



NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 STRUCTURE MANAGEMENT UNIT

ATTENTION: **PRIORITY MAINTENANCE ISSUED.**

Structure Safety Report

Routine Element Inspection

INSPECTION DATE: 02/22/2018

DIVISION: 4 COUNTY: JOHNSTON STRUCTURE NUMBER: 500056 FREQUENCY: 24 MONTHS

FACILITY CARRIED: US301,NC96 MILE POST: _____

LOCATION: 0.7 MI. N. JCT. US701

FEATURE INTERSECTED: BLACK CREEK

LATITUDE: 35° 28' 9.05" LONGITUDE: 78° 23' 4.31"

SUPERSTRUCTURE: REINFORCED CONCRETE DECK GIRDERS

SUBSTRUCTURE: RC ABUTS;BTS;RNP&W PIERS EXTENDED W/BRACKETS

SPANS: 4 SPANS. SEE SPAN PROFILE SHEET FOR SPAN DETAILS

FRACTURE CRITICAL TEMPORARY SHORING SCOUR CRITICAL SCOUR PLAN OF ACTION

GRADES: DECK 6 SUPERSTRUCTURE 6 SUBSTRUCTURE 6 CULVERT N

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: NONE



LOOKING NORTH

Sign noticed issued for	Number Required
<u>NO</u> WEIGHT LIMIT	<u>0</u>
<u>NO</u> DELINEATORS	<u>0</u>
<u>NO</u> NARROW BRIDGE	<u>0</u>
<u>NO</u> ONE LANE BRIDGE	<u>0</u>
<u>NO</u> LOW CLEARANCE	<u>0</u>

DIRECTION OF INSPECTION S-N

DIRECTION MATCHES PLANS _____

INSPECTED BY RICHARD P. STEIGER JR.	SIGNATURE <i>Richard P Steiger</i>	ASSISTED BY WAYNE T. WILKINSON
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Structure Element Scoring

Structure Number: 500056

Inspection Date 2/22/2018

Element Number	Parent Number	Element Name	Location	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity
38	0	Reinforced Concrete Slabs	Deck	6652	5968	679	5	0
110	0	Reinforced Concrete Open Girder/Beam	Beam	1040	996	41	3	0
205	0	Reinforced Concrete Column	Piles and Columns	8	2	6	0	0
210	0	Reinforced Concrete Pier Wall	Piles and Columns	45	0	45	0	0
215	0	Reinforced Concrete Abutment	Abutments	81	0	71	10	0
220	0	Reinforced Concrete Pile Cap/Footing	Footing	82	82	0	0	0
234	0	Reinforced Concrete Pier Cap	Caps	113	83	24	6	0
316	0	Other Bearings	Bearing Device	40	40	0	0	0
331	0	Reinforced Concrete Bridge Railing	Bridge Rail	424	419	3	2	0
510	0	Wearing Surface	Wearing Surfaces	5968	5090	3	875	0

Summary of Maintenance Needs

Maintenance By Defect

Structure Number: **500056**

Inspection Date: **02/22/2018**

MMS Code	Element Name	Defect Name	Recommended Quantity
3326	Reinforced Concrete Slabs	Patched Area	2 Square Feet
3326	Reinforced Concrete Slabs	Delamination/Spall	4 Square Feet
3326	Reinforced Concrete Slabs	Cracking (RC and Other)	145 Square Feet
3306	Reinforced Concrete Open Girder/Beam	Delamination/Spall	2 Feet
3306	Reinforced Concrete Open Girder/Beam	Cracking (RC and Other)	3 Feet
3350	Reinforced Concrete Abutment	Cracking (RC and Other)	6 Feet
3348	Reinforced Concrete Pier Cap	Exposed Rebar	3 Feet
3348	Reinforced Concrete Pier Cap	Cracking (RC and Other)	3 Feet
3318	Reinforced Concrete Bridge Railing	Delamination/Spall	3 Feet
3318	Reinforced Concrete Bridge Railing	Exposed Rebar	2 Feet
2816	Wearing Surface	Crack (Wearing Surface)	875 Square Feet

Element Structure Maintenance Quantities

Structure Number: **500056**

Inspection Date **02/22/2018**

Location	MMS Code	Description	Maint Quantity	Total Quantity	Severe Quantity	Poor Quantity	Fair Quantity	Good Quantity
Abutments	3350	Maintenance of Concrete Wings and Wall	6	81	0	10	71	0
Beam	3306	Maintenance Concrete Superstructure Components	5	1040	0	3	41	996
Bearing Device	3334	Bridge Bearing	0	40	0	0	0	40
Bridge Rail	3318	Maintenance of Concrete Bridge Rail	5	424	0	2	3	419
Caps	3348	Maintenance of Concrete Substructure	6	113	0	6	24	83
Deck	3326	Maintenance of Concrete Deck	151	6652	0	5	679	5968
Footing	3348	Maintenance of Concrete Substructure	0	82	0	0	0	82
Piles and Columns	3348	Maintenance of Concrete Substructure	0	53	0	0	51	2
Wearing Surfaces	2816	Asphalt Surface Repair	875	5968	0	875	3	5090

Element Condition and Maintenance Data

Structure Number: 500056

Inspection Date: 02/22/2018

Span 1 Deck

Reinforced Concrete Deck Slab

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
38	Reinforced Concrete Slabs	1,663	1,496	164	3	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
38	Delamination/Spall	TOP OF DECK : 1 SQUARE FOOT SPALL IN THE LEFT CURB AT BENT 1 : SPALL GREATER THAN 1 INCH DEEP OR GREATER THAN 6 INCH IN DIAMETER.	3	1	1 Square Feet
38	Patched Area	TOP OF DECK : 2 SQUARE FT. CRACKED PATCH REPAIR IN LEFT CURB AT END BENT 1 (PATCH IS YNSOUND OR SHOWING DISTRESS.	3	2	2 Square Feet
38	Abrasion/Wear (PSC/RC)	TOP OF DECK : 142 SQUARE FEET OF ABRASION / WEAR ALONGS CURBS. (ABRASION / WEAR HAS EXPOSED COARSE AGGRAGATE BUT AGGRAGATE REMAINS SECURE IN CONCRETE)	2	142	Square Feet
38	Cracking (RC and Other)	BOTTOM OF DECK : 2 SQUARE FEET OF CRACKING: 1/32 INCH WIDE VERTICAL CRACK IN BAY 2 AND 3 END DIAPHRAGMS AT BENT 1.	2	8	8 Square Feet
38	Cracking (RC and Other)	TOP OF DECK : 12 FOOT. OF MODERATE CRACKING IN CURBS.	2	12	12 Square Feet
38	Efflorescence/Rust Staining	BOTTOM OF DECK : 2 SQUARE FEET OF EFFLORESCENCE: SURFACE WHITE WITHOUT BUILD UP IN RIGHT OVERHANG AT ABRASION 1 .	2	2	Square Feet

General Comments

Span 1 Beam 4

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
110	Reinforced Concrete Open Girder/Beam	52	40	11	1	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
110	Cracking (RC and Other)	1/8" WIDE TRANSVERSE CRACK IN BOTTOM OF BEAM AT MID-SPAN.	3	1	1 Feet
110	Delamination/Spall	12" DIAMETER DELAMINATION IN BOTTOM OF BEAM AT MID-SPAN.	2	1	1 Feet
110	Patched Area	10 FEET OF SOUND PATCHING.	2	10	Feet

General Comments

Span 1 Beam 5

Reinforced Concrete Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
110	Reinforced Concrete Open Girder/Beam	52	51	1	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
110	Patched Area	1 FOOT OF SOUND PATCHING.	2	1	Feet

General Comments

Span 1 Right Bridge Rail**Concrete Railing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
331	Reinforced Concrete Bridge Railing	53	51	2	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Delamination/Spall	1 FOOT OF DELAMINATION / SPALLING / PATCHED AREA : SPALL 1 INCH OR LESS DEEP OR 6 INCH OR LESS IN DIAMETER. PATCHED AREA THAT IS SOUND.	2	1	1 Feet
331	Exposed Rebar	1 FEET OF EXPOSED STEEL : PRESENT WITHOUT MEASURABLE SECTION LOSS.	2	1	1 Feet

General Comments**Span 1 Wearing Surface****Asphalt Wearing Surface**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
510	Wearing Surface	1,492	1,362	0	130	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
510	Crack (Wearing Surface)	130 SQUARE FEET. OF HEAVY OR PATTERN CRACKING ALONG TRAVEL LANES.	3	130	130 Square Feet
510	Crack (Wearing Surface)	28 SQUARE FEET. OF HEAVY OR PATTERN CRACKING NEAR END BENT 1.	3		Square Feet

General Comments**Span 2 Deck****Reinforced Concrete Deck Slab**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
38	Reinforced Concrete Slabs	1,663	1,490	173	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
38	Abrasion/Wear (PSC/RC)	TOP OF DECK : 131 SQUARE FEET OF ABRASION / WEAR ALONGS CURBS. (ABRASION / WEAR HAS EXPOSED COARSE AGGRAGATE BUT AGGRAGATE REMAINS SECURE IN CONCRETE)	2	131	Square Feet
38	Cracking (RC and Other)	BOTTOM OF DECK : 16 SQUARE FEET OF CRACKING: 1/32 INCH WIDE VERTICAL CRACK IN BAY 2 AND 3 END DIAPHRAGMS AT BENT 1 AND BENT 2.	2	16	16 Square Feet
38	Cracking (RC and Other)	TOP OF DECK : 22 FOOT. OF MODERATE CRACKING IN THE LEFT CURB.	2	22	22 Square Feet
38	Patched Area	TOP OF DECK : 4 SQUARE FEET OF PATCHING IN THE RIGHT CURB. PATCHED AREA THAT IS SOUND.	2	4	Square Feet

General Comments**Span 2 Beam 5****Reinforced Concrete Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
110	Reinforced Concrete Open Girder/Beam	52	39	13	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
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110	Patched Area	13 FEET OF SOUND PATCHING IN BOTTOM OF GIRDER.	2	13	Feet
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General Comments**Span 2 Wearing Surface****Asphalt Wearing Surface**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
510	Wearing Surface	1,492	1,146	1	345	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
510	Crack (Wearing Surface)	27 SQUARE FEET OF HEAVY OR PATTERN CRACKING OVER BENT 1.	3	27	27 Square Feet
510	Crack (Wearing Surface)	318 SQUARE FEET. OF HEAVY OR PATTERN CRACKING ALONG TRAVEL LANES.	3	318	318 Square Feet
510	Patched Area/Pothole (Wearing Surface)	1 SQUARE FOOT PATCH IN NORTH BOUND LANE OVER BENT 1. (PATCHED AREA THAT IS SOUND.)	2	1	Square Feet

General Comments**Span 2 Right Bridge Rail****Concrete Railing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
331	Reinforced Concrete Bridge Railing	53	52	1	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Exposed Rebar	1 FOOT OF EXPOSED STEEL IN THE 4TH GUARDRAIL POST FROM BENT 1: PRESENT WITHOUT MEASURABLE SECTION LOSS.	2	1	1 Feet

General Comments**Span 3 Deck****Reinforced Concrete Deck Slab**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
38	Reinforced Concrete Slabs	1,663	1,489	173	1	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
38	Delamination/Spall	1 SQUARE FEET OF SPALLING IN RIGHT OVERHANG AT BENT 3 (SPALL IS 1 FOOT x 1 FOOT x 6 INCHES DEEP.)	3	1	1 Square Feet
38	Abrasion/Wear (PSC/RC)	TOP OF DECK : 139 SQUARE FEET OF ABRASION / WEAR ALONG DECK CURBS. (ABRASION / WEAR HAS EXPOSED COARSE AGGRAGATE BUT AGGRAGATE REMAINS SECURE IN CONCRETE)	2	139	Square Feet
38	Cracking (RC and Other)	BOTTOM OF DECK : 16 SQUARE FEET OF CRACKING: 1/32 INCH WIDE VERTICAL CRACK IN BAY 2 AND 3 END DIAPHRAGMS AT BENT 2 AND BENT 3.	2	16	16 Square Feet
38	Cracking (RC and Other)	TOP OF DECK : 18 FOOT. OF MODERATE CRACKING ALONG CURBS.	2	18	18 Square Feet

General Comments

Span 3 **Beam 1****Reinforced Concrete Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
110	Reinforced Concrete Open Girder/Beam	52	51	1	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
110	Efflorescence/Rust Staining	1 FOOT OF SURFACE WHITE EFFLORESCENCE IN RIGHT SIDE NEAR MID-SPAN.	2	1	Feet

General Comments**Span 3** **Beam 3****Reinforced Concrete Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
110	Reinforced Concrete Open Girder/Beam	52	51	1	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
110	Delamination/Spall	14" HIGH X 6" WIDE DELAMINATION IN THE LEFT SIDE AT BENT 2.	2	1	1 Feet

General Comments**Span 3** **Beam 5****Reinforced Concrete Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
110	Reinforced Concrete Open Girder/Beam	52	43	7	2	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
110	Cracking (RC and Other)	1/16" WIDE LONGITUDINAL CRACK 2' LONG IN BOTTOM RIGHT CORNER AT BENT 3.	3	2	2 Feet
110	Cracking (RC and Other)	1/32" WIDE VERTICAL CRACK IN RIGHT SIDE APPROXIMATELY 8' FROM BENT 3.	2	1	Feet
110	Patched Area	6 FEET OF SOUND PATCHING IN BOTTOM OF GIRDER.	2	6	Feet

General Comments**Span 3** **Wearing Surface****Asphalt Wearing Surface**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
510	Wearing Surface	1,492	1,305	2	185	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
510	Crack (Wearing Surface)	159 SQUARE FEET. OF HEAVY OR PATTERN CRACKING ALONG TRAVEL LANES.	3	159	159 Square Feet
510	Crack (Wearing Surface)	26 SQUARE FEET OF HEAVY OR PATTERN CRACKING OVER BENT 2.	3	26	26 Square Feet
510	Patched Area/Pothole (Wearing Surface)	2 SQUARE FEET OF PATCHING IN THE NORTH BOUND LANE OVER BENT 2. PATCHED AREA THAT IS SOUND.	2	2	Square Feet

General Comments

Span 3 Right Bridge Rail**Concrete Railing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
331	Reinforced Concrete Bridge Railing	53	52	0	1	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Delamination/Spall	1 FOOT OF SPALLING 3" DEEP WITH EXPOSED REBAR IN THE GUARDRAIL POST BASE AT BENT 3. PRIORITY MAINTENANCE ISSUED.	3	1	1 Feet

General Comments**Span 4 Deck****Reinforced Concrete Deck Slab**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
38	Reinforced Concrete Slabs	1,663	1,493	169	1	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
38	Delamination/Spall	BOTTOM OF DECK : 1 SQUARE FEET OF SPALLING IN RIGHT OVERHANG AT BENT 3 (SPALL IS 1 FOOT x 10 INCHES x 3 INCHES DEEP.)	3	1	1 Square Feet
38	Abrasion/Wear (PSC/RC)	TOP OF DECK : 111 SQUARE FEET OF ABRASION / WEAR ALONG CURBS. (ABRASION / WEAR HAS EXPOSED COARSE AGGRAGATE BUT AGGRAGATE REMAINS SECURE IN CONCRETE)	2	111	Square Feet
38	Cracking (RC and Other)	BOTTOM OF DECK : 8 SQUARE FEET OF CRACKING: 1/32 INCH WIDE VERTICAL CRACK IN BAY 2 AND 3 END DIAPHRAGMS AT BENT 3.	2	8	8 Square Feet
38	Cracking (RC and Other)	TOP OF DECK : 45 FOOT. OF MODERATE CRACKING ALONG CURBS.	2	45	45 Square Feet
38	Delamination/Spall	TOP OF DECK : 1 SQUARE FOOT SPALLING IN THE LEFT CURB. (SPALL 1 INCH OR LESS DEEP OR 6 INCHES OR LESS IN DIAMETER.)	2	1	1 Square Feet
38	Efflorescence/Rust Staining	BOTTOM OF DECK : 4 SQUARE FEET OF EFFLORESCENCE: SURFACE WHITE WITHOUT BUILD UP: 3 FEET IN BOTTOM OF LEFT OVERHANG AND 1 FOOT IN BOTTOM OF DECK BAY 1.	2	4	Square Feet

General Comments**Span 4 Beam 5****Reinforced Concrete Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
110	Reinforced Concrete Open Girder/Beam	52	45	7	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
110	Patched Area	5 FEET OF SOUND PATCHING IN BOTTOM OF GIRDER AND 2 FEET OF SOUND PATCHING IN THE RIGHT SIDE WEB.	2	7	Feet

General Comments

Span 4**Wearing Surface****Asphalt Wearing Surface**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
510	Wearing Surface	1,492	1,277	0	215	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
510	Crack (Wearing Surface)	12 SQUARE FEET OF HEAVY OR PATTERN CRACKING OVER BENT 3.	3	28	28 Square Feet
510	Crack (Wearing Surface)	159 SQUARE FEET. OF HEAVY OR PATTERN CRACKING ALONG TRAVEL LANES.	3	159	159 Square Feet
510	Crack (Wearing Surface)	28 SQUARE FEET OF HEAVY OR PATTERN CRACKING OVER END BENT 2.	3	28	28 Square Feet

General Comments

Span 4**Right Bridge Rail****Concrete Railing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
331	Reinforced Concrete Bridge Railing	53	52	0	1	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Delamination/Spall	1 FOOT OF SPALLING 3" DEEP WITH EXPOSED REBAR IN THE GUARDRAIL POST BASE AT BENT 3. PRIORITY MAINTENANCE ISSUED.	3	1	1 Feet

General Comments

Bent 1**Cap 1****Reinforced Concrete Pier Cap**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
234	Reinforced Concrete Pier Cap	28	16	12	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
234	Cracking (RC and Other)	2 FEET OF 1/32" VERT CRACKING IN FACE OF CAP SPAN 2 SIDE AT GIRDERS 2 & 3	2	2	Feet
234	Patched Area	10 FEET OF SOUND PATCHING AND FACE OF CAP AND UNDER GIRDER 4 SPAN 1 SIDE.	2	10	Feet

General Comments

Bent 1**Pile 1****Reinforced Concrete Column**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
205	Reinforced Concrete Column	1	0	1	0	0 Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
205	Abrasion/Wear (PSC/RC)	ABRASION WITH COARSE AGGREGATE EXPOSED FROM WATERLINE UP 3 FEET.	2	1	Each

General Comments

End Bent 1**Abutment****Reinforced Concrete Abutment**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
215	Reinforced Concrete Abutment	81	0	71	10	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
215	Cracking (RC and Other)	1/4" WIDE DIAGONAL CRACK 6' LONG IN FACE OF LEFT WINGWALL.	3	6	6 Feet
215	Cracking (RC and Other)	4 FEET OF VERTICAL CRACKING 1/16" WIDE IN FACE OF CAP AT GIRDERS 2 & 4 EXTENDING DOWN BREAST WALL.	3	4	Feet
215	Abrasion/Wear (PSC/RC)	57 FEET OF ABRASION WITH COARSE AGGREGATE EXPOSED FROM WATERLINE UP 3 FT.	2	57	Feet
215	Patched Area	2 FEET OF SOUND PATCHING IN CAP UNDER GIRDER 2.	2	2	Feet
215	Patched Area	4 FEET OF SOUND PATCHING IN CAP UNDER GIRDER 1.	2	4	Feet
215	Patched Area	4 FEET OF SOUND PATCHING IN CAP UNDER GIRDER 3.	2	4	Feet
215	Patched Area	4 FEET OF SOUND PATCHING IN CAP UNDER GIRDER 5 WITH 1/32" WIDE VERTICAL CRACK IN PATCH.	2	4	Feet

General Comments

Underwater inspection:

4 Feet of Cracking (RC and Other): Width greater than 0.05 in. or spacing of less than 1 ft.

81 Feet of Abrasion/Wear (RC): Abrasion or wearing has exposed coarse aggregate but the aggregate remains secure in the concrete.

Bent 1**Pile 2****Reinforced Concrete Pier Wall**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
210	Reinforced Concrete Pier Wall	15	0	15	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
210	Abrasion/Wear (PSC/RC)	ABRASION WITH COARSE AGGREGATE EXPOSED FROM WATERLINE UP 3 FEET.	2	15	Feet

General Comments**Bent 1****Pile 3****Reinforced Concrete Column**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
205	Reinforced Concrete Column	1	0	1	0	0 Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
205	Abrasion/Wear (PSC/RC)	ABRASION WITH COARSE AGGREGATE EXPOSED FROM WATERLINE UP 3 FEET.	2	1	Each

General Comments**Bent 2****Cap 1****Reinforced Concrete Pier Cap**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
234	Reinforced Concrete Pier Cap	22	19	2	1	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
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234	Cracking (RC and Other)	3/16" WIDE VERTICAL CRACK IN FACE OF CAP SPAN 3 SIDE AT RIGHT SIDE OF GIRDER 4 BUILDUP.	3	1	1	Feet
234	Cracking (RC and Other)	2 FEET OF 1/32" VERT CRACKING IN FACE OF CAP SPAN 3 SIDE AT GIRDER 2.	2	2		Feet

General Comments**Bent 2****Pile 1****Reinforced Concrete Column**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
205	Reinforced Concrete Column	1	0	1	0	0 Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
205	Abrasion/Wear (PSC/RC)	ABRASION WITH COARSE AGGREGATE EXPOSED FROM WATERLINE UP 3 FEET.	2	1	Each

General Comments**Bent 2****Pile 2****Reinforced Concrete Pier Wall**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
210	Reinforced Concrete Pier Wall	15	0	15	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
210	Abrasion/Wear (PSC/RC)	ABRASION WITH COARSE AGGREGATE EXPOSED FROM WATERLINE UP 3 FEET.	2	15	Feet

General Comments**Bent 2****Pile 3****Reinforced Concrete Column**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
205	Reinforced Concrete Column	1	0	1	0	0 Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
205	Abrasion/Wear (PSC/RC)	ABRASION WITH COARSE AGGREGATE EXPOSED FROM WATERLINE UP 3 FEET.	2	1	Each

General Comments**Bent 3****Cap 1****Reinforced Concrete Pier Cap**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
234	Reinforced Concrete Pier Cap	28	13	10	5	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
234	Cracking (RC and Other)	1/16" X 2' LONGITUDINAL CRACK IN SPAN 3 SIDE UNDER GIRDER 2.	3	2	2 Feet
234	Exposed Rebar	26" LONG X 7" WIDE X 2" DEEP SPALL WITH SECTION LOSS TO EXPOSED BAR IN BOTTOM OF CAP AT BENT 3 SPAN 3 SIDE UNDER BAY 4 (ESTIMATED 1" DIAMETER BAR REMAINING). PRIORITY MAINTENANCE ISSUED.	3	3	3 Feet
234	Patched Area	10 FEET OF SOUND PATCHING IN FACE OF CAP SPAN 3 SIDE.	2	10	Feet

General Comments**Bent 3 Pile 1****Reinforced Concrete Column**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
205	Reinforced Concrete Column	1	0	1	0	0 Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
205	Abrasion/Wear (PSC/RC)	ABRASION WITH COARSE AGGREGATE EXPOSED FROM WATERLINE UP 3 FEET.	2	1	Each
205	Cracking (RC and Other)	1/32" VERTICAL CRACK IN SPAN 3 SIDE.	2		Each

General Comments**Bent 3 Pile 2****Reinforced Concrete Pier Wall**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
210	Reinforced Concrete Pier Wall	15	0	15	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
210	Abrasion/Wear (PSC/RC)	ABRASION WITH COARSE AGGREGATE EXPOSED FROM WATERLINE UP 3 FEET.	2	15	Feet
210	Cracking (RC and Other)	2 FEET OF 1/32" VERT CRACKING IN WEB.	2		Feet

General Comments**Bent 3 Pile 3****Reinforced Concrete Column**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
205	Reinforced Concrete Column	1	0	1	0	0 Each

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
205	Cracking (RC and Other)	ABRASION WITH COARSE AGGREGATE EXPOSED FROM WATERLINE UP 3 FEET.	2	1	Each

General Comments

Elements Verified

Location	Name	Component	Element Name	Amount
Span 1	Deck	Reinforced Concrete Deck Slab	Reinforced Concrete Slabs	1663
Span 1	Beam 1	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 1	Beam 2	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 1	Beam 3	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 1	Beam 4	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 1	Beam 5	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 1	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	53
Span 1	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	53
Span 1	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	1492
Span 2	Deck	Reinforced Concrete Deck Slab	Reinforced Concrete Slabs	1663
Span 2	Beam 1	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 2	Beam 2	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 2	Beam 3	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 2	Beam 4	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 2	Beam 5	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 2	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	53
Span 2	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	53
Span 2	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	1492
Span 3	Deck	Reinforced Concrete Deck Slab	Reinforced Concrete Slabs	1663
Span 3	Beam 1	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 3	Beam 2	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 3	Beam 3	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 3	Beam 4	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 3	Beam 5	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 3	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	53
Span 3	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	53
Span 3	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	1492
Span 4	Deck	Reinforced Concrete Deck Slab	Reinforced Concrete Slabs	1663
Span 4	Beam 1	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 4	Beam 2	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 4	Beam 3	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 4	Beam 4	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 4	Beam 5	Reinforced Concrete Girder	Reinforced Concrete Open Girder/Beam	52
Span 4	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	53
Span 4	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	53
Span 4	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	1492
Bent 1	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	28
Bent 1	Pile 1	Reinforced Concrete Column	Reinforced Concrete Pier Wall	29
Bent 1	Pile 1	Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 1	Pile 2	Reinforced Concrete Pier Wall	Reinforced Concrete Pier Wall	15
Bent 1	Pile 3	Reinforced Concrete Column	Reinforced Concrete Column	1
End Bent 1	Abutment	Reinforced Concrete Abutment	Reinforced Concrete Abutment	81
Bent 2	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	22
Bent 2	Pile 1	Reinforced Concrete Column	Reinforced Concrete Pier Wall	29
Bent 2	Pile 1	Reinforced Concrete Column	Reinforced Concrete Column	1

Elements Verified

Location	Name	Component	Element Name	Amount
Bent 2	Pile 2	Reinforced Concrete Pier Wall	Reinforced Concrete Pier Wall	15
Bent 2	Pile 3	Reinforced Concrete Column	Reinforced Concrete Column	1
End Bent 2	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	35
End Bent 2	Pile 1	Reinforced Concrete Column	Reinforced Concrete Column	1
End Bent 2	Pile 2	Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 3	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	28
Bent 3	Pile 1	Reinforced Concrete Column	Reinforced Concrete Pier Wall	29
Bent 3	Pile 1	Reinforced Concrete Column	Reinforced Concrete Column	1
Bent 3	Pile 2	Reinforced Concrete Pier Wall	Reinforced Concrete Pier Wall	15
Bent 3	Pile 3	Reinforced Concrete Column	Reinforced Concrete Column	1

General Inspection Notes

National Bridge and NC Inspection Items

Structure Number: 500056

Inspection Date: 02/22/2018

National Bridge Inventory Items

Item	Grade Scale	Grade
Item 58: Deck	0 - 9 , N	6
Item 59: Superstructure	0 - 9 , N	6
Item 60: Substructure	0 - 9 , N	6
Item 61: Channel and Channel Protection	0 - 9 , N	7
Item 62: Culvert	0 - 9 , N	N
Item 71: Waterway Adequacy	0 - 9 , N	7
Item 72: Approach Roadway Alignment	0 - 9 , N	8

Note: If NBI Inspection Item is not present, code NBI item with "N"

NC SMU Inspection Items

Item	Grade Scale	Grade	Maint. Qty.	Maint. Code
Deck Debris	G, F, P, or C	F	6652	3376
Drainage System	G, F, P, or C	P	420	3332
Utilities	G, F, P, or C	F		
Slope Protection	G, F, P, or C	F	120	3352
Scour	G, F, P, or C	G		
Wingwall	G, F, P, or C		0	3350
Field Scour Evaluation		G		
Drift	G, F, P, or C	G	0	3366
Fender System	G, F, P, or C		0	3364
Movable Span Machinery	G, F, P, or C			
Response to Live Load	G, F, P, or C	G		
Estimated Remaining Life	0 - 100 Years			
Superstructure Paint Code				

Note: If NC SMU Inspection Item is not present, leave NC SMU item blank

Inspection Information

Item	Grade Scale	Grade
Sign Noticed Issued	YES/NO	N
Priority Maintenance Request Submitted	YES/NO	Y
Inspection Time	Hours	6
Traffic Control Time	Hours	
Snooper Time	Hours	
Ladder Used	YES/NO	N
Bucket Truck Used	YES/NO	N
Boat Used	YES/NO	Y
Other Equipment Used	YES/NO	N

National Bridge and NC SMU Inspection Item Details

Structure Number: 500056

Inspection Date: 02/22/2018

Item	Priority Maintenance Issued	Grade Y	Maint Code	Qty. 0
Details	26" LONG X 7" WIDE X 2" DEEP SPALL WITH SECTION LOSS TO EXPOSED BAR IN BOTTOM OF CAP AT BENT 3 SPAN 3 SIDE UNDER BAY 4 (ESTIMATED 1" DIAMETER BAR REMAINING). PRIORITY MAINTENANCE ISSUED. LEFT END OF ABUTMENT 2 UNDERMINED 4' L X 10" HIGH X 10" DEEP. RIGHT END OF ABUTMENT 2 UNDERMINED 4' LONG X 10" HIGH X 12" DEEP. COLUMNS EXPOSED AT END BENT 2. PRIORITY MAINTENANCE ISSUED. RIGHT SIDE GUARDRAIL POST BASES AT BENT 3 SPALLED 3" DEEP WITH EXPOSED REBAR. PRIORITY MAINTENANCE ISSUED.			

Item	Deck Debris	Grade F	Maint Code 3376	Qty. 6652
Details	DIRT, DEBRIS AND VEGETATION OUT 1' ALONG CURBS.			

Item	Drainage System	Grade P	Maint Code 3332	Qty. 420
Details	DECK DRAINS CLOGGED WITH DIRT AND VEGETATION.			

Item	Slope Protection	Grade F	Maint Code 3352	Qty. 120
Details	LEFT END OF ABUTMENT 2 UNDERMINED 4' L X 10" HIGH X 10" DEEP. RIGHT END OF ABUTMENT 2 UNDERMINED 4' LONG X 10" HIGH X 12" DEEP. COLUMNS EXPOSED AT END BENT 2.			

Item	Utilities	Grade F	Maint Code	Qty. 0
Details	AREAS OF CORROSION ALONG BOTTOM OF 12" UTILITIES PIPE, LEFT SIDE OVERHANG.			



LEFT CURB AT END BENT 1 CRACKED AND SPALLED



CRACKING IN WEARING SURFACE OVER END BENT 1



ABRASION WITH COARSE AGGREGATE EXPOSED ALONG DECK CURBS IN SPAN 1



DIRT, DEBRIS AND VEGETATION OUT 1 FT. ALONG CURBS



TRANSVERSE CRACK WITH SPALLING IN THE LEFT CURB OF SPAN 1



CRACKING IN WEARING SURFACE OVER BENT 1



ABRASION WITH COARSE AGGREGATE EXPOSED ALONG DECK CURBS IN SPAN 2



LONGITUDINAL CRACKING IN SPAN 2 WEARING SURFACE - OTHER SPANS SIMILAR



RANDOM TRANSVERSE CRACKS IN THE LEFT CURB OF SPAN 2



CRACKING IN WEARING SURFACE OVER BENT 2



CRACKING IN WEARING SURFACE OVER BENT 3



CRACKING IN WEARING SURFACE OVER END BENT 2



SPALL IN THE LEFT END OF ABUTMENT AT END BENT 2



LEFT END OF ABUTMENT 2 UNDERMINED 4'L X 10" HIGH X 10" DEEP



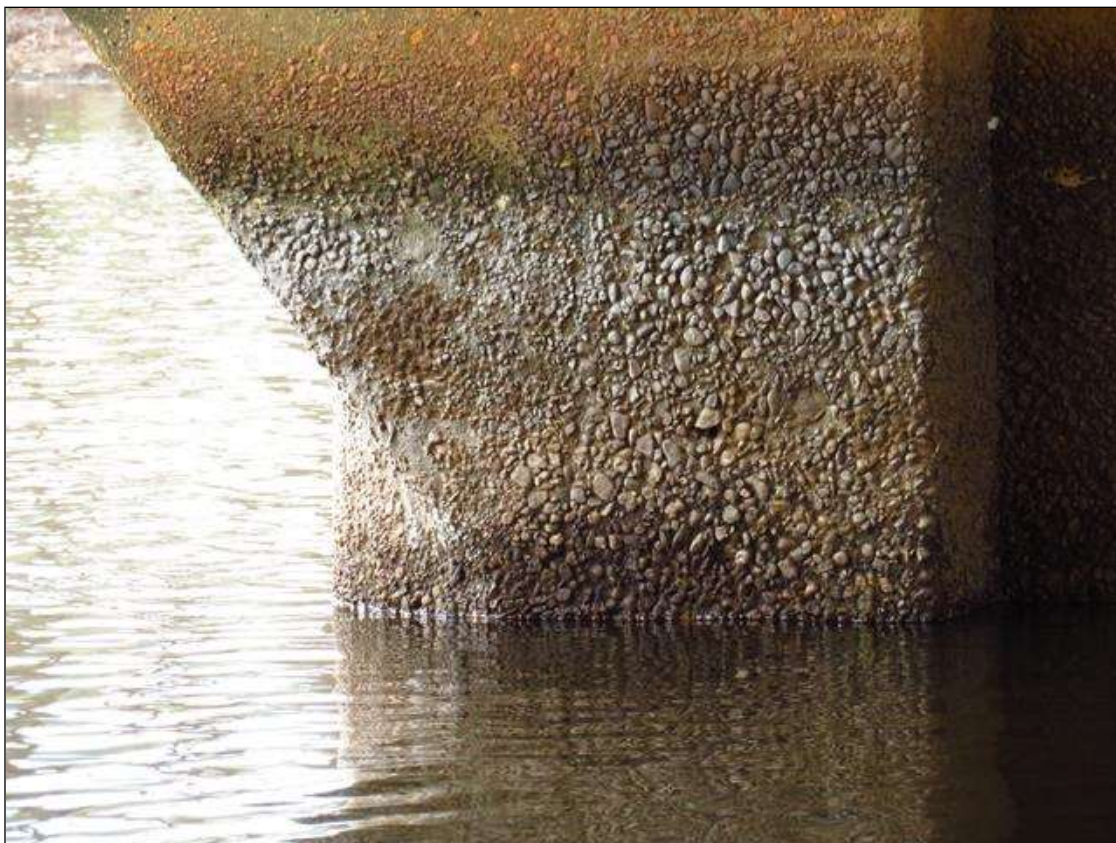
RIGHT END OF ABUTMENT 2 UNDERMINED 4' LONG X 10" HIGH X 12" DEEP



REPAIR PATCH IN THE RIGHT SIDE BOTTOM OF GIRDER 5 IN SPAN 4



REPAIR PATCH IN THE RIGHT SIDE WEB OF GIRDER 5 IN SPAN 4 AT 2/3 POINT FROM BENT 3



ABRASION WITH COARSE AGGREGATE EXPOSED FROM WATERLINE UP 2 FT. AROUND BENT 3 - OTHER BENTS SIMILAR



HAIRLINE CRACK WITH SURFACE WHITE EFFLORESCENCE IN BOTTOM OF DECK IN SPAN 4, BAY 1
EXTENDING DOWN THE RIGHT SIDE WEB OF GIRDER 1 NEAR MID-SPAN



REPAIR PATCH IN THE RIGHT SHOULDER AND CURB AT END BENT 2



HAIRLINE CRACKING IN THE RIGHT CURB OF SPAN 4



SPALL WITH EXPOSED REBAR IN THE RIGHT SIDE GUARDRAIL POST AT APPROACH GUARDRAIL CONNECTION IN SPAN 1



HAIRLINE TO 1/32" CRACK WITH SURFACE WHITE EFFLORESCENCE IN REPAIR PATCH IN ABUTMENT 1 AND IN CAP UNDER GIRDER 1



ABRASION WITH COARSE AGGREGATE EXPOSED FROM WATERLINE UP 3' AT ABUTMENT 1



1/4" WIDE VERTICAL CRACK IN FACE OF ABUTMENT 1



HAIRLINE CRACK WITH SURFACE WHITE EFFLORESCENCE IN REPAIR PATCH IN ABUTMENT 1 AND IN CAP UNDER GIRDER 5



VERTICAL CRACKS IN FACE OF ABUTMENT 1 UNDER GIRDER 4



REPAIR PATCH IN THE BOTTOM OF GIRDER 4 IN SPAN 1 AT 2/3 POINT FROM ABUTMENT 1



REPAIR PATCH IN THE BOTTOM OF GIRDER 5 IN SPAN 1 AT 2/3 POINT FROM ABUTMENT 1



REPAIR PATCHING IN FACE OF CAP AT BENT 1 SPAN 1 SIDE UNDER GIRDERS 3 AND 4



REPAIR PATCH IN SPAN 1 SIDE OF COLUMN 1 AT BENT 1 - COLUMN 2 SIMILAR



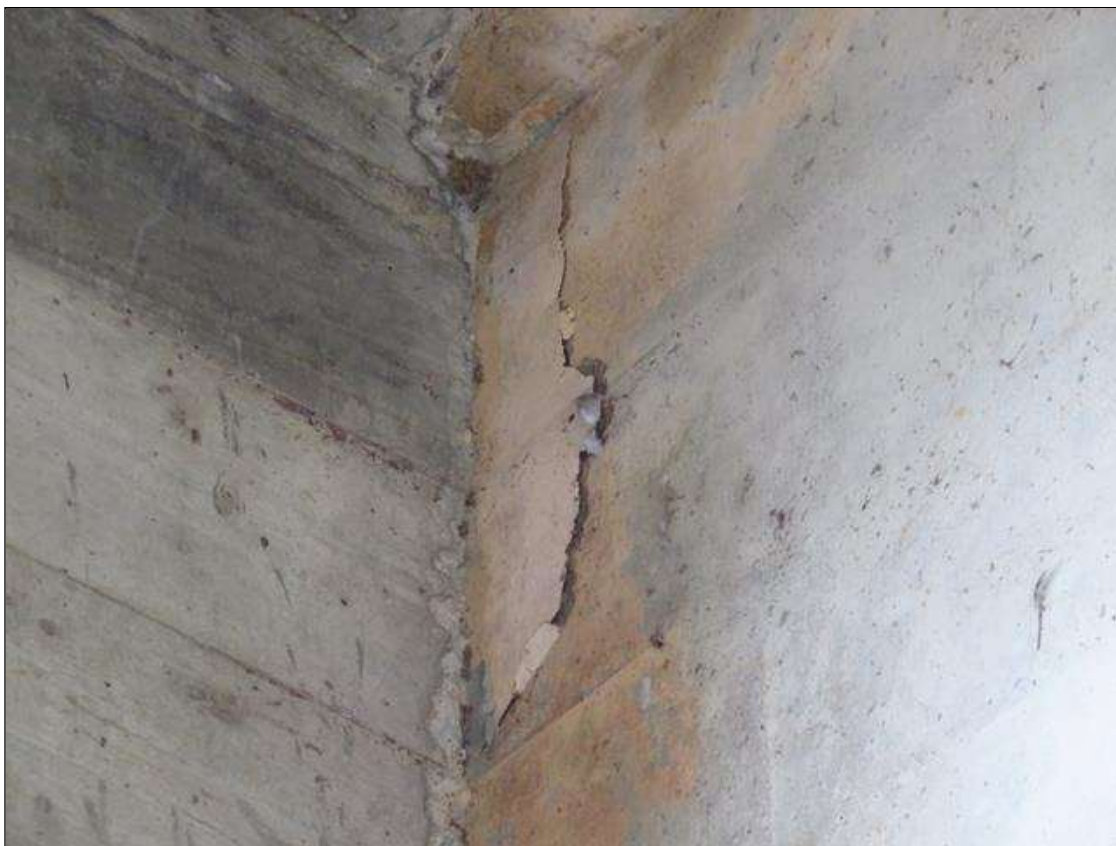
6" DIAMETER X 1" DEEP SPALL WITH EXPOSED REBAR IN SPAN 2 END DIAPHRAGM AT BENT 2 BAY 3



REPAIR PATCH IN THE BOTTOM OF GIRDER 5 IN SPAN 2 NEAR BENT 2



REPAIR PATCH IN THE RIGHT SIDE OF GIRDER 5 IN SPAN 2 AT MID-SPAN



DELAMINATION IN THE RIGHT SIDE OF GIRDER 4 IN SPAN 3 OVER BENT 2



REPAIR PATCH IN FACE OF CAP AT BENT 3 SPAN 3 SIDE UNDER GIRDER 2



REPAIR PATCH IN FACE OF CAP AT BENT 3 SPAN 3 SIDE FROM GIRDER 3 TO GIRDER 4



26" LONG X 7" WIDE X 2" DEEP SPALL WITH SECTION LOSS TO EXPOSED BAR IN BOTTOM OF CAP AT BENT 3 SPAN 3 SIDE UNDER BAY 4 (ESTIMATED 1" DIAMETER BAR REMAINING) PHOTO 1 OF 2



26" LONG X 7" WIDE X 2" DEEP SPALL WITH SECTION LOSS TO EXPOSED BAR IN BOTTOM OF CAP AT BENT 3 SPAN 3 SIDE UNDER BAY 4 (ESTIMATED 1" DIAMETER BAR REMAINING) PHOTO 2 OF 2



REPAIR PATCH IN THE LEFT SIDE OF GIRDER 4 IN SPAN 3 NEAR BENT 3



SPALLING WITH EXPOSED REBAR IN THE RIGHT SIDE DOG-EARS AT BENT 3



SPOTS OF CORROSION ALONG BOTTOM OF UTILITIES PIPE ALONG THE LEFT OVERHANG



LOOKING NORTH



SPAN 1 WEARING SURFACE OVERVIEW



SPAN 2 WEARING SURFACE OVERVIEW



SPAN 3 WEARING SURFACE OVERVIEW



LOOKING WEST UPSTREAM



SPAN 4 WEARING SURFACE OVERVIEW



LOOKING SOUTH



UTILITIES ALONG THE LEFT SIDE OVERHANG



TYPICAL UTILITIES CONNECTION ALONG THE LEFT SIDE OVERHANG



FELT BEARING PADS AT END BENTS



END BENT 2 OVERVIEW



BENT 3 SPAN 4 SIDE



LOOKING EAST DOWNSTREAM



EAST PROFILE



APPROACH GUARDRAIL CONNECTION



EAST PROFILE



END BENT 1 OVERVIEW



BOAT AT BENT 1



BENT 1 SPAN 1 SIDE



SUPERSTRUCTURE OVER END OF CAP AT BENT 2 - OTHER BENTS SIMILAR



SUPERSTRUCTURE OVERVIEW



TYPICAL GIRDER SEAT/BEARING AREA AT THE INTERIOR BENT



ACCESS EQUIPMENT

Stream Bed Soundings

(Profile diagram on following sheet)

County **JOHNSTON**

Structure Number: **500056**

Inspection Date **02/22/2018**

Sounding recorded from: **Top of Bridge Rail**

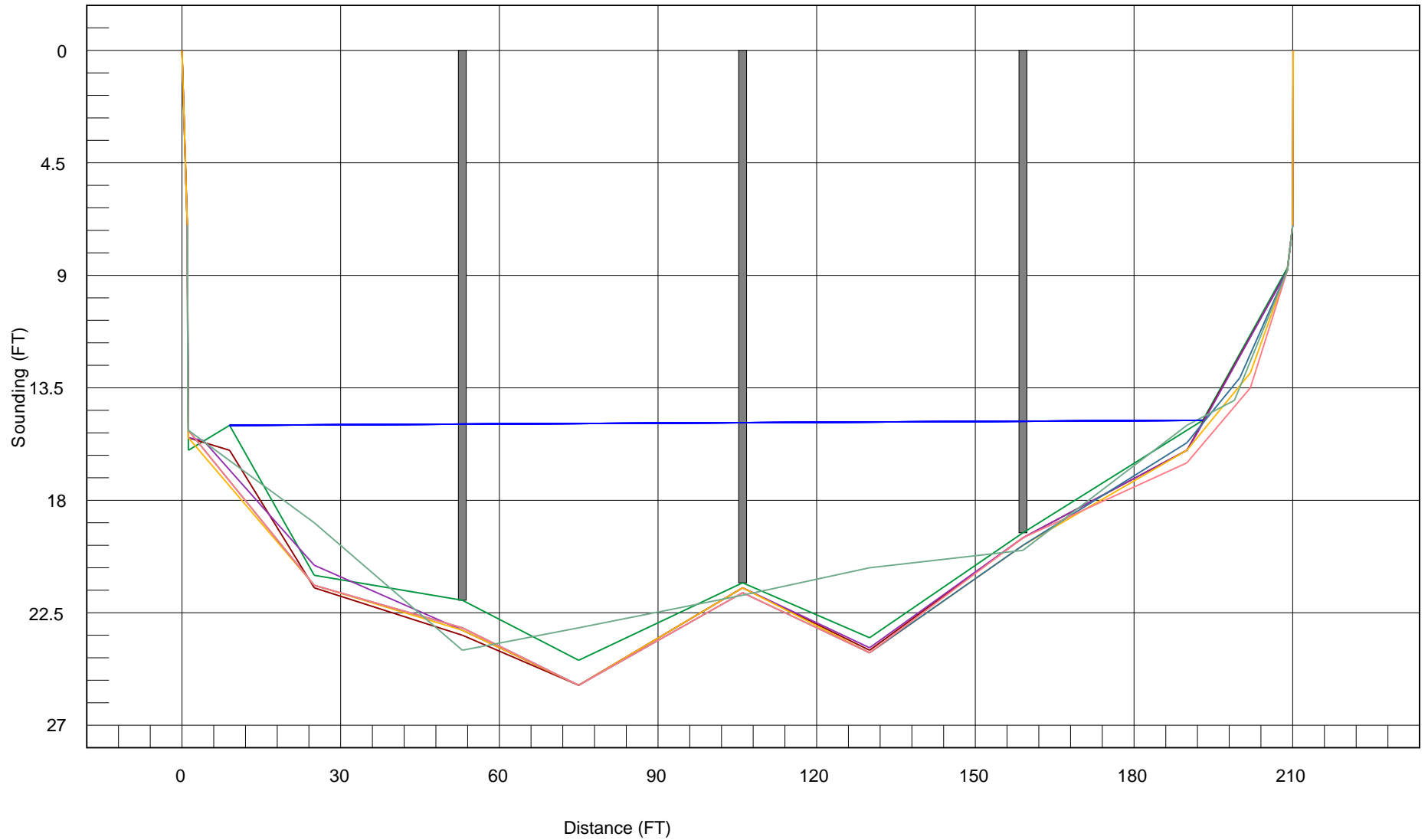
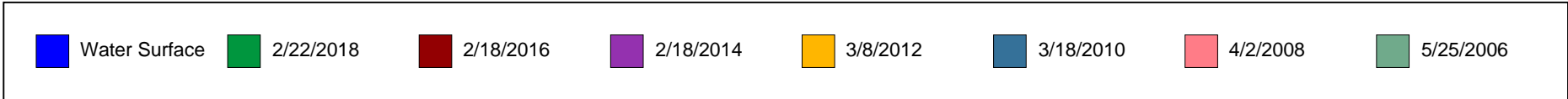
Highwater Mark Distance

Location of Highwater Mark

Distance (Station) ft.	Downstream Sounding ft.	Upstream Sounding ft.	Description
0.000	0.000	0.000	TOP OF RAIL
1.000	7.000	0.000	TOP OF CAP
1.200	16.000	16.700	STREAMBED AT CAP
9.000	15.000	0.000	WSWE
25.000	21.000	0.000	
53.000	22.000	22.800	BENT 1
75.000	24.400	0.000	
106.000	21.300	21.300	BENT 2
130.000	23.500	0.000	
159.000	19.300	19.000	BENT 3
193.000	14.800	0.000	WSWE
209.000	8.700	10.100	GROUND AT CAP
210.000	7.000	0.000	TOP OF CAP
210.100	0.000	0.000	TOP OF RAIL

STREAMBED PROFILE (Downstream)

Top of Rail = 0FT (Sounding)

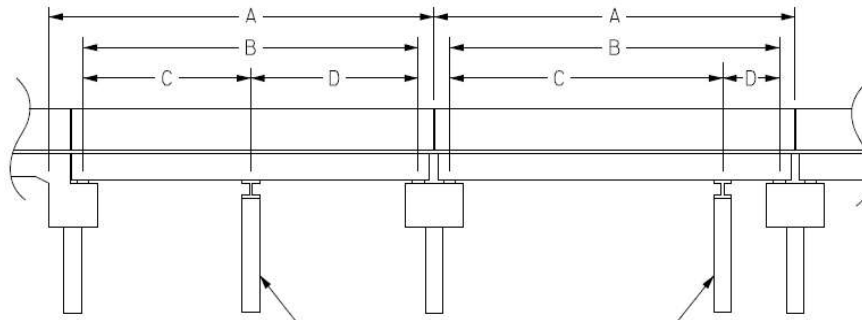


Structure Data Worksheet

Span Profile

County: **JOHNSTON**

Structure Number: **500056**



A: SPAN LENGTH
 B: BEARING TO BEARING
 C: DISTANCE FROM NEAR BEARING
 D: DISTANCE TO FAR BEARING

Span Number	Span Length	Bearing to Bearing	Crutch/ Helper Bent	Distance to Near Bearing	Distance to Far Bearing
1	52.500	48.875			
2	52.500	50.250			
3	52.500	50.250			
4	52.500	48.875			

NATIONAL BRIDGE INVENTORY----- STRUCTURE INVENTORY AND APPRAISAL

Run Date: 09/19/2018

IDENTIFICATION

(1) STATE NAME -NORTH CAROLINA BRIDGE **500056**
 (8) STRUCTURE NUMBER(FEDERAL) 000000001010056
 (5) INVENTORY ROUTE (ON/UNDER) - ON 21003010
 (2) STATE HIGHWAY DEPARTMENT DISTRICT 3
 (3) COUNTY CODE 101 (4) PLACE CODE 62520
 (6) FEATURE INTERSECTED - BLACK CREEK
 (7) FACILITY CARRIED US301,NC96
 (9) LOCATION 0.7 MI. N. JCT. US701
 (11)MILEPOINT 0
 (16)LAT 35° 28' 9.05" (17)LONG 78° 23' 4.31"
 (98)BORDER BRIDGE STATE CODE PCT SHARE
 (99)BORDER BRIDGE STRUCTURE NO

SUFFICIENCY RATING = 42.96
 STATUS = Not Deficient

CLASSIFICATION **CODE**

(112)NBIS BRIDGE SYSTEM - YES
 (104)HIGHWAY SYSTEM Is on the NHS 1
 (26) FUNCTIONAL CLASS - Minor Arterial 16
 (100)STRAHNET HIGHWAY - Not a STRAHNET Route 0
 (101)PARALLEL STRUCTURE - No Parallel Structure N
 (102)DIRECTION OF TRAFFIC - 2-way Traffic 2
 (103)TEMPORARY STRUCTURE -
 (110)DESIGNATED NATIONAL NETWORK - Not on the National Network 0
 (20) TOLL On Free Road 3
 (31) MAINTAIN - State Highway Agency 01
 (22) OWNER - State Highway Agency 01
 (37) HISTORICAL SIGNIFICANCE - Not Eligible 5

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN: Concrete
 TYPE - Tee Beam CODE 104
 (44) STRUCTURE TYPE APPR :
 TYPE - CODE 000
 (45) NUMBER OF SPANS IN MAIN UNIT 4
 (46) NUMBER OF APPROACH SPANS
 (107)DECK STRUCTURE TYPE - 1 CODE
 (108)WEARING SURFACE / PROTECTIVE SYSTEM :
 (A) TYPE OF WEARING SURFACE - CODE
 (B) TYPE OF MEMBRANE - CODE
 (C) TYPE OF DECK PROTECTION - CODE

CONDITION **CODE**

(58) DECK 6
 (59) SUPERSTRUCTURE 6
 (60) SUBSTRUCTURE 5
 (61) CHANNEL & CHANNEL PROTECTION 7
 (62) CULVERTS N

LOAD RATING AND POSTING **CODE**

(31) DESIGN LOAD H 15 2
 (63) OPERATING RATING METHOD - Allowable Stress 2
 (64) OPERATING RATING - HS-19 35
 (65) INVENTORY RATING METHOD - Allowable Stress 2
 (66) INVENTORY RATING - HS-12 21
 (70) BRIDGE POSTING - No Posting Required 5
 (41) STRUCTURE OPEN, POSTED ,OR CLOSED A
 DESCRIPTION - Open, No Restriction

AGE AND SERVICE

(27) YEAR BUILT 1926
 (106)YEAR RECONSTRUCTED 1954
 (42) TYPE OF SERVICE : ON - Highway
 UNDER - Waterway CODE 15
 (28) LANES: ON STRUCTURE 2 UNDER STRUCTURE 0
 (29) AVERAGE DAILY TRAFFIC 9300
 (30) YEAR OF ADT 2013 (109) TRUCK ADT PCT 6%
 (19) BYPASS OR DETOUR LENGTH 8 MI

APPRAISAL **CODE**

(67) STRUCTURAL EVALUATION 4
 (68) DECK GEOMETRY 4
 (69) UNDERCLEARANCES,VERTI & HORIZ N
 (71) WATERWAY ADEQUACY 7
 (72) APPROACH ROADWAY ALIGNMENT 8
 (36) TRAFFIC SAFETY FEATURES 0010
 (113)SCOUR CRITICAL BRIDGES 5

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN 53 FT
 (49) STRUCTURE LENGTH 210 FT
 (50)CURB OR SIDEWALK: LEFT 1.54165 FT RIGHT 1.54165 FT
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 28.4167 FT
 (52) DECK WIDTH OUT TO OUT 31.6667 FT
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 30 FT
 (33) BRIDGE MEDIAN - No Median CODE 0
 (34) SKEW 0° (35) STRUCTURE FLARED 0
 (10) INVENTORY ROUTE MIN VERT CLEAR 999.9 FT
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 28.4167 FT
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 999.9 FT
 (54) MIN VERT UNDERCLEAR REF Not a Highway or Railroad 0 FT
 (55) MIN LAT UNDERCLEAR RT REF Not a Highway or Railroad 000 FT
 (56) MIN LAT UNDERCLEAR LT REF - 000 FT

PROPOSED IMPROVEMENTS

(75) TYPE OF WORK - CODE
 (76) LENGTH OF STRUCTURE IMPROVEMENT
 (94) BRIDGE IMPROVEMENT COST
 (95) ROADWAY IMPROVEMENT COST
 (96) TOTAL PROJECT COST
 (97) YEAR OF IMPROVEMENT COST ESTIMATE
 (114)FUTURE ADT 18600 (115) YEAR FUTURE ADT 2025

INSPECTIONS

(90) INSPECTION DATE 02/22/2018
 (92) CRITICAL FEATURE INSPECTION : (93) CFI DATE
 A) FRACTURE CRIT DETAIL - NO A)
 B) UNDERWATER INSP - YES 48Mo B) 07/21/2015
 C) OTHER SPECIAL INSP NO C)
 SCOUR

NAVIGATION DATA

(38) NAVIGATION CONTROL - No Navigational Control CODE 0
 (111)PIER PROTECTION - CODE
 (39) NAVIGATION VERTICAL CLEARANCE 0
 (116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR FT
 (40) NAVIGATION HORIZONTAL CLEARANCE 0 FT

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 09/19/2018

COUNTY : JOHNSTON DIVISION : 4 DISTRICT : 3 STRUCTURE NUMBER : 500056 LENGTH : 210 FEET

ROUTE CARRIED : US301,NC96 FEATURE INTERSECTED : BLACK CREEK

LOCATED : 0.7 MI. N. JCT. US701 BRIDGE NAME : CITY : *SMITHFIELD

FUNC. CLASS : 16 SYST.ON : FA SYST.UNDER : NFA ADT & YR : 9300 2013 RAIL TYPE : LT 111 RT 111

BUILT : 1926 BY : SHPWC PROJ : 240 FED.AID PROJ : DESIGN LOAD : H 15

REHAB : 1954 BY : SHPWC PROJ : 2333 ALIGNMENT : TAN SKEW : 90 LANES : ON 2 UNDER 0

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 23 FT WATER DEPTH : 9 FT

SUPERSTRUCTURE : REINFORCED CONCRETE DECK GIRDERS

SUBSTRUCTURE : RC ABUTS;BTS;RNP&W PIERS EXTENDED W/BRACKETS

SPANS : 4@52'6"

BEAMS OR GIRDERS : REINFORCED CONCRETE DECK GIRDER

FLOOR : RC/5.5" AWS ENCROACHMENT : DECK (OUT TO OUT) : 31.6667 FT

CLEAR ROADWAY : 28.4167 FT BETWEEN RAILS : 31.5 FT SIDEWALK OR CURB : LT 1.54165 FT RT 1.54165 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. : HS-12 OPE.RTG. : HS-19 CONTR.MEMBER : RCDG POSTED : SV TTST DATE 02/24/2009

SYSTEM : Primary U.S. Route GREEN LINE ROUTE : Y

UNDER ROUTES AND CLEARANCES

REMARKS :


BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 500056

County JOHNSTON

Date: 02/22/2018

These Repairs Should Be Made Within Twelve Months From Date Of This Inspection

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
 0	No Maintenance Required	NA	120	LEFT END OF ABUTMENT 2 UNDERMINED 4'L X 10" HIGH X 10" DEEP. RIGHT END OF ABUTMENT 2 UNDERMINED 4' LONG X 10" HIGH X 12" DEEP. COLUMNS EXPOSED AT END BENT 2.	
3318	Maint to Concrete Handrail	LF	1	Span 3 Right Bridge Rail: 1 FOOT OF SPALLING 3" DEEP WITH EXPOSED REBAR IN THE GUARDRAIL POST BASE AT BENT 3. PRIORITY MAINTENANCE ISSUED.	
3318	Maint to Concrete Handrail	LF	1	Span 4 Right Bridge Rail: 1 FOOT OF SPALLING 3" DEEP WITH EXPOSED REBAR IN THE GUARDRAIL POST BASE AT BENT 3. PRIORITY MAINTENANCE ISSUED.	
3348	Maintain Concrete Substructure Components	LF	3	Bent 3 Cap 1: 26" LONG X 7" WIDE X 2" DEEP SPALL WITH SECTION LOSS TO EXPOSED BAR IN BOTTOM OF CAP AT BENT 3, SPAN 3 SIDE, UNDER BAY 4 (ESTIMATED 1" DIAMETER BAR REMAINING). PRIORITY MAINTENANCE ISSUED.	

Key

 Priority Maintenance Item

 Critical Finding Item

 Priority Maintenance Level Not Determined

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 500056

County JOHNSTON

THE FOLLOWING MAINTENANCE ITEMS HAVE BEEN SUBMITTED IN CONJUNCTION WITH A PRIORITY MAINTENANCE REQUEST

MMS Code	MMS Description	Quantity
0	No Maintenance Required	120 NA
Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Maintenance Work Completed	
Submitted Date:	Submitted By:	Assisted By:
03/28/2018	WAYNE T. WILKINSON	
Details		
LEFT END OF ABUTMENT 2 UNDERMINED 4'L X 10" HIGH X 10" DEEP. RIGHT END OF ABUTMENT 2 UNDERMINED 4' LONG X 10" HIGH X 12" DEEP. COLUMNS EXPOSED AT END BENT 2.		

MMS Code	MMS Description	Quantity
3318	Maint to Concrete Handrail	1 LF
Location:		
Bent/Span No.		
Priority Level	Status	
Recommended	Routine Maintenance	
Submitted Date:	Submitted By:	Assisted By:
03/28/2018	WAYNE T. WILKINSON	
Details		
Span 3 Right Bridge Rail: 1 FOOT OF SPALLING 3" DEEP WITH EXPOSED REBAR IN THE GUARDRAIL POST BASE AT BENT 3. PRIORITY MAINTENANCE ISSUED.		

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 500056

County JOHNSTON

THE FOLLOWING MAINTENANCE ITEMS HAVE BEEN SUBMITTED IN CONJUNCTION WITH A PRIORITY MAINTENANCE REQUEST

MMS Code	MMS Description	Quantity
3318	Maint to Concrete Handrail	1 LF
Location:		
Bent/Span No.		
Priority Level	Status	
Recommended	Routine Maintenance	
Submitted Date:	Submitted By:	Assisted By:
03/28/2018	WAYNE T. WILKINSON	
Details		
Span 4 Right Bridge Rail: 1 FOOT OF SPALLING 3" DEEP WITH EXPOSED REBAR IN THE GUARDRAIL POST BASE AT BENT 3. PRIORITY MAINTENANCE ISSUED.		

MMS Code	MMS Description	Quantity
3348	Maintain Concrete Substructure Components	3 LF
Location:		
Bent/Span No.		
Priority Level	Status	
Recommended	Routine Maintenance	
Submitted Date:	Submitted By:	Assisted By:
02/22/2018	WAYNE T. WILKINSON	
Details		
Bent 3 Cap 1: 26" LONG X 7" WIDE X 2" DEEP SPALL WITH SECTION LOSS TO EXPOSED BAR IN BOTTOM OF CAP AT BENT 3, SPAN 3 SIDE, UNDER BAY 4 (ESTIMATED 1" DIAMETER BAR REMAINING). PRIORITY MAINTENANCE ISSUED.		

Bridge Inspection Field Sketch



Roadway	24ft Wide	2 Paved Lanes	Looking North
Left Shoulder	3ft Wide	2.333ft Paved	0.667ft Unpaved
Right Shoulder	5ft Wide	3.167ft Paved	1.833ft Unpaved
Left Guardrail	2.917ft from road		
Right Guardrail	5.083ft from road		

MEASUREMENT TAKEN APPROXIMATELY 100 FEET AWAY FROM END BENT 1

MODIFIED ON 02-22-2018 BY: RPS

Title
APPROACH ROADWAY

Description
LOOKING NORTH

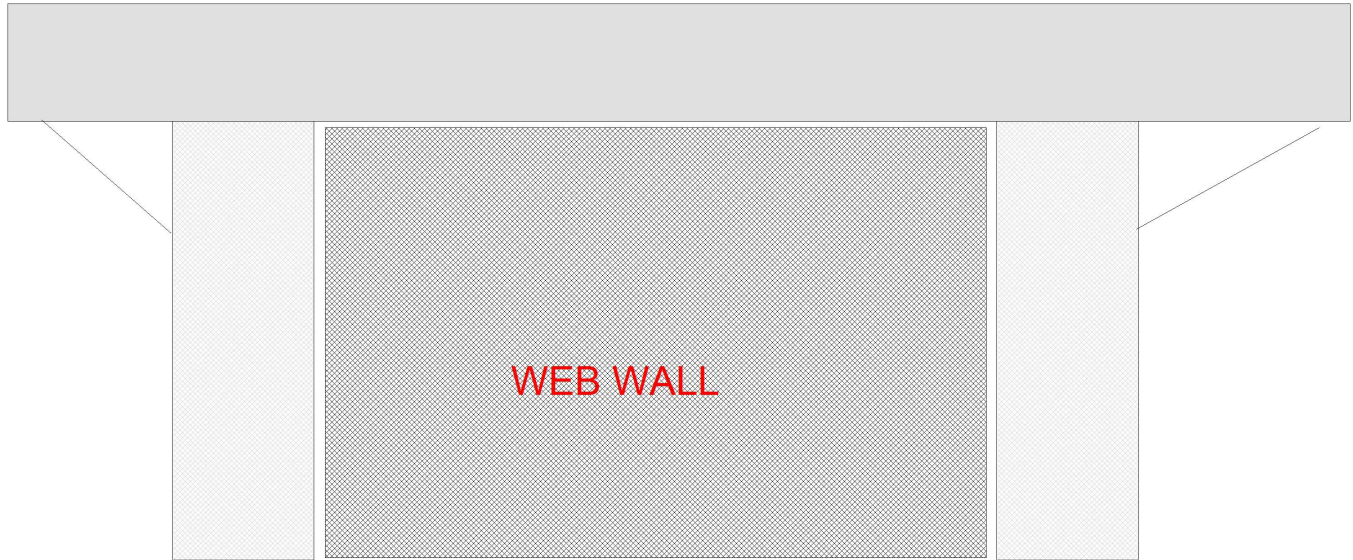
Bridge No: 500056

Drawn By: RPS

Date: 02/22/2018

File Name: S0242000606

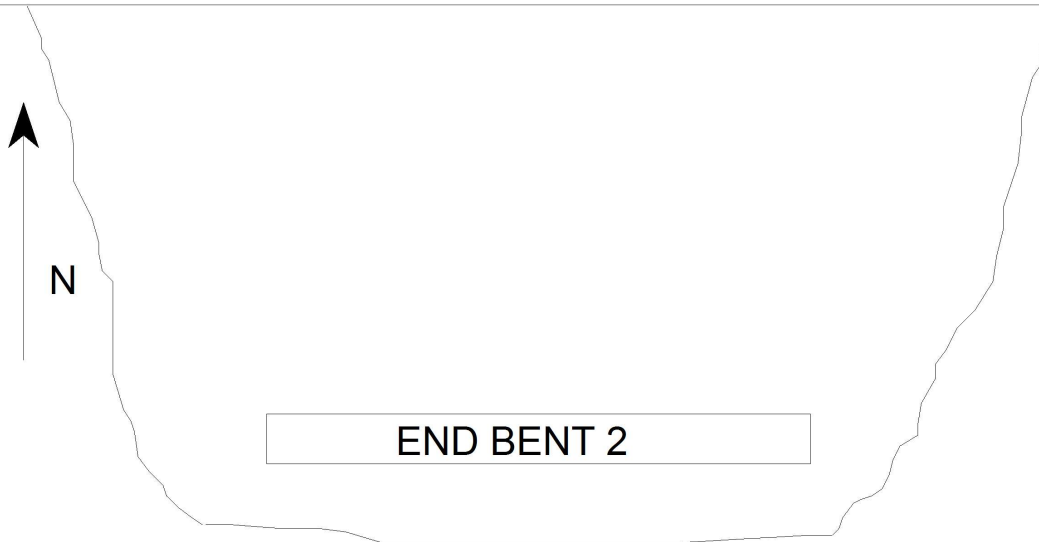
Bridge Inspection Field Sketch



Cap Information			Material Cast-in-Place Concrete							
Length	Width	Height	Left Overhang	Right Overhang	Left Beam to End of Cap.		Right Beam to End of Cap.			
28.0 ft.	4.5 ft.	2.333 ft.	5.333 ft.	5.333 ft.						
Subcap Information			Material							
Length	Width	Height	Left Overhang	Right Overhang	Left Pile to Splice.					
Sill Information			Material							
Length	Width	Height								
Pile #	Material	Spacing	Width/Dia.	Height	Length	Orientation	Driven?	Replacement?	Removed?	Collar?
1	Concrete		3 ft.			Vertical	No	No	No	No
2	Concrete	17.333 ft.	3 ft.			Vertical	No	No	No	No
Bent/Abutment #: 1			Similar Bents: 2, 3							

Title bent 1				CHECKED BY: WCM 2/18/2016				Description data			
Bridge No: 500056		Drawn By: bzc			Date: 7/21/2015		File Name: S0158001237				

Bridge Inspection Field Sketch



LAKE

5.3' BT 3 5.5'

7.5' BT 2 7.4'

9.4' BT 1 8.1'

1.0' END BENT 1 1.2'

BOTTOM COMP. = SILT, SAND AND CLAY W/ 2' PROBE
 WATER SURFACE = 14.0' AT E. SIDE OF BT. 1

Title
 PLAN VIEW

Description
 WATERWAY

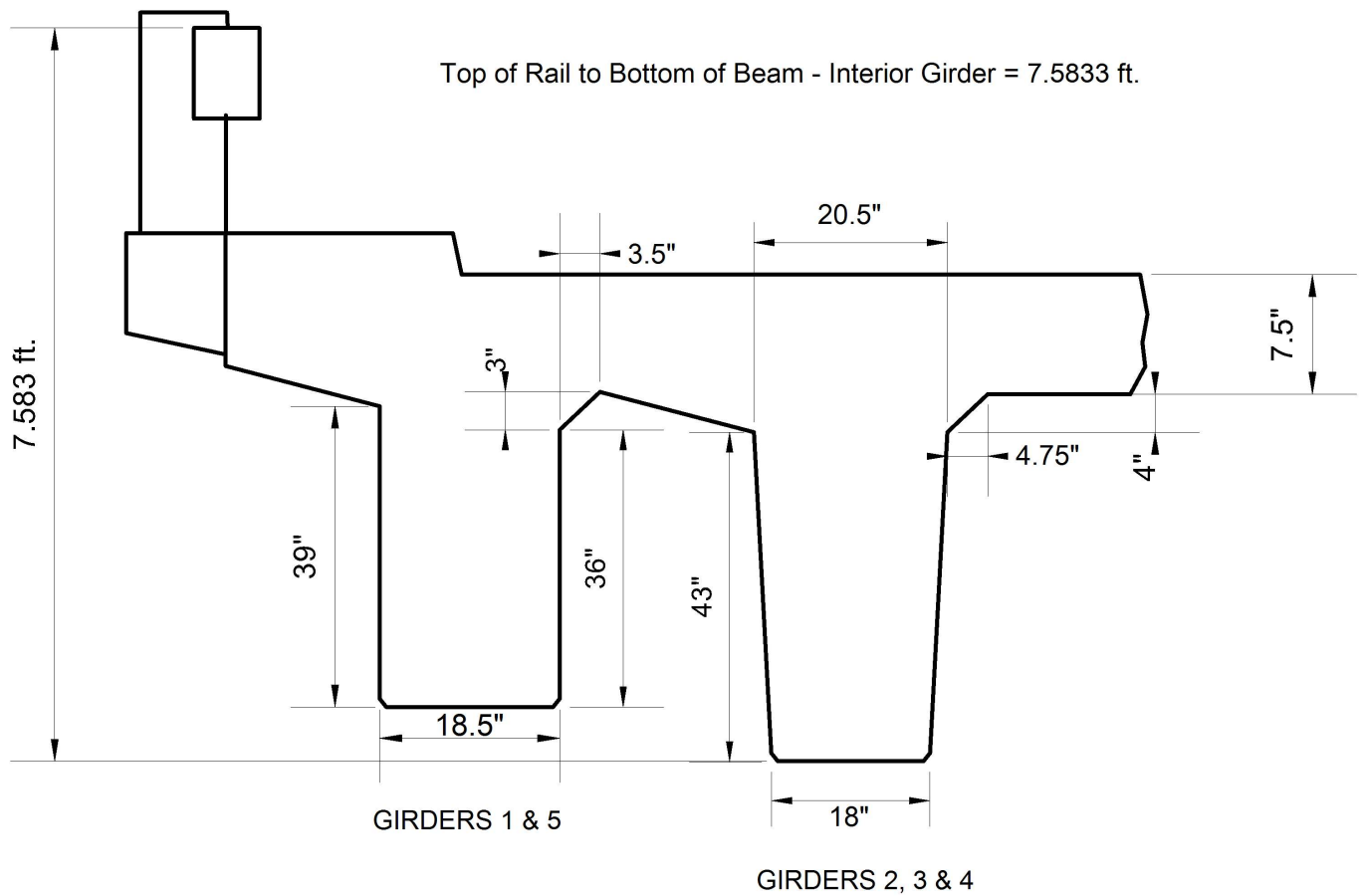
Bridge No: 500056

Drawn By: BZC

Date: 7/19/2007

File Name: S0158000432

Bridge Inspection Field Sketch



Title
GIRDER DIMENSIONS

Description
GIRDER DIMENSIONS

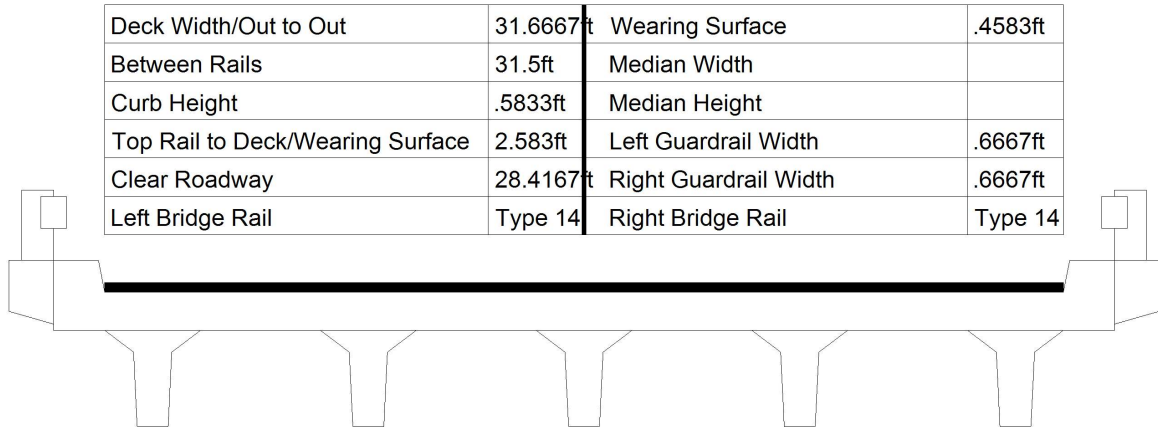
Bridge No: 500056

Drawn By: WTW

Date: 2/15/2018

File Name: S0000003147

Bridge Inspection Field Sketch



Deck Width/Out to Out	31.6667ft	Wearing Surface	.4583ft
Between Rails	31.5ft	Median Width	
Curb Height	.5833ft	Median Height	
Top Rail to Deck/Wearing Surface	2.583ft	Left Guardrail Width	.6667ft
Clear Roadway	28.4167ft	Right Guardrail Width	.6667ft
Left Bridge Rail	Type 14	Right Bridge Rail	Type 14

Measurements for Span #	1		
Deck Thickness	.625	Left Overhang	3.3333
Top of Rail to Bottom of Beam	*6.8333	Right Overhang	3.3333

*EXTERIOR GIRDER DIMENSION

Beam No	Beam Type	Spacing	Comments
1	RC Deck Girder	4.5ft	
2	RC Deck Girder	8.0ft	
3	RC Deck Girder	8.0ft	
4	RC Deck Girder	4.5ft	
5	RC Deck Girder		

Top of Rail to Bottom of Beam - Interior Girder = 7.5833 ft. See Other Sketch

Title

TYPICAL SECTION

Description

5 LINES OF PC DECK GIRDERS

Bridge No: 500056

Drawn By: KMM

Date: 05/23/2006

File Name: S0242000605