflorescence/Rust Staining	11.00	0%	0.00	55%	6.00	45%	5.00	0%	0.00
	1130/3	Cracking (RC and Other)	111.00	0%	0.00	50%	56.00	50%	55.00	0%	0.00
0	8398/1	Curb/sidewalks - Con	700.00	0%	0.00	100%	700.00	0%	0.00	0%	0.00
	1080/1	Delamination/Spall/Patched Area	698.00	0%	0.00	100%	698.00	0%	0.00	0%	0.00
	1120/1	Efflorescence/Rust Staining	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
	1130/1	Cracking (RC and Other)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00

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Structure Inventory and Appraisal Sheet (English Units)

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
12	Re Concrete Deck	3	07/24/2019	142,889.00	sq.ft	134,317.00	7,144.00	1,428.00	0.00

There is a reinforced concrete deck in Span #1 through #18.

The top of the deck has a bituminous concrete wearing surface/overlay that was in varying stages of repair during the inspection (Photos 1-5, 42-49).

The underside of the deck at the deck joints was in varying stages of re-construction during the inspection. Formwork remains in place throughout the bridge (Photos 26-36) and the seismic restrainer assemblies at the deck joints in Spans #1 through #6 and #8 through #14 typically have the restrainer rod removed (Photo 97).

The underside of the deck has areas of exposed rebar chairs throughout, areas of rust staining and efflorescence, random hairline cracking, random areas of damp concrete, random hollow areas and isolated spalls. The areas immediately surrounding drain pipes have heavy rust staining and efflorescence with intermittent hollow areas. The overhangs exhibit typical hairline transverse cracks with efflorescence and stalactites. See photos 92-105 and the attached file "070001 Elem 12 Defect Table.pdf" for further details.

510	Wearing Surfaces	3	07/24/2019	142,889.00	sq.ft	134,317.00	7,144.00	1,428.00	0.00
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The bituminous concrete wearing surface/overlay on the bridge exhibits sand and debris accumulation along construction limits, minor to moderate wheel line rutting, random sealed and unsealed longitudinal and transverse cracks, scattered patches and depressed pavement with minor potholes, and random locations of raveling along deck joint edges (Photos 46-49, 55-62)

3210	Del/Spall/Patch/Pot(Wear Surf)	3	07/24/2019	4,286.00	sq.ft	0.00	3,572.00	714.00	0.00
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There are isolated minor potholes up to 3" deep and scattered depressed patches in the wearing surface. There is typical raveling or depressed areas up to 12" wide x 2" deep in the pavement along the joints (Photos 46-49, 55-62).

3220	Crack (Wearing Surface)	3	07/24/2019	4,286.00	sq.ft	0.00	3,572.00	714.00	0.00
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There are isolated locations of sealed longitudinal cracks along the lane lines, in the shoulders and in the gore area in Spans #15 through #18 (Photos 46-49). There are sealed transverse cracks adjacent to the joints (Photos 55-62).

1080	Delamination/Spall/Patched Area	3	07/24/2019	2,143.00	sq.ft	0.00	1,786.00	357.00	0.00
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See photos 92-105 and the attached file "070001 Elem 12 Defect Table.pdf" for further details.

1090	Exposed Rebar	3	07/24/2019	2,143.00	sq.ft	0.00	1,786.00	357.00	0.00
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See photos 92-105 and the attached file "070001 Elem 12 Defect Table.pdf" for further details.

1120	Efflorescence/Rust Staining	3	07/24/2019	2,143.00	sq.ft	0.00	1,786.00	357.00	0.00
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See photos 92-105 and the attached file "070001 Elem 12 Defect Table.pdf" for further details.

1130	Cracking (RC and Other)	3	07/24/2019	2,143.00	sq.ft	0.00	1,786.00	357.00	0.00
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See photos 92-105 and the attached file "070001 Elem 12 Defect Table.pdf" for further details.

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
16	Re Conc Top Flange	3	07/24/2019	7,336.00	sq.ft	5,911.00	1,150.00	275.00	0.00

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Structure Inventory and Appraisal Sheet (English Units)

This element defines the top flanges of the reinforced concrete box girders in Spans #1R, #2R, #3R and #5 of the Gano Street off-ramp, which was closed at the time of the inspection (Photos 7, 53-54).

The top of the top flanges has a new bituminous concrete wearing surface/overlay which was not striped at the time of the inspection (Photos 6-7, 50-52).

The undersides of the top flanges exhibit typical transverse hairline cracks up to full width with efflorescence and rust, scattered areas of heavy map cracks with efflorescence, isolated hollow areas and spalls and ongoing repairs with form work left in place. See photos 182, 183, 186-189, 191 and the attached file "070001 Elem 16 Defect Table.pdf" for further details.

510	Wearing Surfaces	3	07/24/2019	7,336.00	sq.ft	7,336.00	0.00	0.00	0.00
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The new bituminous concrete wearing surface/overlay was not striped at the time of the inspection (Photos 6-7, 50-52).

1080	Delamination/Spall/Patched Area	3	07/24/2019	200.00	sq.ft	0.00	200.00	0.00	0.00
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See photos 182, 183, 186-189, 191 and the attached file "070001 Elem 16 Defect Table.pdf" for further details.

1090	Exposed Rebar	3	07/24/2019	25.00	sq.ft	0.00	0.00	25.00	0.00
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See photos 182, 183, 186-189, 191 and the attached file "070001 Elem 16 Defect Table.pdf" for further details.

1120	Efflorescence/Rust Staining	3	07/24/2019	1,000.00	sq.ft	0.00	750.00	250.00	0.00
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See photos 182, 183, 186-189, 191 and the attached file "070001 Elem 16 Defect Table.pdf" for further details.

1130	Cracking (RC and Other)	3	07/24/2019	200.00	sq.ft	0.00	200.00	0.00	0.00
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See photos 182, 183, 186-189, 191 and the attached file "070001 Elem 16 Defect Table.pdf" for further details.

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
105	Re Clsd Box Girder	3	07/24/2019	922.00	ft	78.00	505.00	339.00	0.00

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Structure Inventory and Appraisal Sheet (English Units)

There are reinforced concrete three-cell box girders in Spans #1R, #2R, #3R and Span #5 which carry the Gano Street off-ramp. The box girder cells are lettered 'A' through 'C' from south to north to maintain the same orientation as the main bridge structure. Span bays are numbered 1 through 3 from west to east. See the attached file "070001 Gano Street Ramp Plan & Section.pdf" in the general info folder for clarification.

There are ongoing repairs on the interior of the box girders with scattered construction debris throughout and remaining formwork in place (Photos 182, 189, 191-193). There are several locations of ponding water up to 18" deep inside the box girders (Photos 189-192). RIDOT was informed about this issue on 7/11/19 and a work item has been added to BrM. The seismic restrainer assemblies and cables at Pier #2R exhibit typical rust with light corrosion (Photos 183, 191).

The interior webs exhibit typical full height vertical/diagonal hairline cracks, both sealed and unsealed (Photos 184-185). There are numerous gauges in place to monitor the movement of these cracks and at the time of inspection no movement was detected. See the attached file "070001 Elem 105 Defect 1130 Table.pdf" for further details.

The interior faces of the bottom flanges exhibit numerous repair patches and up to 2'-0" deep accumulation of construction debris throughout (Photos 183, 189, 191). There is typical ponding water up to 18" deep at Piers #1R and #2R (Photos 189-192). See the attached file "070001 Elem 105 Defect Table.pdf" for further details of scattered minor defects and notes.

The undersides of the bottom flanges have random repair patches, scattered transverse hairline cracks with efflorescence and rust staining and isolated hollow areas and spalls. See photos 37-41, 175-180 and the attached file "070001 Elem 105 Underside Sketches.pdf" for further details.

1080	Delamination/Spall/Patched Area	3	07/24/2019	100.00	ft	0.00	80.00	20.00	0.00
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See photos 37-41, 175-193 and the attached files "070001 Elem 105 Defect 1130 Table.pdf", "070001 Elem 105 Defect Table.pdf" and "070001 Elem 105 Underside Sketches.pdf" for further details.

1090	Exposed Rebar	3	07/24/2019	5.00	ft	0.00	0.00	5.00	0.00
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See photos 37-41, 175-193 and the attached files "070001 Elem 105 Defect 1130 Table.pdf", "070001 Elem 105 Defect Table.pdf" and "070001 Elem 105 Underside Sketches.pdf" for further details.

1120	Efflorescence/Rust Staining	3	07/24/2019	244.00	ft	0.00	122.00	122.00	0.00
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See photos 37-41, 175-193 and the attached files "070001 Elem 105 Defect 1130 Table.pdf", "070001 Elem 105 Defect Table.pdf" and "070001 Elem 105 Underside Sketches.pdf" for further details.

1130	Cracking (RC and Other)	3	07/24/2019	495.00	ft	0.00	303.00	192.00	0.00
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See photos 37-41, 175-193 and the attached files "070001 Elem 105 Defect 1130 Table.pdf", "070001 Elem 105 Defect Table.pdf" and "070001 Elem 105 Underside Sketches.pdf" for further details.

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
107	Steel Opn Girder/Beam	3	07/24/2019	1,320.00	ft	787.00	496.00	37.00	0.00

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Structure Inventory and Appraisal Sheet (English Units)

There are eleven (11) steel plate girders in Span #7 spanning between the Pier #6 east wall and the Pier #7 west wall (Photos 15, 30, 245, 246). Most girder ends have bolted repair plates and angles at the webs and bottom flanges for up to 25' long, with typical light to heavy rust and up to 1/16" section loss to the repair plates and angles. There are isolated areas of 1/8" section loss to webs beyond the repair plates. Remaining areas have scattered light to moderate rust with heavy rust at girder ends. The bottom flanges at girder ends exhibit typical heavy rust and section loss with down to 5/16" remaining thickness. See photos 122-127 and the attached file "070001 Elem 107 Defect Table.pdf" for further details.

Note that Element 8107 – Steel Opn Girder/Beam ENDS has been created and quantifies the end 5'-0" of each girder.

515	Steel Protective Coating	3	07/24/2019	19,385.00	sq.ft	7,350.00	6,300.00	5,735.00	0.00
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The fascia sides of Girders 'A' and 'K' have been re-painted and are re-rusting. Remaining areas have light to moderate rust with up to heavy rust at girder ends. See photos 122-127 and the attached file "070001 Elem 107 Defect Table.pdf" for further details.

3410	Chalk(Steel Protect Coatings)	3	07/24/2019	6,300.00	sq.ft	0.00	6,300.00	0.00	0.00
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See photos 122-127 and the attached file "070001 Elem 107 Defect Table.pdf" for further details.

3420	Peel/Bub/Crack(Stl Protect Coat)	3	07/24/2019	5,735.00	sq.ft	0.00	0.00	5,735.00	0.00
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See photos 122-127 and the attached file "070001 Elem 107 Defect Table.pdf" for further details.

1000	Corrosion	3	07/24/2019	390.00	ft	0.00	353.00	37.00	0.00
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See photos 122-127 and the attached file "070001 Elem 107 Defect Table.pdf" for further details.

1900	Distortion	3	07/24/2019	143.00	ft	0.00	143.00	0.00	0.00
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The bottom flanges exhibit typical 1/8" vertical distortion at the section transitions (Photo 128).
Girder 'A' bottom flange exhibits full length x up to 1/4" vertical distortion and minor rotation of the girder (top of girder is rotating towards the north) (Photo 129).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
109	Pre Opn Conc Girder/Beam	3	07/24/2019	14,543.00	ft	11,733.00	1,268.00	1,407.00	135.00

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Bridge Inspection Report

Structure Inventory and Appraisal Sheet (English Units)

The prestressed concrete girders in Spans #1 through #6 and #8 through #14 consist of variable depth post-tensioned cantilevered girder sections over the piers with corbels at the end. The cantilevered girder sections support prestressed concrete drop-in mid-span sections. The prestressed concrete I-girders in Spans #15 through #18 are simply supported between the substructure units. Rehabilitation construction is on-going and there are multiple defects that have been repaired or are in the process of being repaired.

The drop-in girders exhibit typical shear cracks at dapped ends, scattered cracked, hollow and spalled areas at dapped ends and bottom flanges undersides with exposed stirrups and prestressing strands, scattered cracked, hollow and spalled areas over the bearings with fully exposed stirrups and reduced bearing areas. See photos 130-144 and the attached files "070001 Elem 109 Shear Crack Table.pdf" and "070001 Elem 109 Defect Table.pdf" for further details.

The corbels exhibit typical cracked, hollow and spalled areas with exposed post tensioned anchor plates on the drop-in span sides throughout. The other faces and undersides exhibit isolated cracks, hollow areas and minor spalls. See photos 146-153 and the attached file "070001 Elem 109 Defect Table.pdf" for further details.

The cantilever girders exhibit typical hairline diagonal cracks along the post-tensioned cable lines, some sealed and unsealed, isolated vertical cracks and hollow area over the pier columns and typical hollow/spalled post-tensioned anchor blocks on the undersides. Other remaining areas exhibit random minor cracked, hollow and spalled areas. The cantilever ends in Span #7 at Pier #6 and Pier #7 (accessed via the catwalks on the interior walls of the piers) exhibit typical hollow areas/spalls up to full height with fully exposed and debonded stirrups and reduced bearing areas. See photos 154-163 and the attached file "070001 Elem 109 Defect Table.pdf" for further details.

The I-girders in Spans #15 through #18 have scattered hairline cracking with efflorescence, hollow areas, spalls and exposed prestressing strands at girder ends, with more severe spalling and exposed stirrups on the back faces beyond the bearings. There are isolated hollow areas and spalls along bottom flange undersides. See photos 164-174 and the attached file "070001 Elem 109 Defect Table.pdf" for further details.

521	Conc Prot Coating	3	07/24/2019	5,000.00	sq.ft	4,250.00	0.00	375.00	375.00
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The drop-in girder dapped ends are coated with a protective sealant which has scattered peeling and cracking throughout (Photos 130-144).

3510	Wear (Concrete Protect Coat)	3	07/24/2019	750.00	sq.ft	0.00	0.00	375.00	375.00
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See 521 - Concrete Protective Coating notes.

1080	Delamination/Spall/Patched Area	3	07/24/2019	1,150.00	ft	0.00	900.00	250.00	0.00
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See photos 130-174 and the attached files "070001 Elem 109 Shear Crack Table.pdf" and "070001 Elem 109 Defect Table.pdf" for further details.

1090	Exposed Rebar	3	07/24/2019	175.00	ft	0.00	0.00	50.00	125.00
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See photos 130-174 and the attached files "070001 Elem 109 Shear Crack Table.pdf" and "070001 Elem 109 Defect Table.pdf" for further details.

1100	Exposed Prestressing	3	07/24/2019	25.00	ft	0.00	0.00	15.00	10.00
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See photos 130-174 and the attached files "070001 Elem 109 Shear Crack Table.pdf" and "070001 Elem 109 Defect Table.pdf" for further details.

1110	Cracking (PSC)	3	07/24/2019	727.00	ft	0.00	0.00	727.00	0.00
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Bridge Inspection Report

Structure Inventory and Appraisal Sheet (English Units)

See photos 130-174 and the attached files "070001 Elem 109 Shear Crack Table.pdf" and "070001 Elem 109 Defect Table.pdf" for further details.

1120	Efflorescence/Rust Staining	3	07/24/2019	730.00	ft	0.00	365.00	365.00	0.00
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See photos 130-174 and the attached files "070001 Elem 109 Shear Crack Table.pdf" and "070001 Elem 109 Defect Table.pdf" for further details.

7000	Damage	3	07/24/2019	3.00	ft	0.00	3.00	0.00	0.00
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The prestressed concrete I-girders have impact scrapes on the bottom flanges over travel lanes in the following locations:

- Span #16 Girder 'E' east of midspan: 3' long x up to 1/4" deep scrape
- Span #18 All girders: Minor impact scrapes (±15' total)

8368	Graffiti	3	07/24/2019	200.00	ft	200.00	0.00	0.00	0.00
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The drop-in girder ends in Span #4 have scattered areas of minor to moderate graffiti (Photo 145).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
110	Re Conc Opn Girder/Beam	3	07/24/2019	2,880.00	ft	954.00	1,188.00	688.00	50.00

This element defines reinforced concrete fascia arches in Spans #1 through #6, #8 through #13 and #1R through #3R (Photos 8-17, 23-25). The arches consist of cantilevered sections at the piers and drop-in midspan sections. The cantilever sections support the drop-in sections with concrete keys at shiplap joints with elastomeric bearing pads. Rehabilitation construction is on-going and there are multiple defects that have been repaired or are in the process of being repaired.

The arches exhibit typical vertical and transverse hairline cracks in the midspan sections, typical hairline to medium horizontal cracks at the shiplap joints, scattered hollow areas and spalls above and below the joint keys with several through holes, exposed and debonded stirrups and rebars, and scattered cracked, hollow and spalled areas on the bottom flanges. See photos 106-121 and the attached file "070001 Elem 110 Defect Table.pdf" for further details.

521	Conc Prot Coating	3	07/24/2019	14,800.00	sq.ft	14,800.00	0.00	0.00	0.00
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The arch exterior faces and bottom flanges are partially coated with a new protective sealant (Photos 8-17, 23-25). See photos 106-121 and the attached file "070001 Elem 110 Defect Table.pdf" for details of deterioration.

1080	Delamination/Spall/Patched Area	3	07/24/2019	800.00	ft	0.00	600.00	200.00	0.00
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See photos 106-121 and the attached file "070001 Elem 110 Defect Table.pdf" for further details.

1090	Exposed Rebar	3	07/24/2019	100.00	ft	0.00	0.00	50.00	50.00
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See photos 106-121 and the attached file "070001 Elem 110 Defect Table.pdf" for further details.

1120	Efflorescence/Rust Staining	3	07/24/2019	450.00	ft	0.00	300.00	150.00	0.00
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See photos 106-121 and the attached file "070001 Elem 110 Defect Table.pdf" for further details.

1130	Cracking (RC and Other)	3	07/24/2019	576.00	ft	0.00	288.00	288.00	0.00
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See photos 106-121 and the attached file "070001 Elem 110 Defect Table.pdf" for further details.

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
205	Re Conc Column	3	07/24/2019	92.00	each	40.00	20.00	32.00	0.00

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Structure Inventory and Appraisal Sheet (English Units)

There are reinforced concrete columns at Piers #1 through #13 that support the cantilever girders and at Piers #14 through #17 that support the reinforced concrete pier caps (Photos 223-225, 236-238, 255-257).

The cantilever girder columns exhibit isolated hairline vertical and map cracks, hollow areas and spalls (Photo 241). The pedestals at the top of the columns exhibit typical scattered hollow areas/spalls up to full width x full height x 2" deep with exposed edges of steel bearing plates (Photo 239).

The pier cap columns exhibit typical scattered sealed/unsealed vertical cracks and rust staining throughout with isolated hairline map cracks, efflorescence, hollow areas and spalls (Photo 234).

See photos 236-238, 255-257 and the attached file "070001 Elem 205 Defect Table.pdf" for further details.

1080	Delamination/Spall/Patched Area	3	07/24/2019	42.00	each	0.00	20.00	22.00	0.00
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See photos 234, 236-238, 255-257 and the attached file "070001 Elem 205 Defect Table.pdf" for further details.

1120	Efflorescence/Rust Staining	3	07/24/2019	5.00	each	0.00	0.00	5.00	0.00
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See photos 234, 236-238, 255-257 and the attached file "070001 Elem 205 Defect Table.pdf" for further details.

1130	Cracking (RC and Other)	3	07/24/2019	5.00	each	0.00	0.00	5.00	0.00
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See photos 234, 236-238, 255-257 and the attached file "070001 Elem 205 Defect Table.pdf" for further details.

8368	Graffiti	3	07/24/2019	300.00	each	0.00	300.00	0.00	0.00
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The Pier #3 and Pier #10 columns have heavy graffiti on the lower halves (Photo 236).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
210	Re Conc Pier Wall	3	07/24/2019	1,151.00	ft	666.00	290.00	172.00	23.00

There are reinforced concrete pier walls at Piers #1 through #13 and #1R through #3R. All pier walls except the east pier wall of Pier #6, the west pier wall of Pier #7 and Piers #1R through #3R are non-structural and act as curtain walls providing architectural (stone façade) and protective effects to the pier columns (Photos 235-238, 247, 255-257). The east pier wall of Pier #6 and the west pier wall of Pier #7 support the cantilever girder ends in Spans #6 and #8 (through cantilever support pedestals) and the steel girders in Span #7 (Photos 245-246). The cantilever girder pedestals can be accessed via the catwalks on the interior portions of Pier #6 and Pier #7; see inspection notes at end of report (285-286). Pier walls #1R through #3R support the Gano Street off-ramp box girder superstructure (Photos 259-263). There are reinforced concrete pylons/ walls at the north and south ends of the piers that extend from the coping at the base of the bridge railings (Photos 16-17, 262).

The pier walls on land have a new protective coating in most locations and all piers have sealed vertical and map cracks throughout with isolated cracks re-opening (Photos 235-238, 247, 255-257). Scattered cracks through the pier wall stone facades remain throughout (Photo 243). The pylons remain uncoated and exhibit typical scattered hairline cracking with efflorescence and rust staining. See photos 235-263 and the attached file "070001 Elem 210 Defect Table.pdf" for details of deterioration.

521	Conc Prot Coating	3	07/24/2019	25,200.00	sq.ft	25,200.00	0.00	0.00	0.00
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The pier walls on land have a new protective coating. See photos 235, 256-258 and the attached file "070001 Elem 210 Defect Table.pdf" for details of deterioration.

1080	Delamination/Spall/Patched Area	3	07/24/2019	175.00	ft	0.00	75.00	77.00	23.00
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Bridge Inspection Report

Structure Inventory and Appraisal Sheet (English Units)

See photos 235-263 and the attached file "070001 Elem 210 Defect Table.pdf" for details of deterioration.

1120	Efflorescence/Rust Staining	3	07/24/2019	80.00	ft	0.00	40.00	40.00	0.00
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See photos 235-263 and the attached file "070001 Elem 210 Defect Table.pdf" for details of deterioration.

1130	Cracking (RC and Other)	3	07/24/2019	115.00	ft	0.00	60.00	55.00	0.00
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See photos 235-263 and the attached file "070001 Elem 210 Defect Table.pdf" for details of deterioration.

6000	Scour	3	07/24/2019	115.00	ft	0.00	115.00	0.00	0.00
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2017 Underwater Inspection:
Since the 2013 Underwater Inspection, there is evidence of scour at most piers up to 3.4' deep (Pier #8) and areas of aggradation up to 4.6' high (Pier #6).

8368	Graffiti	3	07/24/2019	400.00	ft	0.00	400.00	0.00	0.00
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The pier walls on land exhibit isolated moderate to heavy graffiti (Photos 235-236).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
215	Re Conc Abutment	3	07/24/2019	230.00	ft	78.00	44.00	108.00	0.00

There are reinforced concrete abutments at each end of the main structure (West Abutment #1 & East Abutment #2) and at the end of the Gano Street off-ramp (West Abutment #1R). The abutments all have new protective coatings.

West Abutment #1 is a stub abutment that is hidden by backfill beyond a retaining wall (Photo 213). There is severe accumulation of pigeon debris and nesting pigeons behind the wall up to the top of the columns preventing the inspection of the stub abutment stem (Photo 214). The retaining wall exhibits scattered hairline cracking.

East Abutment #2 is a full height abutment with an electrical utility room built into the abutment in Bays 'H' and 'I' (Photos 215-216, 280). See inspection notes for electrical room notes. The abutment exhibits scattered hairline cracks, hollow areas and spalls with typical debris accumulation/pigeon nesting on the beam seat (Photos 217-221).

West Abutment #1R is a semi-stub abutment that sits on the river embankment with slope protection blocks in front (Photo 222). The abutment exhibits scattered efflorescence and rust staining and an isolate spall.

See photos 213-222 and the attached file "070001 Elem 215 Defect Table.pdf" for details of deterioration.

521	Conc Prot Coating	3	07/24/2019	2,300.00	sq.ft	2,300.00	0.00	0.00	0.00
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The abutments all have new protective coatings. See photos 213-222 and the attached file "070001 Elem 215 Defect Table.pdf" for details of deterioration.

1080	Delamination/Spall/Patched Area	3	07/24/2019	103.00	ft	0.00	29.00	74.00	0.00
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See photos 213-222 and the attached file "070001 Elem 215 Defect Table.pdf" for details of deterioration.

1120	Efflorescence/Rust Staining	3	07/24/2019	30.00	ft	0.00	15.00	15.00	0.00
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See photos 213-222 and the attached file "070001 Elem 215 Defect Table.pdf" for details of deterioration.

1130	Cracking (RC and Other)	3	07/24/2019	19.00	ft	0.00	0.00	19.00	0.00
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See photos 213-222 and the attached file "070001 Elem 215 Defect Table.pdf" for details of deterioration.

8368	Graffiti	3	07/24/2019	200.00	ft	0.00	200.00	0.00	0.00
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West Abutment #1R has heavy graffiti covering most of its surface (Photo 222).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
220	Re Conc Pile Cap/Fta	3	07/24/2019	1,151.00	ft	1,150.00	1.00	0.00	0.00

2017 Underwater Inspection:

The exposed pile caps step out from the face of the pier stems at varying widths from 10" wide to 18" wide and are exposed up to full-height with varying measurements from 2' (full-height) at Pier #5 to 9.0' (full-height) at Pier #3R (Gano Street Ramp).

Piers #3R, #5 and #9 exhibit exposed concrete tremie seals up to a maximum vertical exposure of 3.5' high. There is no observed undermining at any of the piers.

1130	Cracking (RC and Other)	3	07/24/2019	1.00	ft	0.00	1.00	0.00	0.00
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2017 Underwater Inspection:

Pier #3R pile cap has a crack 6' high x 3/16" wide extending from the top of the pile cap.

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
234	Re Conc Pier Cap	3	07/24/2019	388.00	ft	52.00	313.00	23.00	0.00

There are reinforced concrete caps at Piers #14 through #17. The caps were recently repaired and are covered with remaining chloride extraction materials throughout (Photos 223-228). The caps and pedestals exhibit isolated hairline cracks, hollow area and spalls. See photos 223-231 and the attached file "070001 Elem 234 Defect Table.pdf" for further details.

1080	Delamination/Spall/Patched Area	3	07/24/2019	308.00	ft	0.00	293.00	15.00	0.00
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See photos 223-231 and the attached file "070001 Elem 234 Defect Table.pdf" for further details.

1090	Exposed Rebar	3	07/24/2019	1.00	ft	0.00	1.00	0.00	0.00
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See photos 223-231 and the attached file "070001 Elem 234 Defect Table.pdf" for further details.

1120	Efflorescence/Rust Staining	3	07/24/2019	15.00	ft	0.00	7.00	8.00	0.00
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See photos 223-231 and the attached file "070001 Elem 234 Defect Table.pdf" for further details.

1130	Cracking (RC and Other)	3	07/24/2019	12.00	ft	0.00	12.00	0.00	0.00
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See photos 223-231 and the attached file "070001 Elem 234 Defect Table.pdf" for further details.

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
300	Strip Seal Exp Joint	3	07/24/2019	93.00	ft	0.00	88.00	5.00	0.00

There is a strip seal joint in Span #5 at the east side of Pier #4 in the left lanes of I-195 westbound (Photo 56). The portion of the joint in the right lanes of I-195 Westbound and at Pier #3R for the Gano Street off-ramp have been paved over (Photos 54, 64).

2310	Leakage	3	07/24/2019	5.00	ft	0.00	5.00	0.00	0.00
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There is evidence of leakage through the joint on the underside due to failing joint seal (Photos 65-66).

2330	Seal Damage	3	07/24/2019	10.00	ft	0.00	10.00	0.00	0.00
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The deck joint seal is loose/sagging/fallen along the underside (Photos 65-66).

2350	Debris Impaction	3	07/24/2019	5.00	ft	0.00	5.00	0.00	0.00
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The joint has full length partial debris impaction that still allows free movement of the joint (Photo 56).

2370	Metal Deterioration or Damage	3	07/24/2019	5.00	ft	0.00	0.00	5.00	0.00
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The steel extrusion on the east side of the joint in the wheel line of the right middle lane has a 3' long missing section that has been paved over (Photo 56)

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
301	Pourable Joint Seal	3	07/24/2019	1,151.00	ft	507.00	544.00	85.00	15.00

There are pourable joint seals on the west side of West Abutment #1 and Piers #1 through #7, on the east side of Piers #7 through #13, at East Abutment #2, and along the gore median in Spans #16 and #17. All joints have been paved over in the right lanes of I-195 Westbound as part of the on-going bridge construction (Photos 7, 42-44). The wearing surface along deck joint edges exhibits scattered patches and depressed pavement with minor potholes, and random locations of raveling (Photos 55, 57-59, 62).

2310	Leakage	3	07/24/2019	344.00	ft	0.00	344.00	0.00	0.00
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The joints exhibit scattered evidence of leakage along the undersides (Photos 94, 104).

2320	Seal Adhesion	3	07/24/2019	300.00	ft	0.00	200.00	85.00	15.00
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The pourable joint seals exhibit typical loss of seal adhesion up to full length with isolated locations of full adhesion failure (Photos 55, 57-59, 62).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
310	Elastomeric Bearing	3	07/24/2019	401.00	each	136.00	190.00	75.00	0.00

There are elastomeric bearing pads for the following elements and locations:

- P/S concrete drop-in girder dapped ends at the corbels in Spans #1 through #6 and #8 through #14
- Post-tensioned concrete cantilever girder ends at the east wall of Pier #6 and the west wall of Pier #7
- P/S concrete I-girders in Spans #14 through #18
- Concrete fascia arches at the shiplap joints in Spans #1 through #6 and Spans #8 through #13 and at pier walls in Spans #1R through #3R

2220	Alignment	3	07/24/2019	4.00	each	0.00	0.00	4.00	0.00
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All measurements were recorded at a temperature of 80 90 degrees Fahrenheit

The drop in girder bearings in Spans #1 through #3, #6, #8, #9, #11, #13 and #14 are typically in contraction up to 1/2" (Photo 147) The bearings in Spans #4, #5, #10 and #12 are typically neutral or expanded up to 1"

The I Girder bearings in Spans #15 through #18 are typically neutral or expanded up to 1/2" (Photo 206)

The fascia arch bearings in Spans #1R through #3R typically neutral or expanded up to 1/2" (Photo 209)

2230	Bulging, Splitting or Tearing	3	07/24/2019	200.00	each	0.00	150.00	50.00	0.00
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The bearing pads exhibit random minor tears throughout. Random bearings exhibit minor to moderate bulging and isolated bearings exhibit heavier bulging with up to 1/2" separation at top of bottom of pad (Photos 208-209).

2240	Loss of Bearing Area	3	07/24/2019	61.00	each	0.00	40.00	21.00	0.00
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There are scattered locations of bearing area loss due to spalls undermining the bearings and spalls above the bearings reducing the bearing area. See photos 107, 109, 111, 115, 136, 142, 147, 148, 163, 170, 205, 229-230 and the attached files "070001 Elem 109 Defect Table.pdf", "070001 Elem 110 Defect Table.pdf" and "070001 Elem 234 Defect Table.pdf" for further details.

In Span #14 at Pier #14, Bearing 'F' overhangs the pedestal 3/4" deep x 14" long (Photo 205).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
311	Moveable Bearing	3	07/24/2019	11.00	each	0.00	7.00	4.00	0.00

There are steel rocker bearings in Span #7 at Pier #6 that have limited access for full inspection due to bearing restraints in place at the east face of each bearing. There are up to full width x 1/2" high x 6" deep gaps beneath the bearing restraints at the east face (per rehab plans). The bearings have light to moderate accumulation of sand and debris (Photo 210).

515	Steel Protective Coating	3	07/24/2019	132.00	sq.ft	0.00	0.00	44.00	88.00
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The bearings have a steel protective coating with areas of peeling paint and light to moderate rust. Bearings 'A', 'B', 'J' and 'K' have no paint remaining (Photo 210).

3420	Peel/Bub/Crack(Stl Protect Coat	3	07/24/2019	132.00	sq.ft	0.00	0.00	44.00	88.00
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See 515 - Steel Protective Coating notes.

1000	Corrosion	3	07/24/2019	9.00	each	0.00	7.00	2.00	0.00
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The bearings and anchor bolts typically have light to moderate rust. Bearings 'A', 'B', 'J' and 'K' have heavy laminated rust on the bearings and anchor bolts with up to 3/8" thick pack rust between the bearing plates (Photo 210).

2220	Alignment	3	07/24/2019	1.00	each	0.00	0.00	1.00	0.00
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The bearings exhibit typical minor expansion at 80 degrees Fahrenheit (Photo 210). Bearing 'A' assembly is uneven with no gap at the south end and a 1" gap at the north end of the restraint plate (Photo 212).

2240	Loss of Bearing Area	3	07/24/2019	1.00	each	0.00	0.00	1.00	0.00
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Bearing 'K' is undermined at the north east corner 4" wide x 4" long x 2" deep and along the west edge 16" wide x up to 1" long (Photo 248).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
313	Fixed Bearing	3	07/24/2019	11.00	each	0.00	8.00	3.00	0.00

There are fixed steel bearings in Span #7 at Pier #7 that have limited access for full inspection due to bearing restraints in place at the west face of each bearing. There are up to full width x 1/2" high x 6" deep gaps beneath the bearing restraints at the west face (per rehab plans). The bearings have light to moderate accumulation of sand and debris (Photo 211).

515	Steel Protective Coating	3	07/24/2019	110.00	sq.ft	0.00	0.00	66.00	44.00
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The fixed bearings have a steel protective coating with areas of peeling paint with light to moderate rust (Photo 211). Bearings 'A', 'B', 'J' and 'K' have no paint remaining.

3420	Peel/Bub/Crack(Stl Protect Coat	3	07/24/2019	110.00	sq.ft	0.00	0.00	66.00	44.00
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See 515 - Steel Protective Coating notes.

1000	Corrosion	3	07/24/2019	11.00	each	0.00	8.00	3.00	0.00
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The bearings and anchor bolts typically have light to moderate rust (Photo 211). Bearings 'A', 'B', 'J' and 'K' have heavy laminated rust on the bearings and anchor bolts.

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
321	Re Conc Approach Slab	3	07/24/2019	2,352.00	sq.ft	0.00	2,352.00	0.00	0.00

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The reinforced concrete approach slabs are concealed from view by bituminous concrete wearing surfaces (Photos 1-5, 67-71).

510	Wearing Surfaces	3	07/24/2019	2,352.00	sq.ft	1,352.00	500.00	500.00	0.00
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The wearing surfaces have moderate wheel line rutting with sealed and unsealed cracks throughout (Photos 67-71).

3220	Crack (Wearing Surface)	3	07/24/2019	2,352.00	sq.ft	1,352.00	500.00	500.00	0.00
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See 510 Wearing Surface notes

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
331	Re Conc Bridge Railing	3	07/24/2019	3,808.00	ft	3,396.00	411.00	1.00	0.00

There are reinforced concrete bridge railings on both sides of the bridge in Spans #1 through #18 (Photo 42). Numerous sections of the railings at the deck joints were recently demolished and re-constructed as part of the bridge rehabilitation (Photo 74). There are scattered utility box covers along the interior faces of the bridge railings, many with broken covers (Photos 46-48, 273, 275). The condition of the tops of the pylons is included in this element.

1080	Delamination/Spall/Patched Area	3	07/24/2019	10.00	ft	0.00	10.00	0.00	0.00
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The bridge railings exhibit isolated minor edge spalls along the top of the railing (Photo 76). In Span #14 the north railing at Pier #14 has a 12" long x 6" high x 1" deep spall.

The pylons exhibit typical scattered hollow areas and shallow spalls (Photos 77-80).

1120	Efflorescence/Rust Staining	3	07/24/2019	1.00	ft	0.00	0.00	1.00	0.00
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See 1130 Cracking notes

1130	Cracking (RC and Other)	3	07/24/2019	351.00	ft	0.00	351.00	0.00	0.00
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The bridge railings exhibit typical scattered full height hairline vertical cracks (Photo 75). The pylons exhibit typical scattered cracks and rust stains (Photos 77-80).

7000	Damage	3	07/24/2019	50.00	ft	0.00	50.00	0.00	0.00
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The bridge railings exhibit random minor scrapes.

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
8060	Scupper	3	07/24/2019	27.00	(EA)	0.00	3.00	20.00	4.00

The scupper drainage grates along both shoulders of I-195 Westbound and along the north shoulder of the Gano Street Off-Ramp are fully clogged with sand and debris; only isolated grates remain partially open with clean drain pipe openings (Photos 82, 268). In Span #17 the drainage grate along the north shoulder is fully clogged and missing the drainage grate (Photo 269). The drain pipe at the end of Pier #17 has a disconnected section (Photo 270). The drain pipes on the interior of the Gano Street off-ramp box girders have been replaced with new PVC piping (Photo 192).

1000	Corrosion	3	07/24/2019	4.00	(EA)	0.00	0.00	0.00	4.00
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The scupper drain pipes on the underside of deck exhibit typical light to heavy rust. The Pier #3 drain pipes on the south face of Column 'A' and on the north face of Column 'F' have rust holes and leak onto members below (Photo 95).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
8107	Steel Opn Girder/Beam ENDS	1	07/24/2019	110.00	ft	0.00	0.00	110.00	0.00

See Element 107 notes, photos 122-127 and the attached file "070001 Elem 107 Defect Table.pdf".

515	Steel Protective Coating	1	07/24/2019	1,615.00	sq.ft	0.00	0.00	615.00	1,000.00
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See Element 107 notes, photos 122-127 and the attached file "070001 Elem 107 Defect Table.pdf".

3420	Peel/Bub/Crack(Stl Protect Coat	1	07/24/2019	1,615.00	sq.ft	0.00	0.00	615.00	1,000.00
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See Element 107 notes, photos 122-127 and the attached file "070001 Elem 107 Defect Table.pdf".

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
8213	R/C Return Wall	3	07/24/2019	175.00	(LF)	0.00	150.00	25.00	0.00

There are reinforced concrete return walls at the north ends of West Abutment #1 and East Abutment #2 and at both ends of West Abutment #1R (Photos 264-267). The return walls have moderate to heavy vegetation growth.

1080	Delamination/Spall/Patched Area	3	07/24/2019	44.00	(LF)	0.00	44.00	0.00	0.00
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The top of the northwest return wall at West Abutment #1 has multiple edge spalls along the cope up to 2" deep (Photo 264).

1120	Efflorescence/Rust Staining	3	07/24/2019	110.00	(LF)	0.00	85.00	25.00	0.00
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The return walls have scattered areas of hairline map cracks with isolated efflorescence and rust (Photos 264-267).

1130	Cracking (RC and Other)	3	07/24/2019	21.00	(LF)	0.00	21.00	0.00	0.00
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See 1120 Efflorescence/Rust Staining notes.

8368	Graffiti	3	07/24/2019	100.00	(LF)	100.00	0.00	0.00	0.00
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There is anti-graffiti paint and light graffiti on the West Abutment #1R return walls (Photos 266-267).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
8218	Backwall, All Types	3	07/24/2019	230.00	(LF)	104.00	80.00	46.00	0.00

There are reinforced concrete backwalls at the abutments. West Abutment #1 backwall is inaccessible due to the heavy accumulation of pigeon debris and nesting pigeons on the abutment seat (Photo 214).

1080	Delamination/Spall/Patched Area	3	07/24/2019	80.00	(LF)	0.00	70.00	10.00	0.00
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West Abutment #1R and East Abutment #2 backwalls exhibit random hollow and minor spalls up to 2' long x 2' high x 2" deep.

1120	Efflorescence/Rust Staining	3	07/24/2019	23.00	(LF)	0.00	10.00	13.00	0.00
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West Abutment #1R and East Abutment #2 backwalls exhibit typical scattered hairline vertical cracks, efflorescence and rust staining (Photos 217, 222).

1130	Cracking (RC and Other)	3	07/24/2019	23.00	(LF)	0.00	0.00	23.00	0.00
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West Abutment #1R and East Abutment #2 backwalls exhibit typical scattered hairline vertical cracks, efflorescence and rust staining (Photos 217, 222).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
8305	Asphaltic Joint Material	3	07/24/2019	1,438.00	(LF)	987.00	451.00	0.00	0.00

There are asphaltic plug joints on the east side of West Abutment #1 and Piers #1 through #3, #5 and #6 and on the west side of Piers #8 through #13. There are also asphaltic plug joints at Piers #14 through #17. All joints have been paved over in the right lanes of I-195 Westbound as part of the on-going bridge construction (Photos 7, 42-44, 60-61).

2310	Leakage	3	07/24/2019	430.00	(LF)	0.00	430.00	0.00	0.00
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The joints exhibit scattered evidence of leakage along the undersides (Photos 142, 164-165).

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2340 Seal Cracking 3 07/24/2019 21.00 (LF) 0.00 21.00 0.00 0.00

The asphaltic plug joints exhibit partial separations at joint edges and isolated cracks along the joints (Photos 60-61).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
8335	Guardrail, Vehicular	3	07/24/2019	700.00	(LF)	550.00	150.00	0.00	0.00

There are W-beam steel guardrails at the north side of the approaches for I-195 Westbound (Photos 3, 5). The Gano Street off-ramp has new W-beam steel guardrails attached to the interior faces of the bridge parapet that continue to the west approach (6, 50-54, 91). There is a new impact attenuator at the gore between I-195 Westbound and the Gano Street off-ramp (Photo 54).

515 Steel Protective Coating 3 07/24/2019 3,150.00 sq.ft 1,800.00 0.00 1,350.00 0.00

The guardrails are galvanized. The I-195 approach guardrails have areas of light rust (Photos 3, 5).

1000 Corrosion 3 07/24/2019 100.00 (LF) 0.00 100.00 0.00 0.00

The I-195 approach guardrails have areas of light rust (Photos 3, 5).

1020 Connection 3 07/24/2019 10.00 (LF) 0.00 10.00 0.00 0.00

The Gano Street off-ramp guardrails have scattered loose connection bolts to the parapets (Photo 89). The northwest approach guardrail at West Abutment #1R has missing connection bolts at the 4th and 5th posts from the endpost (Photo 88).

7000 Damage 3 07/24/2019 40.00 (LF) 0.00 40.00 0.00 0.00

The I-195 approach guardrails have 20' long areas of impact damage with leaning posts at the northwest and northeast guardrails (Photos 3, 90).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
8336	Conc Bridge Parapet	3	07/24/2019	700.00	(LF)	350.00	320.00	30.00	0.00

The Gano Street off-ramp has a reinforced concrete bridge parapet with a single metal rail attached to the top face (Photos 6, 54, 73).

1080 Delamination/Spall/Patched Area 3 07/24/2019 100.00 (LF) 0.00 100.00 0.00 0.00

The parapets exhibit typical scattered cracks, hollow areas and random 1" deep spalls along the top of parapet (Photo 84). The north parapet at midspan of Span #1R has an 8'-0" long x up to 16" high hollow area with 5'-6" long x 9" high x 2" deep spall with multiple exposed rebars (Photo 85).

During the rehab project the contractor found that basically the entire face of the north parapet was hollow. There's a crack/seam that runs about 1"-2" in. They didn't replace the guardrail posts because they were concerned there would be nothing to connect them to if they removed the existing bolts.

1090 Exposed Rebar 3 07/24/2019 100.00 (LF) 0.00 70.00 30.00 0.00

See 1080 Delamination/Spall/Patched Area notes.

1130 Cracking (RC and Other) 3 07/24/2019 150.00 (LF) 0.00 150.00 0.00 0.00

The parapets exhibit typical scattered hairline vertical cracks (Photos 84, 87). The north parapet at Pier #2R has a full height x 1/4" wide vertical crack (Photo 86).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
8366	Rip Rap	3	07/24/2019	1,000.00	sq.ft	940.00	30.00	30.00	0.00

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Bridge Inspection Report

Structure Inventory and Appraisal Sheet (English Units)

There is rip rap along the West Abutment #1R embankment (Photo 222). Above the high water mark there is a level area covered by bituminous concrete pavement and a sloped block revetment to the base of the abutment. The rip rap has random missing stones along the channel embankment and there are several small sinkholes up to 12" deep in the pavement at the top of the slope.

4000 Settlement 3 07/24/2019 60.00 sq.ft 0.00 30.00 30.00 0.00

The rip rap has random missing stones along the channel embankment and there are several small sinkholes up to 12" deep in the pavement at the top of the slope (Photo 222).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
8367	Slope Blocks	3	07/24/2019	700.00	sq.ft	595.00	0.00	105.00	0.00

There is a sloped block revetment in front of West Abutment #1R. The slope block protection has mortar deterioration between the pavers and light to moderate vegetation growth (Photo 222).

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
8370	Steel Diaphragms	3	07/24/2019	70.00	(EA)	13.00	36.00	17.00	4.00

There are steel diaphragms between the steel girders in Span #7 labeled end diaphragms at each pier and intermediate diaphragms numbered west to east (Photo 30).

515 Steel Protective Coating 3 07/24/2019 1,800.00 sq.ft 378.00 1,125.00 207.00 90.00

The end diaphragms exhibit typical moderate to heavy rust and corrosion throughout (Photo 203). The intermediate diaphragms have typical paint chalking and random areas of light rust (Photo 204).

3410 Chalk(Steel Protect Coatings) 3 07/24/2019 900.00 sq.ft 0.00 900.00 0.00 0.00

See 515 - Steel Protective Coating notes.

3420 Peel/Bub/Crack(Stl Protect Coat) 3 07/24/2019 522.00 sq.ft 0.00 225.00 207.00 90.00

See 515 - Steel Protective Coating notes.

1000 Corrosion 3 07/24/2019 55.00 (EA) 0.00 35.00 16.00 4.00

The end diaphragms exhibit typical moderate to heavy rust and corrosion throughout with down to 1/8" remaining thickness to top flanges and down to 1/4" remaining thickness to bottom flanges (Photo 203). There is scattered pack rust up to 3/8" thick between the bearing stiffeners and diaphragm connection plates.

The intermediate diaphragms have random areas of light rust (Photo 204).

1020 Connection 3 07/24/2019 2.00 (EA) 0.00 1.00 1.00 0.00

Bay 'E' Diaphragm #5 at Girder 'F' has one (1) missing lower diaphragm connection bolt (Photo 204). Bay 'H' Diaphragm #1 has a two (2) mis-drilled bolt holes.

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
8371	Conc Diaphragms	3	07/24/2019	221.00	each	35.00	68.00	113.00	5.00

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Structure Inventory and Appraisal Sheet (English Units)

There are reinforced concrete diaphragms for the following elements and locations:

- End diaphragms and a midspan diaphragm for drop-in girders, between corbels and between cantilever girders over piers in Spans #1 through #6 and #8 through #14
- End diaphragms and a midspan diaphragm for I-girders in Spans #14 through #18
- Gano Street off-ramp box girder interior diaphragms and exterior diaphragms below the box girders at the piers

In Span #5, the east end of drop-in Girder 'B' bears on an oversized L-shaped diaphragm/transverse support beam that transfers loads to Girders 'A' and 'C' (Photos 29, 194). The irregular configuration is due to the Gano Street off-ramp connecting to Span #5.

The diaphragms were in varying stages of rehabilitation during the inspection. There are several locations where the diaphragm concrete has been fully removed with only rebar remaining (Photos 197, 200). Scattered formwork remains in place throughout the bridge (Photo 195) and the seismic restrainer assemblies at the deck joints typically have the restrainer rod removed (Photo 97).

The diaphragms exhibit typical scattered hairline map cracks with and without efflorescence and rust staining, hairline to 1/2" wide vertical cracks, random concrete patches, hollow area and spalls with and without exposed and debonded rebar. See photos 194-202 and the attached file "070001 Elem 8371 Defect Table.pdf" for further details.

1080	Delamination/Spall/Patched Area	3	07/24/2019	52.00	each	0.00	0.00	52.00	0.00
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See photos 194-202 and the attached file "070001 Elem 8371 Defect Table.pdf" for further details.

1090	Exposed Rebar	3	07/24/2019	12.00	each	0.00	6.00	1.00	5.00
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See photos 194-202 and the attached file "070001 Elem 8371 Defect Table.pdf" for further details.

1120	Efflorescence/Rust Staining	3	07/24/2019	11.00	each	0.00	6.00	5.00	0.00
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See photos 194-202 and the attached file "070001 Elem 8371 Defect Table.pdf" for further details.

1130	Cracking (RC and Other)	3	07/24/2019	111.00	each	0.00	56.00	55.00	0.00
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See photos 194-202 and the attached file "070001 Elem 8371 Defect Table.pdf" for further details.

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
8398	Curb/sidewalks - Con	1	07/24/2019	700.00	ft	0.00	700.00	0.00	0.00

There are concrete safety walks and granite curbs along both sides of the Gano Street off-ramp. The safetywalks exhibit typical heavy accumulation of dirt and debris up to 12" deep with vegetation growth (Photo 82).

1080	Delamination/Spall/Patched Area	1	07/24/2019	698.00	ft	0.00	698.00	0.00	0.00
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The safety walks exhibit scattered hairline cracks and general scaling 1/2" to 1" deep (Photo 83). The curbs exhibit typical rust staining and minor chipping throughout. In Span #3R near Pier #3R the south curb has a 5" wide x 2-1/2" long x 2" deep chip. The approach curbs are shifted up to 3" laterally with typical gaps up to 1" between curb sections (Photos 72-73).

1120	Efflorescence/Rust Staining	1	07/24/2019	1.00	ft	0.00	1.00	0.00	0.00
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See 1080 Delamination/Spall/Patched Area notes.

1130	Cracking (RC and Other)	1	07/24/2019	1.00	ft	0.00	1.00	0.00	0.00
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See 1080 Delamination/Spall/Patched Area notes.

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Bridge Inspection Report

Structure Inventory and Appraisal Sheet (English Units)

BRIDGE NOTES

Orientation:

The main bridge structure carries I-195 Westbound and consists of eighteen (18) spans labeled Span #1 through #18. The spans are logged west to east with Girder 'A' at the north fascia.

The Gano Street Ramp ties into the main bridge structure at the north side of Span #5 and consists of three (3) spans labeled Span #1R through #3R. The spans are logged west to east with Box Girder Cell 'A' at the south (true west) fascia.

The Seekonk River flows north to south below the structure.

Equipment:

60' manlift, 60' bucket boat, Ladder and Air Monitor.

Traffic Control:

Lane Closures on Gano Street (Span #1), Water Street (Span #15), Waterfront Drive (Span #16) and Valley Street (Span #18) with local police details. Moving closure on I-195 Westbound with state police details for topside inspection.

Access Notes:

- Access to the underside of Span #10 through Span #14 requires access to the CARDI construction yard. Check in with local personnel on site.
- The boat was launched from East Providence Yacht Club dock on Pier Road in East Providence .
- The interior of the Gano Street Ramp box girders was accessed through the hatches at West Abutment #1R with a 24' ladder (Photos 182, 222). The key for the box girder hatches can be obtained from David Cluley at the RIDOT Bridge Inspection office on Jefferson Boulevard .
- The catwalks on the interior portions of Pier #6 and Pier #7 can be accessed through hatches and ladders on the topside of the north overhang (Photos 282 – 284).
- The electrical utility room in the East Abutment has a locked door (Photos 215, 216, 280). The lock key can be obtained from David Cluley at the RIDOT Bridge Inspection office on Jefferson Boulevard .

INSPECTION NOTES

Rhode Island Department of Transportation

Bridge Inspection Report

Structure Inventory and Appraisal Sheet (English Units)

Routine and Special Inspection by AECOM

Inspection Date: Multiple dates from 06/17/19 to 07/24/19

Team Leader: [REDACTED]

Staff Inspector: [REDACTED]

Weather: 80° - 90° Fahrenheit

Special Inspection Requirements:

The special inspection includes the superstructure and substructure.

NBI Ratings:

The bridge is in overall Poor condition. The condition ratings for the Item 58 – Deck (6 – Satisfactory), Item 59 – Superstructure (6 – Satisfactory) and Item 60 – Substructure (4 - Poor) remain unchanged since the last inspection.

Bridge Construction:

The bridge was under construction during the time of inspection with ongoing superstructure repairs. There is scaffolding in place throughout the structure allowing access to the drop-in girder ends and corbels (Photos 236 – 238, 247, 255, 256, 288). There is typical construction debris scattered through the scaffolding (Photos 289, 290). There is typical construction wiring in place throughout the bridge (Photo 291).

The two (2) right lanes of I-195 Westbound and the Gano Street off ramp were closed during the time of inspection (Photos 7, 42 – 44, 50 – 54). The Taunton Avenue on ramp was also partially closed with a construction area in place at the east approach of the bridge (Photos 1, 4).

For additional inspection notes refer to the attached file “070001 Additional Inspection Notes.pdf”.

SCHEDULE NOTES

Rhode Island Department of Transportation

Bridge Inspection Report

Structure Inventory and Appraisal Sheet (English Units)

Equipment	
Aerial Lift	<input checked="" type="checkbox"/>
Boat	<input checked="" type="checkbox"/>
Underbridgeinspel	<input type="checkbox"/>
Scaffolding	<input checked="" type="checkbox"/>
BoesemansChair	<input type="checkbox"/>
Waders	<input type="checkbox"/>
Rail Mount Elliot	<input type="checkbox"/>
Crash Truck	<input type="checkbox"/>
Air Monitor	<input checked="" type="checkbox"/>
Ladder	<input checked="" type="checkbox"/>
Bucket Truck	<input type="checkbox"/>
Rigging	<input type="checkbox"/>
Floats	<input type="checkbox"/>
Climbing	<input type="checkbox"/>
Rail Mount Bucket Truck	<input type="checkbox"/>
Light Tower	<input type="checkbox"/>

Poison Ivy	<input type="checkbox"/>
Heavy Vegetation	<input type="checkbox"/>
Hurricane Evac Route ?	<input type="checkbox"/>

Cones	Yes
Traffic Setup Req	Yes
Police Req	Yes
Night Insp Req	No
Signs	Yes

Speed Limit	
Prep Time	
Crew Slize	Varies
Under Insp Vehicle Time	
Traffic Control Time	4
Mile Post	
Crew Days	20
Time Report Time	
Bucket Truck Time	

Site Access Notes	
Access SP #10-14 via CARDI construction yard. Launch boat from E. Prov. Yacht Club dock on Pier Rd. Access Gano St Ramp box girder interiors via locked hatches at W. Abut. #1R with ladder. Access catwalks inside Pier #6 & 7 via hatches on the top of the north overhang. The elect. room in E. Abut. is locked. Obtain all keys from David Cluley(RIDOT).	

Avg Curb Reveal North/East	2.50
Avg Curb Reveal South/West	2.50
Posted Weight Limit	
Posting Sign ?	<input type="checkbox"/>
Post Signs Legible	01
Post Sign Rec	01
Adv Min Vert Clear Sign	-1
Min Ver tClear Signs Leg	01
Min Vert Clear Post Vales	13'-9"
Min Vert Clear Sign Rec	01
Old Rating and Postings	
RR Mile Post	
US DOT/AAR No.	

Telephone	<input type="checkbox"/>
Sewer	<input type="checkbox"/>
Cable	<input type="checkbox"/>
Oil	<input type="checkbox"/>
Fire Alarm	<input type="checkbox"/>
OH Lines Present	<input type="checkbox"/>
Water	<input type="checkbox"/>
Gas	<input type="checkbox"/>
Electric	<input type="checkbox"/>
Fiber Optic	<input type="checkbox"/>

Rhode Island Department of Transportation
Bridge Inspection Report
Structure Inventory and Appraisal Sheet (English Units)

Work Candidaties

Assigned to Agency

Statius	Priority	Action	Date Proposed	Noties
Unknown	High	Bridge-Rehab	07/28/2015	<p>Bridge rehab projecti in progress</p> <p>[Baker – revised per 2018 Special Inspection] Repair quantity is based on tiotial defecti quantity ffor each elementi</p> <p>Superstiructiure</p> <ul style="list-style-type: none"> • Total Reinforced Concrete Closed Box Gird(Elementi105) repair quantity(844 LF) • Total Stieel Open Girde(Elementi107) repair quantity(643 LF) • Total Prestressed Concrete Open Girde(Elementi109) repair quantity(2,810 LF) • Total Reinforced Concrete Open Gird#Beam (Elementi110) repair quantity(1,926 LF) • Total Elastomeric Bearing(Elementi310) repair quantity(265 EA) • Total Movable Bearing(Elementi311) repair quantity(11 EA) • Total Fixed Bearing(Elementi313) repair quantity(11 EA) • Total Steel Diaphragm(Elementi8370) repair quantity(57 EA) • • Total Concrete Diaphragm(Elementi8371) repair quantity(186 EA) <p>Substiructiure</p> <ul style="list-style-type: none"> • Total Reinforced Concrete Colum(Elementi205) repair quantity(52 EA) • Total Reinforced Concrete Pier Wa(Elementi210) repair quantity(485 LF) • Total Reinforced Concrete Abutime(Elementi215) repair quantity(152 LF) • Total Reinforced Concrete Pier Ca(Elementi234) repair quantity(335 LF) • Total Reinforced Concrete Retiurn Wq(Elementi8213) repair quantity(175 LF) • Total Backwall(Elementi8218) repair quantity(126 LF) • Total Riprap(8366) repair quantity(60 SF) • Total Slope Blocks(8367) repair quantity(105 SF)

Assigned to Municipality

Statius	Priority	Action	Date Proposed	Noties
Under Review	High		07/24/2019	<p>Generated by user " [REDACTED] " on 10/26/2019</p> <p>There are several locations off ponding watier up ti08" deep inside tihe box girders RIDOT was informed abouti tihis issue on /11/19.</p>