

**STRUCTURAL DATA RECORD****Sufficiency Rating: 83.3****IDENTIFICATION**

Bridge ID: 1758 6143	(2) District: 01	(3) County: 3
Inventory Route:	(B) Highway Type: 3	(4) Place Code: 77580
(A) On/Under: 1	(E) Direction: 0	(C) Service Lvl: 7
(D) Route No: 00048		6B) Critical: *
6A) Features Intersected: SR 4,MARYLAND AVE		11) Km. Point: 0.170 mi
(7) Facility Carried: SR 48 TO I 95 SB		
(9) Location: SOUTH WILMINGTON		
16) Latitude: 39^44'23.99"	17) Longitude: 75^33'45.98"	
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: 7	46) Approach Spans: 0
107) Deck Type: 1	
108A) Wearing Surface: 3	108B) Membrane: 0
Pier 1: 34	Pier 2: 32
Abut 1: 1	Abut 2: NA
Pier Ftg. 1: E	Pier Ftg. 2: E
Abut Ftg. 1: E	Abut Ftg. 2: NA
	108C) Deck Protection: 0

**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: 4 mi	27) Year Built: 1964	
28) No. of Lanes:	A) On Bridge: 1	B) Under Bridge: 2
29) ADT: 7637	30) Year of ADT: 2010	
42) Type of Service:	A) On Bridge: 6	B) Under Bridge: 1
106) Year Reconst.: -4	109) % Truck ADT: 11	

**CLASSIFICATION**

12) Base Hwy. Network: 1	13A) LRS Inv. Rte: 0000006143	13B) LRS Subroute No.: 00
20) Toll Facility: 3	21) Maintenance: 1	22) Owner: 1
26) Functional Class: 14	37) Historical: 5	100) Defense Highway: 0
101) Parallel Str.: N	102) Direction: 1	103) Temp. Str.: 0
104) NHS: 1	105) Fed. Lands Highway: 0	110) Nat. Truck Network: 0
112) NBIS Length: Y		

**LOAD RATING AND POSTING**

31) Design Load: 6	41) Oper. Status: A	Rating Date: 10/28/2010
63) Oper. Rating Method: 3	64) Operating Rating: 89.9	
65) Inv. Rating Method: 3	66) Inv. Rating: 69.2	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: 35	76) Length of Imp.: 141,122
94) Bridge Cost: 1028000	95) Roadway Cost: 103000
96) Total Cost: 1532000	97) Year of Cost Est.: 2005
114) Future ADT: 9492	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: 6/27/2013  
 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: 6/27/2013  
 UBIV Days: NA  
 Tidal: N

Next Inspection: 6/27/2015  
 Next FC Insp.: NA  
 Next UW Insp.: NA  
 Next SI: NA  
 Next Elem Insp.: 6/27/2015  
 Inspection Zone: 99  
 GPS: N

**CONDITION**

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

59) Superstructure: 7  
 Paint Condition: 8  
 Paint Priority: 98.23

60) Substructure: 6

**APPRAISAL**

36) Traffic Sfty Feat.:  
 A) Bridge Rail: 1  
 D) Approach Rail Ends: 0  
 67) Structure Evaluation: 6  
 71) Waterway Adequacy: N  
 113) Scour Critical Evaluation: N

B) Transition: 0  
 68) Deck Geometry: 3  
 72) Approach Rdwy Alignment: 8

C) Approach Rail: 0  
 69) Underclearance: 3  
 Scour Analysis Date: NA

**GEOMETRIC DATA**

32) Appr. Rdwy Width (w/ Shldrs): 17.00 ft  
 34) Skew: 0^ 0' 0"  
 48) Length Maximum Span: 85.00 ft  
 50) Curb or Sidewalk:  
 51) Width Curb to Curb: 17.00 ft  
 53) Minimum Vertical Clearance Over Bridge Roadway: 0.00 ft  
 54) Vertical Underclearance:  
 55) Lateral Underclearance:  
 56) Lateral Underclearance - Minimum Left: 0.00 ft

35) Structure Flared: 1  
 49) Structure Length: 463.00 ft  
 A) Left: 0.00 ft  
 52) Deck Width o/o: 22.20 ft

33) Median: 0  
 B) Right: 0.00 ft  
 B) Minimum: 13.44 ft  
 B) Minimum: 10.00 ft

**PAST INSPECTION**

Inspection Date: 6/27/2013

Type: 1

Inspector: PENNONI

**INSPECTION NOTES**

INSPECTED BY: PENNONI ASSOCIATES, INC. LAA  
 (TL,I,R), HAB (I,P,U) REQUESTED MAXIMO  
 MAINTENANCE: CLEAN & FLUSH SCUPPERS AND  
 DOWNSPOUTS -- WO# 579985 REPAIR BITUM.  
 APPROACH ROADWAYS. SEAL CRACKS AND REPAIR  
 SPALLS OR DELAMS IN SUBSTRUCTURE UNITS. SEAL  
 CRACKS AND REPAIR SOFFIT SPALLS. SEAL CRACKS  
 IN PARAPETS AND REPAIR SPALLING. CLEAN & FLUSH  
 SCUPPERS AND DOWNSPOUTS. CLEAN/FLUSH JOINTS.  
 REPAIR/REPLACE DELAM CONCRETE IN DECK SURFACE.  
 INSPECTION NOTES: HOMELESS HABITAT IN SPAN 1  
 W/ PERSONS OCCUPYING SPACE. NOTE - COMPLAINT  
 THAT VAGRANTS HIDE IN BRUSH ALONG APPROACH  
 ROADWAY AND JUMP OUT TO ATTACK PASSING  
 PEDESTRIANS. SURMOUNTED LIGHT POLES ON PARAPET  
 W/ NDN IN SPANS 0, 3 & 5.

**BRIDGE NOTES**

NBI DONE BY: JARNDT & DMJM ....NOTE: SCALE FACTORS ENTERED BY GRD ON 12/30/05, DO NOT  
 CHANGE....

**PONTIS DATA**

Elements	ID	ENV	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	Comments
Concrete Deck - Protected w/ Rigid Overlay	22	4	(SF)	11119	0	11119	0	0	0	For Notes See MSPE Report
Drains/Downspouts/Scuppers	65	4	(EA)	3	1	0	2	0	0	For Notes See MSPE Report
Painted Steel Open Girder/Beam	107	3	(LF)	2182	2064	79	39	0	0	For Notes See MSPE Report
Reinforced Concrete Column or Pile	205	1	(LF)	53	53	0	0	0	0	For Notes See MSPE Report
Reinforced Concrete Pier Wall	210	3	(LF)	104	95	7	2	0	0	For Notes See MSPE Report
Reinforced Concrete Abutment	215	3	(LF)	49	42	7	0	0	0	For Notes See MSPE Report
Reinforced Concrete Pier Cap	234	3	(LF)	137	94	12	31	0	0	For Notes See MSPE Report
Strip Seal Expansion Joint	300	4	(LF)	221	35	186	0	0	0	For Notes See MSPE Report
Moveable Bearing (roller, sliding, etc.)	311	4	(EA)	34	32	2	0	0	0	For Notes See MSPE Report
Fixed Bearing	313	4	(EA)	34	34	0	0	0	0	For Notes See MSPE Report
Reinforced Conc Approach Slab w/ or w/o AC Ovly	321	4	(EA)	2	0	2	0	0	0	For Notes See MSPE Report
Bridge Railing - Reinforced Concrete	331	4	(LF)	926	0	0	926	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	0	1	0	0	0	For Notes See MSPE Report
Section Loss	363	1	(EA)	1	1	0	0	0	0	For Notes See MSPE Report
Painted Steel Diaphragm	381	3	(EA)	105	53	42	10	0	0	For Notes See MSPE Report
Reinforced Concrete Wingwalls	390	3	(LF)	26	26	0	0	0	0	For Notes See MSPE Report

**Total Elements:** 17

# DELAWARE DEPARTMENT OF TRANSPORTATION

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

Bridge ID: 1758 6143

Inspection Date: 6/27/2013

Description: Span 0B (N. Abut. to  
Pier 1B)

ELEM	ENV	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4	CS5	COMMENTS
22	4	P Conc Deck/Rigid Ov	(SF)	11119	0	11119	0	0	0	CS2: (11,119 SF) Moderate wear with exposed aggregate throughout, dirt and debris along gutterlines. Span 4B with large bituminous patches with adjacent delaminated areas (9.5' x 10' and 4' x 5'). Delaminated areas (6' x 3') with associated shallow spall (26" x 9" x 1") in center of Span 6B and two (2) other delaminations (12' x 7' and 8' x 5'). Typical full-width hairline transverse cracks. See Photo 6.
65	4	Drainage	(EA)	0	0	0	0	0	0	0
300	4	Strip Seal Exp Joint	(LF)	91	0	91	0	0	0	CS2: (91 LF) Filled with debris for full-width at North Abutment and Pier 1. Deck with minor edge spalls at North Abutment.
321	4	R/Conc Approach Slab	(EA)	2	0	2	0	0	0	CS2: (2 EA) Moderate wear and several hairline to fine cracks throughout. 2 SF bituminous patch with cracks with efflorescence adjacent to East Parapet, several 1/16" to 1/8" wide transverse, diagonal and longitudinal cracks in northeast slab.
107	3	Paint Stl Opn Girder	(LF)	350	350	0	0	0	0	CS1: (350 LF) Beam 1 has slight kink in bottom flange, west side at 4' from south end (3" L x 1/8" H). Heavy soot from vagrant fires in Bays 1-3.
331	4	Conc Bridge Railing	(LF)	100	0	0	100	0	0	CS3: (100 LF) Inside face with hairline horizontal cracks with minor rust stains for full length of East and West Parapets and up to 1/16" wide horizontal cracks on back face of both parapets. West parapet roadway face with void spalling along at bottom (4 LF). Top surface with map cracking and hairline to 1/16" longitudinal cracks especially at joints. (NC-13)
381	3	Painted Steel Diaphr	(EA)	18	14	4	0	0	0	CS2: (4 EA) Bays 2, 3, 4, and 5 at Pier 1 have kinks in top flanges.
311	4	Moveable Bearing	(EA)	7	7	0	0	0	0	CS1: (7 EA) Pier 1B bearings greased with NDN.
313	4	Fixed Bearing	(EA)	7	7	0	0	0	0	CS1: (7 EA) North Abutment bearings greased with NDN.
205	1	R/Conc Column	(LF)	0	0	0	0	0	0	0
210	3	R/Conc Pier Wall	(LF)	42	35	7	0	0	0	CS2: (7 LF) Large spalls below paint on north face (4 SF) and Pedestal 3 (2'-9" W x 6" H). Hairline horizontal crack full-width on Pedestal 2.
215	3	R/Conc Abutment	(LF)	49	42	7	0	0	0	CS2: (7 LF) Hairline cracks with associated delaminated concrete on pedestals for bearings 2, 3, 5, 6 and 7. Vagrants inhabiting area. See Photo 14.
234	3	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	3	Reinf Conc Wingwalls	(LF)	26	26	0	0	0	0	NDN
358	1	Deck Cracking SmFlag	(EA)	1	0	1	0	0	0	CS2: (1 EA) Numerous hairline to 1/8" wide transverse cracks, most sealed at 5' to 10' intervals. Associated delaminated concrete (worst in Spans 3B, 4B, 5B and 6B).
										CS2: (1 EA) Typical trans cracks throughout, (with and without efflorescence). Span 0B: Large spall in Bay 1 at 1/3 span with exposed steel (3' W x 18" L x 1.75" D). Span 1B: Small incipient spall in Bays 3 and 4 (12" L x 8" W). Span 2B: Bay 2 at North end with incipient spall (1 SF). Span 3B: Numerous spots of rust from chairs and small shallow incipient spall (6" x 3") in Bay 3 adjacent to Pier 3. Bay 1 at North half with three (3) spalls with exposed steel (6" diameter x 1" D, 12" L x 23" W x 1" D, and 13" L x 15" W x

359	1	Soffit Smart Flag	(EA)	1	0	1	0	0	0	1" D). Span 4B: Incipient spall in East Overhang at Pier 5B (1' diameter) and in Bay 3 at north end (6" diameter), several shallow small incipient spalls in Bays 1 and 3 1 at Pier 4B with longitudinal crack with rust and associated incipient spall (18" L x 8" W). Bay 1 with incipient spalls along beam haunch, and two (2) spalls with exposed steel near South interim diaphragm (6" L x 12" W x 1" D). Span 5B: Bay 1, midspan, delamination with rust bleeding (1' diameter). Span 6B: Transverse crack with efflorescence and minor corrosion, center bay above 1st diaphragm from Pier 6. Bay 3 at south interim diaphragm with open/incipient spall and delaminated haunch with rust stains.
363	1	Section Loss SmFlag	(EA)	1	1	0	0	0	0	CS1: (1 EA) Area of section loss below paint at north end of Beam 1 in Span 1B on west face of web (6' L x 2" H x 1/16" D). West face of web of Beam 1 in Span 1B at north bearing is an area of section loss 2' L x 2" H x 1/16" D. See Photo 9.

# DELAWARE DEPARTMENT OF TRANSPORTATION

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

Bridge ID: 1758 6143

Inspection Date: 6/27/2013

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

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 filled with debris and vegetation and downspout clogged with debris.
300	4	Strip Seal Exp Joint	(LF)	35	35	0	0	0	0	CS1: (35 LF) Filled with debris.
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	3	Paint Stl Opn Girder	(LF)	360	356	4	0	0	0	CS2: (4 LF) Freckled rust to top flange at Beam 1 on south and north end and bottom flange at Beam 3 south end. Beam 5 at north end with peeling paint with exposed primer to underside of bottom flange.
331	4	Conc Bridge Railing	(LF)	120	0	0	120	0	0	CS3: (120 LF) Inside faces with hairline horizontal cracks with rust stains for full length of East and West Parapets and 1/16" wide horizontal cracks on back face of both parapets. Top surface with hairline to 1/16" longitudinal cracks with few areas of rust. See Photo 8.
381	3	Painted Steel Diaphr	(EA)	20	17	3	0	0	0	CS2: (3 EA) 1/2" kink in top flange in Bay 5 at Pier 2. Two (2) diaphragm in Bay 1 at Pier 1 with peeled paint with exposed primer.
311	4	Moveable Bearing	(EA)	6	6	0	0	0	0	CS1: (6 EA) Pier 1B bearings greased with NDN.
313	4	Fixed Bearing	(EA)	6	6	0	0	0	0	CS1: (6 EA) Pier 2B bearings greased with NDN.
205	1	R/Conc Column	(LF)	0	0	0	0	0	0	0
210	3	R/Conc Pier Wall	(LF)	35	35	0	0	0	0	CS1: (35 LF) Several small (1" to 3" diameter) shallow spalls on vertical faces, painted over with NDN.
215	3	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
234	3	R/Conc Pier Cap	(LF)	0	0	0	0	0	0	0
390	3	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
363	1	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0

# DELAWARE DEPARTMENT OF TRANSPORTATION

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

Bridge ID: 1758 6143

Inspection Date: 6/27/2013

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

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)	29	0	29	0	0	0	CS2: (29 LF) Filled with debris for full width, evidence of leakage noted. Small edge spalls in top of deck.
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	3	Paint Stl Opn Girder	(LF)	300	288	10	2	0	0	CS2: (10 LF) Freckled rust or spot rust mostly on ends on flanges. All beams at Pier 2 with area of flange with flaking paint with exposed primer. CS3: (2 LF) Ends of Beam 1 flanges with areas of exposed and rusted steel.
331	4	Conc Bridge Railing	(LF)	120	0	0	120	0	0	CS3: (120 LF) 1/16" to 1/8" wide crack with horizontal crack across outside of West Parapet with intermittent rust stains and vertical cracks at ends on joints, some with rust stains or efflorescence. West Parapet with series of painted over small spalls with rust bleeding. East barrier with 1/16" to 1/8" vertical cracks typical with rust stains.
381	3	Painted Steel Diaphr	(EA)	16	0	7	9	0	0	CS2: (7 EA) Minor spot or freckled rust on some diaphragms. CS3: (9 EA) Several diaphragms with paint chipping with rusted steel or flaked paint with rusted steel, mostly on flanges.
311	4	Moveable Bearing	(EA)	5	4	1	0	0	0	CS1: (4 EA) Pier 3B bearings 2 thru 5 are greased with minor rust mostly to plate edges of fascia bearing or areas of missing grease. CS2: (1 EA) East anchor bolt nut for Beam 4 bearing at Pier 3B is cross threaded on bolt and not completely seated.
313	4	Fixed Bearing	(EA)	5	5	0	0	0	0	CS1: (5 EA) Pier 2B bearings greased with NDN.
205	1	R/Conc Column	(LF)	0	0	0	0	0	0	0
210	3	R/Conc Pier Wall	(LF)	9	9	0	0	0	0	NDN
215	3	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
234	3	R/Conc Pier Cap	(LF)	29	22	3	4	0	0	CS2: (3 LF) South face in Bay 3 with delamination with cracks (1 SF). North face in Bay 1 with delamination and 1/16" wide horizontal crack with rust staining (1 SF). Pedestal 4 east face 1/16" to 1/8" wide horizontal crack with small delamination. Pedestal 2 east face with 1/16" longitudinal horizontal crack with small delamination. CS3: (4 LF) Pedestal 1 on south and west faces with crack with rust and associated small delamination area (2 SF) and on Pedestal 4 north, south, and west faces.
390	3	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
363	1	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0

# DELAWARE DEPARTMENT OF TRANSPORTATION

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

Bridge ID: 1758 6143

Inspection Date: 6/27/2013

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

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	NDN
300	4	Strip Seal Exp Joint	(LF)	22	0	22	0	0	0	CS2: (22 LF) Filled with debris for full length and evidence of leakage noted. Adjacent deck with minor spalls.
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	3	Paint Stl Opn Girder	(LF)	340	317	9	14	0	0	CS2: (9 LF) Minor spot rust on fasteners through north end webs. CS3: (14 LF) Beams 1 and 4 with few areas of exposed and rusted steel to top flanges at ends. See Photo 3.
331	4	Conc Bridge Railing	(LF)	170	0	0	170	0	0	CS3: (170 LF) Exterior face of West Parapet with 1/16" to 1/8" horizontal crack with rust. East Parapet with mostly hairline to 1/16" horizontal crack with intermittent rust stains and 1/8" horizontal crack at north end with rust stains. Exterior face with vertical cracks at parapet joint with rust stains or light efflorescence.
381	3	Painted Steel Diaphr	(EA)	15	6	9	0	0	0	CS2: (9 EA) Diaphragms have minor spot or freckled rust.
311	4	Moveable Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Pier 3B bearings with minor rust, worst at fascia bearings where its more moderate with delaminations on plate edges.
313	4	Fixed Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Pier 4B bearings heavily greased with minor spot rust on exposed areas of plate.
205	1	R/Conc Column	(LF)	0	0	0	0	0	0	0
210	3	R/Conc Pier Wall	(LF)	6	6	0	0	0	0	NDN
215	3	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
234	3	R/Conc Pier Cap	(LF)	22	0	3	19	0	0	CS2: (3 LF) Large incipient spall on west side of Beam 2 pedestal (23" L x 7" H x 4" D). Pedestal 3 at SW corner with small spall. CS3: (19 LF) North face with patch with rust and delamination in Bay 1 (4' W x 1' H) and Pedestal 2 with cracks with rust and spall with exposed steel on north face (3' L x 6" H x 2" D). South face with spall with exposed steel and associated delamination that extend into east and west faces with associated 1/8" max horizontal crack with rust stains on Pedestal 1 (38" W x 9" L x 6" H), Bay 1 with horizontal crack with rust. Bay 3 with 2 vertical cracks through patch with rust stains with associated delaminated areas in patch and rust from below patch (32" W x 12" H). Unsound patch with cracks with rust stains under Beam 1 (18" W x 7" H). Bay 1 seat at south edge with 1/16" transverse crack with minor rust, and top surface with cracks with rust stains and associated delamination. Pedestal 1 west face at north end with painted over spall with exposed steel with rust (1' L x 6" H x 2" D) and associated horizontal crack with rust stains that continue into north face. North face Bay 3 with patch with rust stains and delamination.
390	3	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
363	1	Section Loss SmFlag	(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: 1758 6143

Inspection Date: 6/27/2013

Description: Span 4B (Pier 4B to Pier 5B)

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)	22	0	22	0	0	0	CS2: (22 LF) Filled with debris in shoulders and heavy delamination and corrosion to east end of armor and evidence of leakage noted and seal is sitting on the seat in Bay 1.
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	3	Paint Stl Opn Girder	(LF)	292	260	24	8	0	0	CS2: (24 LF) South end with fasteners throughout web with light rust scattered light freckled or spot rust on some beams. CS3: (8 LF) Beam 1 and 3 at Pier 4 with rusted weld for bearing stiffener. Random areas of exposed and rusted steel.
331	4	Conc Bridge Railing	(LF)	146	0	0	146	0	0	CS3: (146 LF) Spall with exposed steel in base of East Parapet at 18' from Pier 5B joint. Horizontal cracks with rust stains for full length of East and West Parapets and 1/16" wide horizontal cracks on back face of both parapets, numerous short horizontal cracks with heavy rust and associated small spalls along the base of East Parapet. West Parapet at joint with spall. East barrier exterior face with 1/16" wide horizontal crack throughout with light rust stains. West Parapet exterior face with 1/16" to 1/8" wide horizontal crack throughout with light rust stain and vertical cracks at parapet joints or ends, (with and without efflorescence). East Parapet inside face at bottom with crack with rust stains and associated spalls for full-length. Areas of base near south end with spall with exposed steel. Mid-height at south end with 1/8" wide horizontal crack with rust stains.
381	3	Painted Steel Diaphr	(EA)	12	6	6	0	0	0	CS2: (6 EA) Light spot or freckled rust on a few diaphragms. Bay 3 at Pier 5 with exposed primer.
311	4	Moveable Bearing	(EA)	4	3	1	0	0	0	CS1: (3 EA) Pier 5B bearings are within limits with minor spot rust on plate edges, fascia bearings with some chipping paint with rust. Previously noted ponding on Bearing 4 was not found. CS2: (1 EA) Bearing 1 with west anchor bolt rubbing against bearing. See Photo 12.
313	4	Fixed Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Pier 4B bearings heavily greased with exposed areas of plates where grease has cleared.
205	1	R/Conc Column	(LF)	0	0	0	0	0	0	0
210	3	R/Conc Pier Wall	(LF)	6	4	0	2	0	0	CS3: (2 LF) South face east end at cap with HL crack with rust stain in patch. West face at North end at top with HL vertical cracks with rust stains.
215	3	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
234	3	R/Conc Pier Cap	(LF)	22	18	0	4	0	0	CS1: (18 LF) Minor debris on seat and minor cracks to concrete repairs. CS3: (4 LF) Pedestal 1, west face with horizontal and vertical crack with rust and associated delamination. Pedestal 4 horizontal crack with rust. Pedestal 4, east and west face with full-length 1/16" to 1/8" wide horizontal crack with light rust. Pedestal 3 east face with rust stains and delamination at top west corner full-length. Pedestal 2, north face, 3' L x 6" H x 2" D spall with exposed rusted steel. The delamination on the west face of Pedestal 2 was not found. See Photo 13.

390	3	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
363	1	Section Loss SmFlag	(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: 1758 6143

Inspection Date: 6/27/2013

Description: Span 5B (Pier 5B to Pier 6B)

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 on Pier 5B completely clogged with vegetation growth and 2' high portion of downspout missing. See Photo 7.
300	4	Strip Seal Exp Joint	(LF)	22	0	22	0	0	0	CS2: (22 LF) Filled with debris and heavy delamination and corrosion to east end of armor.
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	3	Paint Stl Opn Girder	(LF)	280	246	26	8	0	0	CS2: (26 LF) Random minor spots or scattered freckled rust on beams. CS3: (8 LF) Exposed and rusted steel, mostly on top flanges at ends of beams. Corrosion throughout the length of Beam 4 was not found.
331	4	Conc Bridge Railing	(LF)	140	0	0	140	0	0	CS3: (140 LF) Wide horizontal cracks on back face of both parapets and cracks with rust stains and 1/16" wide cracks at southeast and northwest corners of span, a few small corner spalls with rust and northwest end with 1/16" to 1/8" wide vertical crack at joint with efflorescence and rust. Exterior face with horizontal cracks on west side 1/16" to 1/8" at south end but 2 LF with rust stains. 1/8" wide for 60 LF with rust stains with small spalls or incipient spalls. Typical areas with map cracking with light efflorescence. East exterior face with 1/16" to 1/8" horizontal crack throughout length with rust stains.
381	3	Painted Steel Diaphr	(EA)	12	5	7	0	0	0	CS2: (7 EA) Random diaphragms with spot or freckled rust. Bay 3 at Pier 6B with peeling paint with exposed primer on flange.
311	4	Moveable Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Pier 5B bearings are heavily greased with areas of exposed plate where grease has cleared.
313	4	Fixed Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Pier 6B bearings heavily greased with NDN.
205	1	R/Conc Column	(LF)	0	0	0	0	0	0	0
210	3	R/Conc Pier Wall	(LF)	6	6	0	0	0	0	NDN
215	3	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
234	3	R/Conc Pier Cap	(LF)	22	12	6	4	0	0	CS1: Hairline map cracking on the underside of the west cantilever. CS2: (6 LF) South face in Bay 3 with delamination and cracks (1 SF). North face in Bay 1 with unsound patch (1 SF). Pedestal 4 east face with 1/16" to 1/8" wide horizontal crack with small delamination. Pedestal 2 east face with 1/16" longitudinal crack and Pedestal 3 west face with 1/16" x 2' L longitudinal crack with small delamination. CS3: (4 LF) Pedestal 1 on south and west faces with associated small delaminated areas and Pedestal 4 with horizontal and vertical cracks up to 1/8" W x up to full-width x full-height with rust on north, south, and west faces.
390	3	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
363	1	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0

# DELAWARE DEPARTMENT OF TRANSPORTATION

## Bridge Management Section MultiSpan PONTIS Element Report for Span No. 7

Bridge ID: 1758 6143

Inspection Date: 6/27/2013

Description: Span 6B (Pier 6B to Pier 33S)

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)	0	0	0	0	0	0	0
321	4	R/Conc Approach Slab	(EA)	0	0	0	0	0	0	0
107	3	Paint Stl Opn Girder	(LF)	260	247	6	7	0	0	CS2: (6 LF) Very light spot rust along top flange of Beam 2 at 2/3 span. Few spots of minor rust on Beams 1 and 4. CS3: (7 LF) Beams 1 and 4 with exposed and rusted steel, mostly on the top flange at ends. See Photo 10.
331	4	Conc Bridge Railing	(LF)	130	0	0	130	0	0	CS3: (130 LF) 1/16" wide horizontal cracks on inside and top of both parapets. East and West Parapet exterior face with 1/16" to 1/8" wide horizontal crack with light rust.
381	3	Painted Steel Diaphr	(EA)	12	5	6	1	0	0	CS2: (6 EA) Random with minor spot or freckled rust. CS3: (1 EA) Bay 3 at Pier 6B with exposed rusted steel. See Photo 11.
311	4	Moveable Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Pier 33S bearings are greased with NDN.
313	4	Fixed Bearing	(EA)	4	4	0	0	0	0	CS1: (4 EA) Pier 6B bearings heavily greased. Bearing 4 is starting to rust and grease covering is deteriorating.
205	1	R/Conc Column	(LF)	53	53	0	0	0	0	NDN Note: Ramp shares pier with adjacent Bridge 1748S.
210	3	R/Conc Pier Wall	(LF)	0	0	0	0	0	0	0
215	3	R/Conc Abutment	(LF)	0	0	0	0	0	0	0
234	3	R/Conc Pier Cap	(LF)	42	42	0	0	0	0	NDN Note: Ramp shares pier with adjacent Bridge 1748S.
390	3	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
363	1	Section Loss SmFlag	(EA)	0	0	0	0	0	0	0





1. North Approach looking south onto bridge.



2. East Elevation looking southwest.



3. Typical soffit/superstructure (Span 4 shown, others similar).



4. Under Record, Elm Street (Span 3B), looking west.





5. Under Record from under bridge in Span 3B looking at end of Elm Street.



6. Typical condition of deck with moderate wear (Span 2B shown).





7. Span 5B, scupper is completely clogged with vegetation.



8. Span 2, West Parapet - HL to 1/16" wide map cracking.



9. Span 1B, Beam 1 @ N. End - 6' L x 2" H x 1/16" D SL in web.



10. Span 6B, Beam 1, TF at N. End - Exp. and rusted steel.



11. Span 6B, diaphragm over Pier 6B - Exposed and rusted steel.



12. Pier 5B, Bearing 1 - W. Anchor Bolt is rubbing against bearing.





13. Pier 4B, Ped. 2, N. Face - 3' L x 6" H x 2" D spall w/ exp. rusted steel.



14. North Abutment Elevation. Note evidence of vagrants inhabiting area.

**UNDER RECORD****For  
Bridge: 1758 6143****IDENTIFICATION**

Bridge ID: 1758 6143	(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: 2.00 mi
6A) Features Intersected: SR 4,MARYLAND AVE		6B) Critical:
16) Latitude: 39^44'23.99"	17) Longitude: 75^33'45.98"	

**AGE AND SERVICE**

19) Detour Length: 199 mi	27) Year Built: 1964	
28) No. of Lanes:	A) On Bridge: 2	B) Under Bridge: 2
29) ADT: 99	30) Year of ADT: 2010	109) % Truck ADT: 3

**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:: 13.4 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: 24.0 ft		
48) Length Maximum Span: 85.0 ft	49) Structure Length: 463.0 ft	

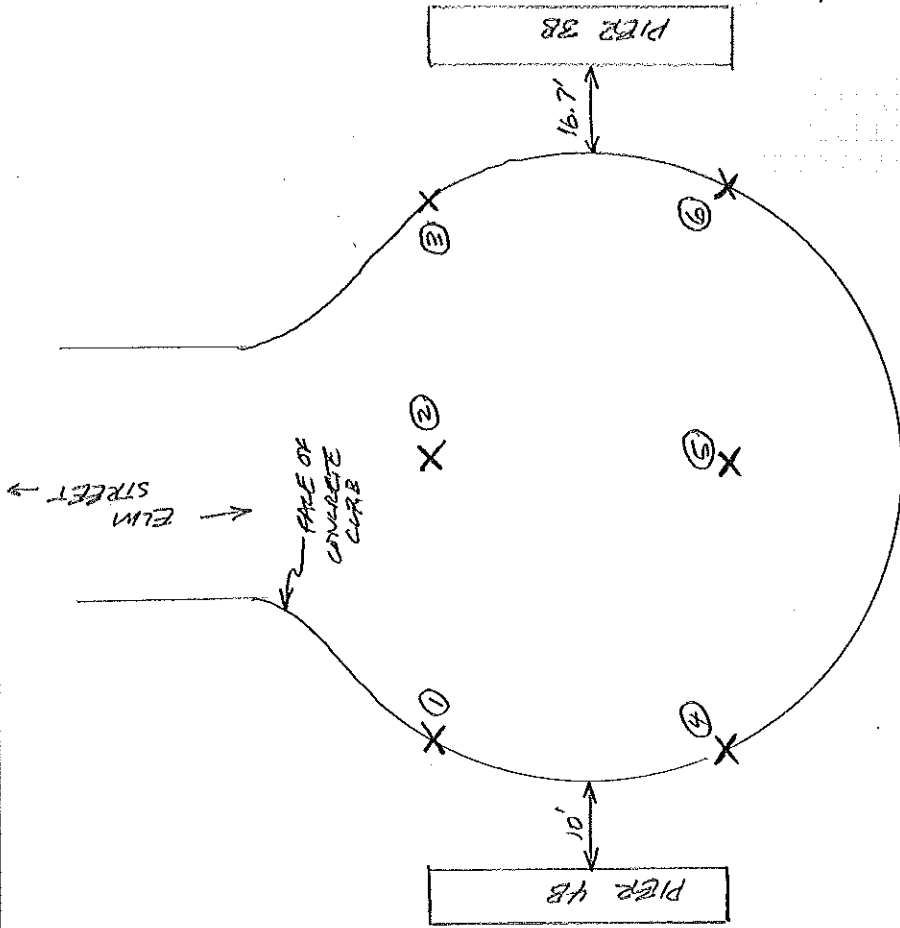
**UNDER RECORD SKETCH**

# Under Record Sketch Sheet

Bridge: 1758 6143

Inspected By: CAA, HAZ,

Date: 06, 27, 13



- ① 16.23'
  - ② 15.01'
  - ③ 13.95'
  - ④ 16.91'
  - ⑤ 15.05'
  - ⑥ 13.45'
- MINIMUM VERTICAL CLEARANCE = 13'-5 1/4"
- MINIMUM LATERAL CLEARANCE = 10' RIGHT