

STRUCTURAL DATA RECORD**Sufficiency Rating: 90.9****IDENTIFICATION**

Bridge ID: 1749 6142	(2) District: 01	(3) County: 3
Inventory Route:		(4) Place Code: 77580
(A) On/Under: 1	(B) Highway Type: 1	(C) Service Lvl: 7
(D) Route No: 00095	(E) Direction: 0	
6A) Features Intersected: LIBERTY STREET		6B) Critical: *
(7) Facility Carried: I 95 NB TO SR 4		
(9) Location: WILMINGTON		11) Km. Point: 0.012 mi
16) Latitude: 39°44'16.81"	17) Longitude: 75°33'44.34"	
98) Border Bridge Code: NA	99) Border Br. Str. No.: NA	

STRUCTURE TYPE AND MATERIAL

43A) MAIN SPAN MATERIAL: 3		43B) DESIGN TYPE: 02
44A) APPR. SPAN MATERIAL: NA		44B) DESIGN TYPE: NA
45) Main Spans: 6	46) Approach Spans: 0	
107) Deck Type: 1		
108A) Wearing Surface: 3	108B) Membrane: 0	108C) Deck Protection: 0
Pier 1: 31	Pier 2: 32	Pier Ftg. 1: NA
Abut 1: 1	Abut 2: NA	Abut Ftg. 1: NA
		Pier Ftg. 2: NA
		Abut Ftg. 2: NA

NAVIGATION DATA

38) Navigational Control: N	39) Vertical Clearance: 0.0 ft	40) Horizontal Clearance: 0.0 ft
111) Pier Protection: !	116) Lift Br. Vert. Clr: 0.0 ft	

AGE AND SERVICE

19) Detour Length: 6 mi	27) Year Built: 1964	
28) No. of Lanes:	A) On Bridge: 1	B) Under Bridge: 2
29) ADT: 8599	30) Year of ADT: 2011	
42) Type of Service:	A) On Bridge: 6	B) Under Bridge: 1
106) Year Reconst.: 1980	109) % Truck ADT: 11	

CLASSIFICATION

12) Base Hwy. Network: 1	13A) LRS Inv. Rte: 0000006142	13B) LRS Subroute No.: 00
20) Toll Facility: 3	21) Maintenance: 1	22) Owner: 1
26) Functional Class: 11	37) Historical: 5	100) Defense Highway: 1
101) Parallel Str.: N	102) Direction: 1	103) Temp. Str.:
104) NHS: 1	105) Fed. Lands Highway: 0	110) Nat. Truck Network: 1
112) NBIS Length: Y		

LOAD RATING AND POSTING

31) Design Load: 6	41) Oper. Status: A	Rating Date: 10/25/2010
63) Oper. Rating Method: 3	64) Operating Rating: 75.8	
65) Inv. Rating Method: 3	66) Inv. Rating: 58.5	70) Bridge Posting: 5
Reason of Posting: NA	Date of Resolution: NA	Rating Analysis Req'd: NA
S335: 0	S437: 0	T330: 0
T435: 0	T540: 0	

PROPOSED IMPROVEMENTS

75) Type of Work: NA	76) Length of Imp.: NA
94) Bridge Cost: NA	95) Roadway Cost: NA
96) Total Cost: NA	97) Year of Cost Est.: NA
114) Future ADT: 13183	115) Year of Future ADT: 2031

CONTRACT INFORMATION

Contract 1: 6403004	Contract 2: 7809101	Contract 3: -1
Contract 4: -1	Contract 5: -1	Contract 6: -1

INSPECTION RECORD

90) Inspection Date: 3/28/2013
92A) FC Frequency: NA
92B) UW Frequency: NA
92C) SI Frequency: NA
Element Frequency: 24 months
UBIV Required: N
Boat: N

91) Frequency: 24 months
93A) FC. Insp. Date: NA
93B) UW Insp. Date: NA
93C) SI Date: NA
Elem. Insp. Date: 3/28/2013
UBIV Days: 01
Tidal: N

Next Inspection: 3/28/2015
Next FC Insp.: NA
Next UW Insp.: NA
Next SI: NA
Next Elem Insp.: 3/28/2015
Inspection Zone: 99
GPS: N

CONDITION

58) Deck: 6
61) Channel: N
62) Culvert: N

59) Superstructure: 6
Paint Condition: 6
Paint Priority: 92.34

60) Substructure: 6

APPRAISAL

36) Traffic Sfty Feat.:
A) Bridge Rail: 1
D) Approach Rail Ends: 1
67) Structure Evaluation: 6
71) Waterway Adequacy: N
113) Scour Critical Evaluation: N

B) Transition: 1
68) Deck Geometry: 6
72) Approach Rdwy Alignment: 8

C) Approach Rail: 1
69) Underclearance: 4
Scour Analysis Date: NA

GEOMETRIC DATA

32) Appr. Rdwy Width (w/ Shldrs): 22.00 ft
34) Skew: 0^ 0' 0"
48) Length Maximum Span: 143.00 ft
50) Curb or Sidewalk:
51) Width Curb to Curb: 22.00 ft
53) Minimum Vertical Clearance Over Bridge Roadway: 99.9 ft
54) Vertical Underclearance:
55) Lateral Underclearance:
56) Lateral Underclearance - Minimum Left: 0.00 ft

35) Structure Flared: 1
49) Structure Length: 609.00 ft
A) Left: 0.00 ft
52) Deck Width o/o: 27.20 ft

33) Median: 0
B) Right: 0.00 ft
B) Minimum: 15.90 ft
B) Minimum: 6.00 ft

PAST INSPECTION

Inspection Date: 3/28/2013

Type: 1

Inspector: PENNONI

INSPECTION NOTES

INSPECTED BY: PENNONI:
SON(TL,I,U),TJP(I,P,R),JRQ(I,P),CWM(I,P,U)
MAINTENANCE RECOMMENDATIONS: Clean debris from deck joints. Repair/replace approach slab spalls. Repair damaged guardrail @ NE corner. Repair delaminations and spalls in substructure units. Replace missing hand hole cover in Span 0A. Repair concrete base for light pole @ NE corner of Span 0A. Repair spalls/delaminations in soffit in Span 2, 3, & 4. Repair/replace fasteners for metal soundwall in Span 2. Tighten down/replace bearing anchor bolt nuts. Repair attenuator damaged crash cushions at SW corner Span 0A. Erect fence around Span 6 to prevent vagrants from having fire under span which is staining and charring beams. Repair erosion at NE corner of NE Wingwall. INSPECTION NOTES:
Span 0A: Light standard @ mid-span of the span w/ spalled concrete base and missing handhole cover. Span 1: Concrete pedestal for light pole on top of E Parapet @ N end is spalled w/ exposed steel reinforcement. The light pole has a missing handhole cover with exposed wires and the anchor bolt covers are missing on 3 of 4 bolts. Span 3: Light pole on the E Parapet has four missing anchor bolt covers and the pedestal is spalled at the NW corner. Span 4: Light pole mounted on the E Parapet has a missing anchor bolt cover.

BRIDGE NOTES

NBI DONE BY: JASON BAUER & DMJM NOTE: SCALE FACTORS ENTERED BY GRD ON 11/14/07,
DO NOT CHANGE OR ERASE....

PONTIS DATA

Elements	ID	ENV	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	Comments
Concrete Deck - Protected w/ Rigid Overlay	22	4	(SF)	17594	0	17594	0	0	0	For Notes See MSPE Report
Drains/Downspouts /Scuppers	65	4	(EA)	5	3	0	2	0	0	For Notes See MSPE Report
Painted Steel Open Girder/Beam	107	3	(LF)	2705	1940	683	82	0	0	For Notes See MSPE Report
Reinforced Concrete Column or Pile	205	3	(LF)	11	9	0	2	0	0	For Notes See MSPE Report
Reinforced Concrete Pier Wall	210	3	(LF)	35	26	1	8	0	0	For Notes See MSPE Report
Reinforced Concrete Abutment	215	1	(LF)	43	38	0	5	0	0	For Notes See MSPE Report
Reinforced Concrete Pier Cap	234	3	(LF)	141	102	19	20	0	0	For Notes See MSPE Report
Strip Seal Expansion Joint	300	4	(LF)	184	0	184	0	0	0	For Notes See MSPE Report
Moveable Bearing (roller, sliding, etc.)	311	4	(EA)	27	25	2	0	0	0	For Notes See MSPE Report
Fixed Bearing	313	4	(EA)	27	25	2	0	0	0	For Notes See MSPE Report
Reinforced Conc Approach Slab w/ or w/o AC Ovly	321	4	(EA)	1	0	1	0	0	0	For Notes See MSPE Report
Bridge Railing - Reinforced Concrete	331	4	(LF)	1247	1180	50	17	0	0	For Notes See MSPE Report
Bridge Railing - Metal Coated	334	4	(LF)	243	236	7	0	0	0	For Notes See MSPE Report
Deck Cracking	358	1	(EA)	1	0	1	0	0	0	For Notes See MSPE Report
Soffit (or Under Surface) of Concrete Deck or Slab	359	1	(EA)	1	1	0	0	0	0	For Notes See MSPE Report
Erosion	364	1	(EA)	1	1	0	0	0	0	For Notes See MSPE Report
Painted Steel Diaphragm	381	3	(EA)	105	33	65	7	0	0	For Notes See MSPE Report
Reinforced Concrete Wingwalls	390	2	(LF)	20	17	3	0	0	0	For Notes See MSPE Report

Total Elements: 18

DELAWARE DEPARTMENT OF TRANSPORTATION

Bridge Management Section MultiSpan PONTIS Element Report for Span No. 1

Bridge ID: 1749 6142

Inspection Date: 3/28/2013

Description: Span 1A (Pier 24 to Pier 1A)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	17594	0	17594	0	0	0	CS2: (17594 SF) Typically exhibit moderate wear w/ exposed aggregate, w/ bitum repairs throughout (60' L x 20' W in Span 6 and 45' L x 15' W in Span 5). Span 5 at S end of bitum roadway w/ Lg delaminations/spalls throughout center lane (5' W x 1' L) and depressed area w/ 1/8" W to 1/4" W cracking and spalls up to 2" Diam x 1 1/2" D (See Photo 9). Spans 1, 2, 3 & 4 w/ No Defects Observed (NDO). Previously noted delamination in Span 4 not observed.
65	4	Drainage	(EA)	1	1	0	0	0	0	CS1: (1 EA) Scupper open and downspout w/ missing section at the bottom but functioning.
300	4	Strip Seal Exp Joint	(LF)	27	0	27	0	0	0	CS2: (27 LF) Filled w/ debris full-width and minor tears throughout (See Photo 12).
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	3	Paint Stl Opn Girder	(LF)	567	315	250	2	0	0	CS2: (250 LF) Plate Girders - Localized areas of minor spot rust on bottom flanges and peeling paint w/ exposed primer on u/side of bottom flange of Girders 1-4 near Pier 1A (7 LF). Girder 4 just N of mid-span bottom flange kinked up. CS3: (2 LF) - Girder 1, bottom flange at P01A w/ peeling paint and exposed corroded steel. Girder 4 bearing stiff at P01A, W face w/ peeling paint and exposed corroded steel.
331	4	Conc Bridge Railing	(LF)	289	282	6	1	0	0	CS2: (6 LF) Ext face of barriers w/ typ vert cracks (up to 1/8" W) that start at parapet joints and extend into soffit. CS3: (1 LF) E. Parapet, S end w/ two spalls w/ exposed steel reinforcement 7" L x 11" W x 3" D at the top (See Photo 14) and 5" L x 7" H x 2 1/2" D at the base.
334	4	Metal Rail Coated	(LF)	16	16	0	0	0	0	NDO
381	3	Painted Steel Diaphr	(EA)	21	6	15	0	0	0	CS2: (15 EA) Most diaph's w/ minor spot/freckled rust and Bay 3 intermediate diaphragms near Pier 1A have some peeling paint.
311	4	Moveable Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Sliding plate bearings @ Pier 1A w/ minor corrosion to plate edges.
313	4	Fixed Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Fixed bearings at Pier 24 (Bridge 1748) are heavily greased w/ NDO.
205	3	R/Conc Column	(LF)	0	0	0	0	0	0	0
210	3	R/Conc Pier Wall	(LF)	7	6	0	1	0	0	CS3: (1 LF) 4" Diam delamination on S face at top near cap w/ rust stain.
215	1	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
234	3	R/Conc Pier Cap	(LF)	27	25	1	1	0	0	CS2: (1 LF) 6" Diam delamination on S face near stem. CS3: (1 LF) Bearing 2 pedestal w/ cracks w/ rust stains.
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	1	0	1	0	0	0	CS2: (1 EA) Random HL cracks throughout, Span 3, 4 & 5 w/ 1/16" to 1/8" wide transv and long cracks throughout. Span 5 just S. of bituminous patch has a 1/8" - 1/4" wide trans crack 6' L.

359	1	Soffit Smart Flag	(EA)	1	1	0	0	0	0	CS1: (1 EA) Several fine transv cracks. Span 1: W overhang w/ 6" L x 3" W x 1 1/2" D spall w/ exposed corroded steel reinforcement (See Photo 10). Span 2: At Pier 1A, E overhang w/ diagonal cracks w/ associated delamination. Span 3: Spall in Bay 3 at Pier 2A 18" L x 6" W x 1 1/4" D. Span 4: Random HL cracks. Bay 3, N & S end w/ diag cracks w/ efflo and associated delaminations (1 SF). Span 5: Bays 1 & 2 w/ exposed concrete w/ cracks w/ efflo. Previously noted spalling along deck haunch in Bay 3 @ Beam 4 top flange not observed. Span 6: Typ trans cracks w/ efflo and stalactites. Some small haunch spalls and delaminations. Random spots of rust stains from some soffit cracks. Typ scaled areas and map cracks throughout. SIP's - Span 6 w/ leaking & efflo from pans at abutment Bays 2 & 3, and minor in Bay 1. Also leaking at intermediate diaph's Bays 2 & 3. Typ thruout w/ areas of severe corrosion to pans at drainholes.
364	1	Erosion Smart Flag	(EA)	1	1	0	0	0	0	CS1: (1 EA) Area of erosion adjacent to the NE corner of the NE Wingwall (54" L x 24" W x 22" D). (See Photo 22).

DELAWARE DEPARTMENT OF TRANSPORTATION

Bridge Management Section MultiSpan PONTIS Element Report for Span No. 2

Bridge ID: 1749 6142

Inspection Date: 3/28/2013

Description: Span 2A (Pier 1A to Pier 2A)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
65	4	Drainage	(EA)	1	1	0	0	0	0	CS1: (1 EA) Downspout disconnected at bottom but functioning w/ NDO.
300	4	Strip Seal Exp Joint	(LF)	27	0	27	0	0	0	CS2: (27 LF) Jt filled w/ debris, jt material has tears and is debonded and depressed up to 2".
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	3	Paint Stl Opn Girder	(LF)	462	310	150	2	0	0	CS2: (150 LF) Plate Girders - Areas of spot/freckled rust throughout; worst @ Pier 2A. CS3: (2 LF) Girder1 w/ exp corroded steel on bottom flange at Pier 1A. Girder 1 W face at Pier 2A with exposed steel w/out corrosion at previously painted over area of section loss. Section loss is 2" W x 8" L x 1/2" D on top of bottom flange and 2" W x up to 3/8" in web. (See Photo 17).
331	4	Conc Bridge Railing	(LF)	234	219	15	0	0	0	CS2: (15 LF) Few corner spalls at the base of the parapet joints. Exterior face of barriers w/ typ vert cracks (up to 1/8" wide) that start at parapet joints and extend into soffit.
334	4	Metal Rail Coated	(LF)	220	214	6	0	0	0	CS2: (6 LF) Missing (12) and loose (1) fasteners for splice plates @ five total locations (5 @ west rail & 8 @ east rail). Worst case @ SW end of span w/ loose & protruding splice panel. (See Photo 16).
381	3	Painted Steel Diaphr	(EA)	18	8	10	0	0	0	CS2: (10 EA) Many have minor spot/freckled rust.
311	4	Moveable Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Sliding plate bearings @ Pier 2A w/ corrosion on plates; worst case @ Bearing 1.
313	4	Fixed Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Pier 1A bearings w/ corrosion to plate edges.
205	3	R/Conc Column	(LF)	0	0	0	0	0	0	0
210	3	R/Conc Pier Wall	(LF)	7	0	1	6	0	0	CS2: (1 LF) S. face w/ 26" H x 12" W x 1" D spall at bottom. CS3: (6 LF) S. face w/ vert crack w/ rust staining at mid-height w/ assoc. delam (4 LF). N. face of cap at W. end w/ few HL cracks w/ minor rust stains and assoc. delam (1 SF). W. face near bottom w/ vert crack w/ rust stains (30" L).
215	1	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
234	3	R/Conc Pier Cap	(LF)	27	20	2	5	0	0	CS2: (2 LF) Top of cap at N. edge under Bay 1 w/ 18" L x 16" W delam. CS3: (5 LF) Top of cap at S. edge under Bay 1 w/ HL crack w/ rust stains. N. face w/ 30" W x 9" H x 6" D spall w/ exp. corr. steel extends into u/side. Span 3 G3 pedestal, W. face has a 9" L x 5" H spall w/ exp. steel.
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	1	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0

364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0
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DELAWARE DEPARTMENT OF TRANSPORTATION

Bridge Management Section
MultiSpan PONTIS Element Report for Span No. 3

Bridge ID: 1749 6142

Inspection Date: 3/28/2013

Description: Span 3A (Pier 2A to
Pier 3A)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
65	4	Drainage	(EA)	1	0	0	1	0	0	CS3: (1 EA) Scupper is clogged. Downspout w/ removed section @ bottom and functioning poorly.
300	4	Strip Seal Exp Joint	(LF)	27	0	27	0	0	0	CS2: (27 LF) Partially filled w/ debris, areas depressed and debonded w/ active leakage noted in Bays 1, 2 & 3.
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	3	Paint Stl Opn Girder	(LF)	490	320	138	32	0	0	CS2: (138 LF) Plate Girders - Areas of spot rust/freckled rust mostly on underside of girder flanges at Pier 2A. CS3: (32 LF) Top and bottom flanges of G1 w/ areas of exposed corroded steel throughout.
331	4	Conc Bridge Railing	(LF)	249	237	8	4	0	0	CS2: (8 LF) Few small edge/corner spalls in base. Exterior face of parapets w/ typ vert cracks (up to 1/8" W) that start at parapet jts and extend into soffit. W Parapet interior face at midspan w/ 3" Diam x 1" D spall. CS3: (4 LF) W Parapet @ midspan w/ 15" L x 12" W x 1 1/2" D spall at top and 6" Diam x 1 1/2" D spall at base w/ exposed steel. W Parapet exterior face w/ (2) HL vert cracks w/ rust staining at parapet joints.
334	4	Metal Rail Coated	(LF)	7	6	1	0	0	0	CS2: (1 LF) SE end w/ 1 missing fastener @ splice plate.
381	3	Painted Steel Diaphr	(EA)	18	5	12	1	0	0	CS2: (12 EA) Many w/ spot/freckled rust, end diaph's @ Pier 2A w/ large freckled spots. Note: Cross-bracing members in Bays 1 & 3 - Many have loose or missing bolts @ gusset plate conn's, but are tack welded to gussets. CS3: (1 EA) Bay 3 @ 1st interior connection from south of G4 has burn marks from welding and exposed corroded steel.
311	4	Moveable Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Sliding plate bearings @ Pier 3A are within allowable tolerances and have spot rust on plate edges.
313	4	Fixed Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Pier 2A bearings w/ rust on plate edges.
205	3	R/Conc Column	(LF)	0	0	0	0	0	0	0
210	3	R/Conc Pier Wall	(LF)	7	6	0	1	0	0	CS3: (1 LF) N face at cap w/ horiz cracks w/ rust stains.
215	1	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
234	3	R/Conc Pier Cap	(LF)	27	21	0	6	0	0	CS3:(6 LF) 9" Diam spall w/ exposed corroded steel reinforcement (1 SF) in bot of cap @ N face under Bay 1. North face w/ (4) shallow spalls w/ exposed corroded steel reinforcement under Bay 3 for a 42" W x 24" H area (See Photo 20) and a HL vert crack w/ rust stains under BM 2 (1 LF).
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	1	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0

364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0
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DELAWARE DEPARTMENT OF TRANSPORTATION

Bridge Management Section
MultiSpan PONTIS Element Report for Span No. 4

Bridge ID: 1749 6142

Inspection Date: 3/28/2013

Description: Span 4A (Pier 3A to
Pier 4A)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
65	4	Drainage	(EA)	1	0	0	1	0	0	CS3: (1 EA) Scupper clogged (See Photo 11) and downspout w/ removed section at bottom.
300	4	Strip Seal Exp Joint	(LF)	27	0	27	0	0	0	CS2: (27 LF) Partially filled w/ debris and evidence of leakage on pier at ends.
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	3	Paint Stl Opn Girder	(LF)	296	260	20	16	0	0	CS2: (20 LF) Rolled Beams - Localized areas of spot rust on bottom & top flanges. Beam 1 w/ rust stains to top flange edge throughout. CS3: (16 LF) Few small areas of scraped paint w/ minor corrosion to exposed steel on bottom flanges, cover plates, and top flange of BM 1 and ends of BM 1 & 4 @ Piers 3A & 4A. Fascia flange edges of BM 4 w/ a few areas of corrosion near mid-length and BM 1 w/ corrosion to top flange at midspan.
331	4	Conc Bridge Railing	(LF)	150	133	7	10	0	0	CS2: (7 LF) W Parapet at S end w/ 6" Diam x 1" D corner spall @ base of interior face (1 LF). Exterior face of parapets w/ typ vert cracks (up to 1/8" W) that start at parapet jts and extend into soffit. CS3: (10 LF) Exterior face of E Parapet w/ horiz HL cracks w/ rust stains at S end and midspan (See Photo 15).
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	3	Painted Steel Diaphr	(EA)	12	5	7	0	0	0	CS2: (7 EA) Intermediate diaph's have minor spot rust.
311	4	Moveable Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Sliding plate bearings @ Pier 3A are within allowable tolerances and have areas of spot rust and blistered paint on plates.
313	4	Fixed Bearing	(EA)	4	3	1	0	0	0	CS1: (3 EA) Pier 4A bearings are heavily greased w/ <1/8" pack rust between masonry PL and pedestal on north ends at fascia bearings. CS2: (1 EA) W anchor bolt nut for Bearing 4 is not tight against masonry plate and is frozen to the top of the bolt threads.
205	3	R/Conc Column	(LF)	0	0	0	0	0	0	0
210	3	R/Conc Pier Wall	(LF)	7	7	0	0	0	0	NDO
215	1	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
234	3	R/Conc Pier Cap	(LF)	27	26	1	0	0	0	CS2: (1 LF) W face of Bearing 3 ped w/ FW x FH x 11" L delamination with 11" L x 6" W x 3" D spall at the S face w/ no undermining of bearing.
390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	1	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

DELAWARE DEPARTMENT OF TRANSPORTATION

Bridge Management Section *MultiSpan PONTIS Element Report for Span No. 5*

Bridge ID: 1749 6142

Inspection Date: 3/28/2013

Description: Span 5A (Pier 4A to Pier 5A) over Liberty St.

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
65	4	Drainage	(EA)	1	1	0	0	0	0	CS1: (1 EA) Scupper w/ minor debris but downspout open. Downspout intentionally disconnected w/ missing section at base, but functioning.
300	4	Strip Seal Exp Joint	(LF)	33	0	33	0	0	0	CS2: (33 LF) Partially filled w/ debris, mostly in shoulders, and evidence of leakage.
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	3	Paint Stl Opn Girder	(LF)	367	308	50	9	0	0	CS2: (50 LF) Rolled Beams - Localized areas of spot rust. CS3: (9 LF) Ends of beam top flanges @ Pier 5A w/ exposed and corroded areas of steel.
331	4	Conc Bridge Railing	(LF)	149	139	8	2	0	0	CS2: (8 LF) 14" H x 7" L x 3" D corner spall in base @ SW. At SE end, 8" H x 3" W x 2" D spall above inlet. Exterior face of barriers w/ typ vert cracks (up to 1/8" W) that start @ the parapet jts and extend into soffit. CS3: (2 LF) E. barrier @ midspan, fine horiz cracks w/ rust stains at parapet jts.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	3	Painted Steel Diaphr	(EA)	16	7	9	0	0	0	CS2: (9 EA) Many diaph's have minor spot rust.
311	4	Moveable Bearing	(EA)	5	3	2	0	0	0	CS1: (3 EA) Plate bearings @ Pier 5A are w/in allowable tolerances. Bearings 1 and 2 w/ spot rust and Bearing 5 is heavily greased w/ spot rust to exposed surfaces. CS2: (2 EA) Plate bearings @ Pier 5A are w/in allowable tolerances. Bearings 3 and 4 w/ rust laminations and flaking paint (See Photo 18).
313	4	Fixed Bearing	(EA)	5	4	1	0	0	0	CS1: (4 EA) Pier 4A bearings are heavily greased w/ up to 1/8" pack rust between masonry plate and pedestal on S ends at fascia bearings. CS2: (1 EA) W anchor bolt nut @ Bearings 1 is backed off 1 3/4" and frozen to the top of the bolt threads.
205	3	R/Conc Column	(LF)	11	9	0	2	0	0	CS2: (2 LF) 18" H x 3" W x 3" L corner delam at top NE corner of column and 22" H x 3" W x 5" L delam at top of NW corner.
210	3	R/Conc Pier Wall	(LF)	7	7	0	0	0	0	NDO
215	1	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
234	3	R/Conc Pier Cap	(LF)	33	10	15	8	0	0	CS2: (15 LF) 18" L x 18" W delam under Bay 1, conc. patch under Bay 2 w/ 3' L x up to 1/4" W crack and 7" H up to 7" W x 1" D spall. Brg 3 Ped w/ 18" L x 10" W delam @ NW corner and S. face w/ (2) diag cracks 11" L and 18" L, up to 1/8" W. Bott of N & S sides below Bay 3 w/ fine cracks in 5' L x 3' W delam. patch, and top of cap under Bay 3 w/ 4' L x up to 1/16" W crack. CS3: (8 LF) Vert crack w/ rust & assoc. 5" W x 5" L corner delam @ SE of Brg 3 Ped and 12" L x 18" W x up to FH corner spall w/ exp corr. steel in W. face of Brg 4 Ped. (See Photo 19). Several fine cracks w/ rust stains in u/side under Bay 4 & 5 (5 LF). S. face of cap under Bay 2 w/ 1' L HL crack w/ rust stains.

390	2	Reinf Conc Wingwalls	(LF)	0	0	0	0	0	0	0
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0
359	1	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0

DELAWARE DEPARTMENT OF TRANSPORTATION

Bridge Management Section
MultiSpan PONTIS Element Report for Span No. 6

Bridge ID: 1749 6142

Inspection Date: 3/28/2013

Description: Span 6A (Pier 5A to
No. Abut.)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	0	0	0	0	0	0	0
65	4	Drainage	(EA)	0	0	0	0	0	0	0
300	4	Strip Seal Exp Joint	(LF)	43	0	43	0	0	0	CS2: (43 LF) Approx. 50% w/ heavy accumulation of debris in abut jt w/ the adjacent deck & slab w/ minor spalls and delaminations. Evidence of leakage on abut. Header w/ severe wear and up to 18" W x 10" L bitum. patch depressed up to 1 1/2" D. Jt armoring is scraped/worn in several locations.
321	4	R/Conc Approach Slab	(EA)	1	0	1	0	0	0	CS2: (1 EA) Mod to severe wear throughout, 22" W x 11" L x 1" D spall adjacent to deck jt (See Photo 13), 3 SF delamination along E edge, HL to 1/8" wide long. & trans. cracks and up to 1/8" W map cracking, numerous small edge spalls along N edge.
107	3	Paint Stl Ogn Girder	(LF)	523	427	75	21	0	0	CS2: (75 LF) Rolled Beams - Beams are charred and soot covered from vagrant fires under span. Graffiti on abut ends. Areas of spot/freckled rust, mostly on bottom flanges. CS3: (21 LF) Random spot rust along the top flanges w/ flaked paint w/ exposed corroded steel and a few scrapes/gouges on bottom flanges w/ rust. Beam 3 w/ rust stains to diaph bolts at Pier 5A.
331	4	Conc Bridge Railing	(LF)	176	170	6	0	0	0	CS2: (6 LF) Exterior face of barriers w/ cracks (up to 1/8" W) that start @ parapet jts and extend into soffit.
334	4	Metal Rail Coated	(LF)	0	0	0	0	0	0	0
381	3	Painted Steel Diaphr	(EA)	20	2	12	6	0	0	CS2: (12 EA) Minor freckled rust @ several diaph's. CS3: (6 EA) Typ end diaph's w/ areas of chipped paint w/ exposed corroded steel.
311	4	Moveable Bearing	(EA)	6	6	0	0	0	0	CS1: (6 EA) Sliding plate bearings @ Pier 5A are w/in allowable tolerances. Bearings 1 thru 4 have minor spot rust, Bearing 1 has <1/16" rust lam on the anchor bolt nut, Bearing 4 has <1/16" rust lam on plates, and Bearings 5 & 6 are heavily greased w/ NDO.
313	4	Fixed Bearing	(EA)	6	6	0	0	0	0	CS1: (6 EA) N Abutment bearings are heavily greased w/ minor spot rust.
205	3	R/Conc Column	(LF)	0	0	0	0	0	0	0
210	3	R/Conc Pier Wall	(LF)	0	0	0	0	0	0	0
215	1	R/Conc Abutment	(LF)	43	38	0	5	0	0	CS3: (5 LF) 15" H x 32" W x 3" D spall w/ exposed corroded steel reinforcement in backwall under Bay 3 (See Photo 21), 8" L x 5" H x 2 1/2" D spall w/ exposed corroded steel reinforcement at West end of backwall and 3" Diam spall with exposed corroded steel reinforcement in W face of Bearing 3 ped.
234	3	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	2	Reinf Conc Wingwalls	(LF)	20	17	3	0	0	0	CS2: (3 LF) NE Wingwall w/ 16" L x 7" W x 3" D corner spall & 1/16" wide cracks.
358	1	Deck Cracking SmFlag	(EA)	0	0	0	0	0	0	0

359	1	Soffit Smart Flag	(EA)	0	0	0	0	0	0	0
364	1	Erosion Smart Flag	(EA)	0	0	0	0	0	0	0



1. North Approach, looking south onto bridge.



2. East Elevation, looking southwest.



3. General view of underside, looking north (Span 6 shown).



4. Under record, Amtrak (Span 2), looking west.



5. Under record, Amtrak (Span 2), looking east.



6. Under record, Liberty Street (Span 4), looking west.



7. Under record, Liberty Street (Span 4), looking east.



8. General view of deck, looking south (Span 4 shown).



9. Span 5, S of bitum patch - 1/4" W cracks & up to 2" Diam x 1 1/2" D spalls.



10. Span 1, N o/hang at midspan - 6"L x 3"W x 1 1/2"D spall w/ exp corr steel reinf.



11. Span 4, W shoulder - Clogged scupper.



12. Pier 1A deck joint - Debris full-width and minor tears throughout.



13. N Aprpr slab - 22" W x 11" L x 1" D spall & adj. joint armoring w/scrapes.



14. Span 1, E Ppt at S end - 7"L x 11"H x 3"D spall @ top w/ exp corr steel reinf.



15. Span 4, E Ppt exterior face@ midspan - 10' L x HL crack w/ minor rust staining.



16. Span 2, W Ppt steel railing @ S end - Splice panel missing 6 of 8 fasteners.



17. Span 2, G1 at P02A - Previously painted S.L. w/ exposed steel in web and flg.



18. Pier 5A, BM 4, Span 5 Brg - Flaking paint w/ corrosion and rust lam on plates.



19. P05A, Ped 4, SW corner - 12"L x 18"W x FH spall w/ exp corr steel reinf.



20. Pier 3A, N face @ Bay 3 - 42"W x 24"H area w/ 4 spalls w/ exp corr steel reinf.



21. N Abut backwall @ Bay 3 - 15" H x 32" W x 3" D spall w/ exp corr steel reinf.



22. NE Wingwall at NE corner - 54" L x 24" W x 22" D area of erosion.

UNDER RECORD
For
Bridge: 1749 6142

IDENTIFICATION

Bridge ID: 1749 6142	(2) District: 01	(3) County: 3
Inventory Route:		
(A) On/Under: 2	(B) Highway Type: 5	(C) Service Lvl: 1
(D) Route No: 00000		11) Mile Pt: 0.46 mi
6A) Features Intersected: LIBERTY STREET		6B) Critical:
16) Latitude: 39^44'16.81"	17) Longitude: 75^33'44.34"	

AGE AND SERVICE

19) Detour Length: 0 mi	27) Year Built: 1964	
28) No. of Lanes:	A) On Bridge: 2	B) Under Bridge: 2
29) ADT: 100	30) Year of ADT: 2011	109) % Truck ADT: 5

CLASSIFICATION

20) Toll Facility: 3		
26) Functional Class: 19	37) Historical: 5	100) Defense Highway: 0
102) Direction: 2	103) Temp. Str.:	104) NHS: 0
110) Nat. Truck Network: 0		

GEOMETRIC DATA

10) Clearances -		
Vertical:: 16.3 ft		
42) Type of Service:	A) On Bridge: 6	B) Under Bridge: 1
43A) MAIN SPAN MATERIAL: 3		43B) DESIGN TYPE: 02
47) Inv. Route - Horiz.		
Clearance: 20.0 ft		
48) Length Maximum Span: 143.0 ft	49) Structure Length: 609.0 ft	

UNDER RECORD SKETCH

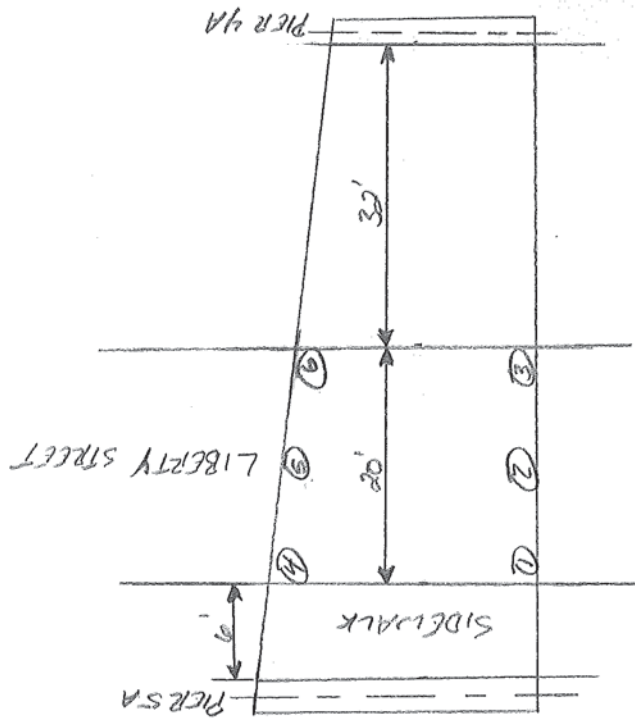
Under Record Sketch Sheet

Bridge: 1-749 - 6/402

Inspected By: CWM, SDW

Date: 4, 4, 2013

I-95 NB to SRH Ramp
over Liberty Street (Span 4A)



VERTICAL CLEARANCES:

- ① 15'-11 1/2"
- ② 16'-3 3/8"
- ③ 16'-11 1/4"
- ④ 16'-3 1/8"
- ⑤ 16'-6 7/8"
- ⑥ 17'-1 3/8"

NO
CHANGE
2013