



NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 STRUCTURE MANAGEMENT UNIT

ATTENTION: **Shored structure**

Structure Safety Report

Routine Element Inspection

COUNTY: JOHNSTON STRUCTURE NUMBER: 500232 FREQUENCY: 24 MONTHS

FACILITY CARRIED: SR2110 MILE POST: _____

LOCATION: 0.2 MI S JCT NC222

FEATURE INTERSECTED: LITTLE BUFFALO CREEK

LATITUDE: 35° 39' 14.52" LONGITUDE: 78° 10' 53.81"

SUPERSTRUCTURE: RC FLOOR/I-BEAMS (BMD 6-2)

SUBSTRUCTURE: EBTS&IBT:RC CAP/TIM.PILES W/STL. CRUTCH BTS ADDED @ IBT.

SPANS: 2@18'7.5
2@18"7.5

FRACTURE CRITICAL TEMPORARY SHORING SCOUR CRITICAL SCOUR PLAN OF ACTION

PRESENT CONDITION: Poor INSPECTION DATE: 05/26/2015

POSTED SV: 16 POSTED TTST: 24

OTHER SIGNS PRESENT: 4 Delineators



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>

INSPECTED BY Willis C May	SIGNATURE <i>Willis C May</i>	ASSISTED BY Wayne T Wilkinson
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Span Element Report

Structure Number: 500232

Inspection Date: 05/26/2015

Span Number 1

Span Length 18.625 Feet

Number of Beams/Girders: 12

Element Number	Parent Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code
12		Reinforced Concrete Deck	479	457	19	3	0	22	3326
107		Steel Open Girder/Beam	216	3	150	58	5	213	3314
515	107	Steel Protective Coating	696	356	0	25	315	340	3342
216		Timber Abutment	33	23	10	0	0	10	3346
225		Steel Pile	4	0	4	0	0	4	3354
515	225	Steel Protective Coating	140	129	0	11	0	11	3342
228		Timber Pile	4	0	4	0	0	3	3344
231		Steel Pier Cap	26	16	10	0	0	10	3354
515	231	Steel Protective Coating	130	110	0	20	0	20	3342
234		Reinforced Concrete Pier Cap	28	28	0	0	0	0	3348
316		Other Bearings	24	23	0	1	0	1	3334
331		Reinforced Concrete Bridge Railing	38	37	1	0	0	1	3318
510		Wearing Surface	452	428	24	0	0	24	2816

"Near" Approach and Substructure quantities have been include for reporting purposes. The last span will also include End Bent 2 and Far Approach quantities where applicable

Span Number 2

Span Length 18.625 Feet

Number of Beams/Girders: 12

Element Number	Parent Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code
12		Reinforced Concrete Deck	479	456	19	4	0	23	3326
107		Steel Open Girder/Beam	216	16	152	42	6	200	3314
515	107	Steel Protective Coating	696	492	0	82	122	204	3342
216		Timber Abutment	33	9	8	16	0	24	3346
225		Steel Pile	4	0	4	0	0	3	3354
515	225	Steel Protective Coating	118	112	0	6	0	6	3342
228		Timber Pile	8	0	8	0	0	5	3344
231		Steel Pier Cap	26	11	15	0	0	15	3354
515	231	Steel Protective Coating	130	115	0	15	0	15	3342
234		Reinforced Concrete Pier Cap	56	56	0	0	0	0	3348
301		Pourable Joint Seal	26	16	10	0	0	10	3310
316		Other Bearings	24	24	0	0	0	0	3334
331		Reinforced Concrete Bridge Railing	38	38	0	0	0	0	3318
510		Wearing Surface	452	448	4	0	0	4	2816

"Near" Approach and Substructure quantities have been include for reporting purposes. The last span will also include End Bent 2 and Far Approach quantities where applicable

Superstructure Detailed Element Quantities

Structure Number: 500232

Inspection Date: 05/26/2015

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
<input checked="" type="checkbox"/> Deck	1	12	Reinforced Concrete Deck	479	457	19	3	0	22	3326	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Bridge Rail	1	331	Reinforced Concrete Bridge Railing	19	18	1	0	0	1	3318	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Bridge Rail	2	331	Reinforced Concrete Bridge Railing	19	19	0	0	0	0	3318	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Wearing Surfaces		510	Wearing Surface	452	428	24	0	0	24	2816	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Beam	1	107	Steel Open Girder/Beam	18	0	0	15	3	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	13	0	0	45	45	3342	
<input checked="" type="checkbox"/> Beam	2	107	Steel Open Girder/Beam	18	0	11	6	1	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	28	0	0	30	30	3342	
<input checked="" type="checkbox"/> Beam	3	107	Steel Open Girder/Beam	18	0	17	0	1	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	33	0	0	25	25	3342	
<input checked="" type="checkbox"/> Beam	4	107	Steel Open Girder/Beam	18	0	18	0	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	33	0	25	0	25	3342	
<input checked="" type="checkbox"/> Beam	5	107	Steel Open Girder/Beam	18	0	16	2	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	33	0	0	25	25	3342	
<input checked="" type="checkbox"/> Beam	6	107	Steel Open Girder/Beam	18	0	15	3	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	28	0	0	30	30	3342	
<input checked="" type="checkbox"/> Beam	7	107	Steel Open Girder/Beam	18	0	15	3	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	28	0	0	30	30	3342	
<input checked="" type="checkbox"/> Beam	8	107	Steel Open Girder/Beam	18	0	15	3	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	33	0	0	25	25	3342	
<input checked="" type="checkbox"/> Beam	9	107	Steel Open Girder/Beam	18	0	14	4	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	33	0	0	25	25	3342	
<input checked="" type="checkbox"/> Beam	10	107	Steel Open Girder/Beam	18	0	14	4	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	28	0	0	30	30	3342	
<input checked="" type="checkbox"/> Beam	11	107	Steel Open Girder/Beam	18	0	15	3	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	28	0	0	30	30	3342	
<input checked="" type="checkbox"/> Beam	12	107	Steel Open Girder/Beam	18	3	0	15	0	15	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	38	0	0	20	20	3342	
<input type="checkbox"/> Bearing Device	1	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	1	316	Other Bearings	1	0	0	1	0	1	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	2	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
<input type="checkbox"/> Bearing Device	2	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	3	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	3	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	4	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	4	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	5	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	5	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	6	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	6	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	7	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	7	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	8	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	8	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	9	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	9	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	10	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	10	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	11	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	11	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	12	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	12	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
<input checked="" type="checkbox"/> Deck	1	12	Reinforced Concrete Deck	479	456	19	4	0	23	3326	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Bridge Rail	1	331	Reinforced Concrete Bridge Railing	19	19	0	0	0	0	3318	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Bridge Rail	2	331	Reinforced Concrete Bridge Railing	19	19	0	0	0	0	3318	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Wearing Surfaces		510	Wearing Surface	452	448	4	0	0	4	2816	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Beam	1	107	Steel Open Girder/Beam	18	0	9	7	2	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	38	0	0	20	20	3342	
<input checked="" type="checkbox"/> Beam	2	107	Steel Open Girder/Beam	18	0	10	5	3	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	38	0	0	20	20	3342	
<input checked="" type="checkbox"/> Beam	3	107	Steel Open Girder/Beam	18	0	16	2	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	46	0	0	12	12	3342	
<input checked="" type="checkbox"/> Beam	4	107	Steel Open Girder/Beam	18	0	17	1	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	38	0	20	0	20	3342	
<input checked="" type="checkbox"/> Beam	5	107	Steel Open Girder/Beam	18	0	17	1	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	48	0	10	0	10	3342	
<input checked="" type="checkbox"/> Beam	6	107	Steel Open Girder/Beam	18	16	0	2	0	2	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	43	0	10	5	15	3342	
<input checked="" type="checkbox"/> Beam	7	107	Steel Open Girder/Beam	18	0	16	2	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	48	0	10	0	10	3342	
<input checked="" type="checkbox"/> Beam	8	107	Steel Open Girder/Beam	18	0	15	3	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	28	0	10	20	30	3342	
<input checked="" type="checkbox"/> Beam	9	107	Steel Open Girder/Beam	18	0	15	3	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	43	0	12	3	15	3342	
<input checked="" type="checkbox"/> Beam	10	107	Steel Open Girder/Beam	18	0	15	3	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	46	0	10	2	12	3342	
<input checked="" type="checkbox"/> Beam	11	107	Steel Open Girder/Beam	18	0	16	1	1	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	43	0	0	15	15	3342	
<input checked="" type="checkbox"/> Beam	12	107	Steel Open Girder/Beam	18	0	6	12	0	18	3314	<input type="checkbox"/> Requested
Protective System		515	Steel Protective Coating	58	33	0	0	25	25	3342	
<input type="checkbox"/> Bearing Device	1	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	1	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	2	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
<input type="checkbox"/> Bearing Device	2	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	3	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	3	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	4	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	4	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	5	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	5	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	6	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	6	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	7	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	7	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	8	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	8	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	9	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	9	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	10	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	10	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	11	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	11	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	12	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Bearing Device	12	316	Other Bearings	1	1	0	0	0	0	3334	<input type="checkbox"/> Requested
<input type="checkbox"/> Expansion Joints	1	301	Pourable Joint Seal	26	16	10	0	0	10	3310	<input type="checkbox"/> Requested

Superstructure Element Defect Descriptions

Structure Number: 500232

Inspection Date: 05/26/2015

Span Number 1

Span	Deck	1	Component Name:	Reinforced Concrete Deck								
Element: 12	Name	Reinforced Concrete Deck	Qty:	479	Lvl 2:	19	Lvl 3:	3	Lvl 4:	0	Maint. Qty	22
Defect Description:												

3 Square Feet of spall with exposed rebar in bottom of deck in bays 6 ,10 , 11 where holes were drilled for temporary supports. Spalls are up to 12 in diameter x 3 in deep.
19 Square Feet of Abrasion/Wear along deck curbs. Abrasion or wearing has exposed coarse aggregate but the aggregate remains secure in the concrete.

Span	Bridge Rail	1	Component Name:	Concrete Railing								
Element: 331	Name	Reinforced Concrete Bridge Ra	Qty:	19	Lvl 2:	1	Lvl 3:	0	Lvl 4:	0	Maint. Qty	1
Defect Description:												

6 in. Diameter x 1 in. deep spall in the end post at End Bent 1.

Span	Wearing Surfaces		Component Name:	Asphalt Wearing Surface								
Element: 510	Name	Wearing Surface	Qty:	452	Lvl 2:	24	Lvl 3:	0	Lvl 4:	0	Maint. Qty	24
Defect Description:												

24 Square Feet of Cracking over End Bent 1. Width 0.012-0.05 in. or spacing of 1.0-3.0 ft.

Span	Beam	1	Component Name:	Plate Girder								
Element: 107	Name	Steel Open Girder/Beam	Qty:	18	Lvl 2:	0	Lvl 3:	15	Lvl 4:	3	Maint. Qty	18
Defect Description:												

3 Feet of section loss in bottom flange and web 4 in high with 1/8 in remaining over bent 1.
15 Feet of Corrosion: Section loss in top flange and bottom flange with 3/16 in remaining.
45 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span	Beam	2	Component Name:	Plate Girder								
Element: 107	Name	Steel Open Girder/Beam	Qty:	18	Lvl 2:	11	Lvl 3:	6	Lvl 4:	1	Maint. Qty	18
Defect Description:												

1 Feet of 100 % section loss in bottom flange and web 4 in high over bent 1.
6 Feet of Corrosion: Section loss in top flange with 3/16 in remaining.
11 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
30 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span	Beam	3	Component Name:	Plate Girder								
Element: 107	Name	Steel Open Girder/Beam	Qty:	18	Lvl 2:	17	Lvl 3:	0	Lvl 4:	1	Maint. Qty	18
Defect Description:												

1 Feet of 100 % section loss in bottom flange and web 4 in high over bent 1.
17 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
25 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span	Beam	4	Component Name:	Plate Girder								
Element: 107	Name	Steel Open Girder/Beam	Qty:	18	Lvl 2:	18	Lvl 3:	0	Lvl 4:	0	Maint. Qty	18
Defect Description:												

18 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
25 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

Span	Beam	5	Component Name:	Plate Girder								
Element: 107	Name	Steel Open Girder/Beam	Qty:	18	Lvl 2:	16	Lvl 3:	2	Lvl 4:	0	Maint. Qty	18
Defect Description:												

1 Feet of Corrosion: Section loss in bottom flange 6 in long and web 2 in high with 3/16 in remaining at end bent 1.
1 Feet of Corrosion: Section loss in bottom flange and web 3 in high with 3/16 in remaining over bent 1.
16 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
25 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span 1 Beam 6 Component Name: Plate Girder

Element: 107 Name Steel Open Girder/Beam Qty: 18 Lvl 2: 15 Lvl 3 3 Lvl 4 0 Maint. Qty 18

Defect Description:

- 1 Feet of Corrosion: Section loss in bottom flange 6 in long and web 2 in high with 3/16 in remaining at end bent 1.
- 2 Feet of Corrosion: Section loss in bottom flange and web 4 in high with 3/16 in remaining over bent 1.
- 15 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
- 30 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span 1 Beam 7 Component Name: Plate Girder

Element: 107 Name Steel Open Girder/Beam Qty: 18 Lvl 2: 15 Lvl 3 3 Lvl 4 0 Maint. Qty 18

Defect Description:

- 1 Feet of Corrosion: Section loss in bottom flange 6 in long and web 2 in high with 3/16 in remaining at end bent 1.
- 2 Feet of Corrosion: Section loss in bottom flange and 4 in high in web over bent 1 with 1/8 in remaining.
- 15 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
- 30 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span 1 Beam 8 Component Name: Plate Girder

Element: 107 Name Steel Open Girder/Beam Qty: 18 Lvl 2: 15 Lvl 3 3 Lvl 4 0 Maint. Qty 18

Defect Description:

- 1 Feet of Corrosion: Section loss in bottom flange 6 in long and web 2 in high with 3/16 in remaining at end bent 1.
- 2 Feet of Corrosion: Section loss in bottom flange and web 3 in high over bent 1 with 3/16 in remaining.
- 15 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
- 25 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span 1 Beam 9 Component Name: Plate Girder

Element: 107 Name Steel Open Girder/Beam Qty: 18 Lvl 2: 14 Lvl 3 4 Lvl 4 0 Maint. Qty 18

Defect Description:

- 1 Feet of Corrosion: Section loss in bottom flange 6 in long and web 2 in high with 3/16 in remaining at end bent 1.
- 3 Feet of Corrosion: Section loss in bottom flange and web 3 in high over bent 1 with 3/16 in remaining.
- 14 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
- 25 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span 1 Beam 10 Component Name: Plate Girder

Element: 107 Name Steel Open Girder/Beam Qty: 18 Lvl 2: 14 Lvl 3 4 Lvl 4 0 Maint. Qty 18

Defect Description:

- 1 Feet of Corrosion: Section loss in bottom flange 6 in long and web 2 in high with 3/16 in remaining at end bent 1.
- 3 Feet of Corrosion: Section loss in bottom flange with 1/8 in remaining and in web 3 in high with 3/16 in remaining over bent 1.
- 14 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
- 30 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span 1 Beam 11 Component Name: Plate Girder

Element: 107 Name Steel Open Girder/Beam Qty: 18 Lvl 2: 15 Lvl 3 3 Lvl 4 0 Maint. Qty 18

Defect Description:

- 1 Feet of Corrosion: Section loss in bottom flange 6 in long and web 2 in high with 3/16 in remaining at end bent 1.
- 2 Feet of Corrosion: Section loss in bottom flange and 3 in high in web over bent 1 with 3/16 in remaining.
- 15 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
- 30 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span 1 Beam 12 Component Name: Plate Girder

Element: 107 Name Steel Open Girder/Beam Qty: 18 Lvl 2: 0 Lvl 3 15 Lvl 4 0 Maint. Qty 15

Defect Description:

- 1 Feet of Corrosion: Section loss in bottom flange 6 in long and web 2 in high with 3/16 in remaining at end bent 1.
- 2 Feet of Corrosion: Section loss in bottom flange and web 3 in high over bent 1 with 1/8 in remaining .
- 12 Feet of Corrosion: Section loss in top flange at bent 1.
- 20 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span Number 2

Span 2	Deck	1	Component Name:	Reinforced Concrete Deck
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Element: 12 Name Reinforced Concrete Deck Qty: 479 Lvl 2: 19 Lvl 3: 4 Lvl 4: 0 Maint. Qty: 23

Defect Description:

4 Square Feet of spall with exposed rebar in bottom of deck in bays 6 ,10 , 11 where holes were drilled for temporary supports. Spalls are up to 12 in diameter x 3 in deep.

17 Square Feet of Abrasion/Wear along deck curbs. Abrasion or wearing has exposed coarse aggregate but the aggregate remains secure in the concrete.

2 Square Feet of Map-Cracking in top of the left curb. Width 0.012-0.05 in. or spacing of 1.0-3.0 ft.

Span 2	Wearing Surfaces		Component Name:	Asphalt Wearing Surface
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Element: 510 Name Wearing Surface Qty: 452 Lvl 2: 4 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 4

Defect Description:

4 Square Feet of Effectiveness. Area in the Southbound lane is uneven and worn.

Span 2	Beam	1	Component Name:	Plate Girder
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Element: 107 Name Steel Open Girder/Beam Qty: 18 Lvl 2: 9 Lvl 3: 7 Lvl 4: 2 Maint. Qty: 18

Defect Description:

9 ft. of Section loss along the Top flange from mid-span to Bent 1 with 3/16 in. remaining.

2 ft. of section loss in the Bottom flange at Bent 1 with 0.0 in. remaining.

2 ft. of Section loss in the web 3 in. high at Bent 1 with 1/8 in. remaining.

9 Feet of Corrosion in remainder of beam: Freckled Rust. Corrosion of the steel has initiated.

20 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span 2	Beam	2	Component Name:	Plate Girder
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Element: 107 Name Steel Open Girder/Beam Qty: 18 Lvl 2: 10 Lvl 3: 5 Lvl 4: 3 Maint. Qty: 18

Defect Description:

8 feet of Section loss in the Top flange from mid-span to Bent 1 with 3/16 in. remaining.

3 feet of Section loss in the Bottom flange at Bent 1 with 0.0 in. remaining.

3 feet of Section loss in the web 3 in. high at Bent 1 with 1/8 in. remaining.

10 Feet of Corrosion in remainder of beam: Freckled Rust. Corrosion of the steel has initiated.

20 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span 2	Beam	3	Component Name:	Plate Girder
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Element: 107 Name Steel Open Girder/Beam Qty: 18 Lvl 2: 16 Lvl 3: 2 Lvl 4: 0 Maint. Qty: 18

Defect Description:

2 feet of Section loss in the Bottom flange at Bent 1 with 1/8 in. remaining.

2 feet of Section loss in the web 3 in. high at Bent 1 with 1/8 in. remaining.

14 Feet of Corrosion in remainder of beam: Freckled Rust. Corrosion of the steel has initiated.

12 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span 2	Beam	4	Component Name:	Plate Girder
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Element: 107 Name Steel Open Girder/Beam Qty: 18 Lvl 2: 17 Lvl 3: 1 Lvl 4: 0 Maint. Qty: 18

Defect Description:

1 foot of Section loss in the web 3 in high & Bottom flange at Bent 1 with 3/16in. remaining in each.

17 Feet of Corrosion in remainder of beam: Freckled Rust. Corrosion of the steel has initiated.

20 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish and primer coats.

Span 2	Beam	5	Component Name:	Plate Girder
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Element: 107 Name Steel Open Girder/Beam Qty: 18 Lvl 2: 17 Lvl 3: 1 Lvl 4: 0 Maint. Qty: 18

Defect Description:

1 foot of Section loss in the web 3 in high and Bottom flange at Bent 1 with 3/16 in. remaining in each.

17 Feet of Corrosion in remainder of beam: Freckled Rust. Corrosion of the steel has initiated.

10 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish and primer coats.

Span 2	Beam	6	Component Name:	Plate Girder
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Element: 107 Name Steel Open Girder/Beam Qty: 18 Lvl 2: 0 Lvl 3: 2 Lvl 4: 0 Maint. Qty: 2

Defect Description:

2 feet of Section loss in the web 3 in high and Bottom flange at Bent 1 with 3/16 in. remaining in each.
 5 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.
 10 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish and primer coats.

Span	2	Beam	7	Component Name:	Plate Girder
Element:	107	Name	Steel Open Girder/Beam	Qty:	18 Lvl 2: 16 Lvl 3: 2 Lvl 4: 0 Maint. Qty: 18

Defect Description:

2 feet of Section loss in the web 3 in high and Bottom flange at Bent 1 with 3/168 in. remaining in each.
 16 Feet of Corrosion in remainder of beam: Freckled Rust. Corrosion of the steel has initiated.
 5 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.
 5 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish and primer coats.

Span	2	Beam	8	Component Name:	Plate Girder
Element:	107	Name	Steel Open Girder/Beam	Qty:	18 Lvl 2: 15 Lvl 3: 3 Lvl 4: 0 Maint. Qty: 18

Defect Description:

3 feet of Section loss in the web 3 in high and Bottom flange at Bent 1 with 3/16 in. remaining in each.
 20 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.
 10 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish and primer coats.
 15 Feet of Corrosion in remainder of beam: Freckled Rust. Corrosion of the steel has initiated.

Span	2	Beam	9	Component Name:	Plate Girder
Element:	107	Name	Steel Open Girder/Beam	Qty:	18 Lvl 2: 15 Lvl 3: 3 Lvl 4: 0 Maint. Qty: 18

Defect Description:

3 feet of Section loss in the web 3 in high and Bottom flange at Bent 1 with 3/16 in. remaining in each.
 15 Feet of Corrosion in remainder of beam: Freckled Rust. Corrosion of the steel has initiated.
 3 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.
 12 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish and primer coats.

Span	2	Beam	10	Component Name:	Plate Girder
Element:	107	Name	Steel Open Girder/Beam	Qty:	18 Lvl 2: 15 Lvl 3: 3 Lvl 4: 0 Maint. Qty: 18

Defect Description:

3 feet of Section loss in the web 3 in high and Bottom flange at Bent 1 with 1/8 in. remaining in each.
 2 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.
 10 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish and primer coats.
 15 Feet of Corrosion in remainder of beam: Freckled Rust. Corrosion of the steel has initiated.

Span	2	Beam	11	Component Name:	Plate Girder
Element:	107	Name	Steel Open Girder/Beam	Qty:	18 Lvl 2: 16 Lvl 3: 1 Lvl 4: 1 Maint. Qty: 18

Defect Description:

1 foot of Section loss in the Bottom flange at Bent 1 with 0.0 in. remaining.
 1 foot of Section loss in the web, 3 in. high at Bent 1 with 1/8 in. remaining.
 16 Feet of Corrosion along remainder of beam: Freckled Rust. Corrosion of the steel has initiated.
 15 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span	2	Beam	12	Component Name:	Plate Girder
Element:	107	Name	Steel Open Girder/Beam	Qty:	18 Lvl 2: 6 Lvl 3: 12 Lvl 4: 0 Maint. Qty: 18

Defect Description:

12 feet of Section loss in the Top flange, Bottom flange and web (3" high) at Bent 1 with 3/16 in. remaining.
 6 Feet of Corrosion along remainder of beam: Freckled Rust. Corrosion of the steel has initiated.
 25 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal.

Span	2	Expansion Joints	1	Component Name:	Standard Joint
Element:	301	Name	Pourable Joint Seal	Qty:	26 Lvl 2: 10 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 10

Defect Description:

10 Feet of Leakage: Minimal. Minor dripping through the joint.

Substructure Detailed Element Quantities

Structure Number: 500232
End Bent 1

Inspection Date: 05/26/2015

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
<input checked="" type="checkbox"/> Caps	1	234	Reinforced Concrete Pier Cap	28	28	0	0	0	0	3348	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	1	228	Timber Pile	1	0	1	0	0	1	3344	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	2	228	Timber Pile	1	0	1	0	0	1	3344	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	3	228	Timber Pile	1	0	1	0	0	1	3344	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	4	228	Timber Pile	1	0	1	0	0	0	3344	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Abutments	1	216	Timber Abutment	33	23	10	0	0	10	3346	<input type="checkbox"/> Requested

Span 1 Crutch Bent

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
<input checked="" type="checkbox"/> Caps	1	231	Steel Pier Cap	26	16	10	0	0	10	3354	<input type="checkbox"/> Requested
<input type="checkbox"/> Caps	1	515	Steel Protective Coating	130	110	0	20	0	20	3342	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	1	225	Steel Pile	1	0	1	0	0	1	3354	<input type="checkbox"/> Requested
<input type="checkbox"/> Piles and Columns	1	515	Steel Protective Coating	35	29	0	6	0	6	3342	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	2	225	Steel Pile	1	0	1	0	0	1	3354	<input type="checkbox"/> Requested
<input type="checkbox"/> Piles and Columns	2	515	Steel Protective Coating	35	33	0	2	0	2	3342	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	3	225	Steel Pile	1	0	1	0	0	1	3354	<input type="checkbox"/> Requested
<input type="checkbox"/> Piles and Columns	3	515	Steel Protective Coating	35	34	0	1	0	1	3342	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	4	225	Steel Pile	1	0	1	0	0	1	3354	<input type="checkbox"/> Requested
<input type="checkbox"/> Piles and Columns	4	515	Steel Protective Coating	35	33	0	2	0	2	3342	<input type="checkbox"/> Requested

Bent 1

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
<input checked="" type="checkbox"/> Caps	1	234	Reinforced Concrete Pier Cap	28	28	0	0	0	0	3348	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	1	228	Timber Pile	1	0	1	0	0	1	3344	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	2	228	Timber Pile	1	0	1	0	0	1	3344	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	3	228	Timber Pile	1	0	1	0	0	0	3344	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	4	228	Timber Pile	1	0	1	0	0	0	3344	<input type="checkbox"/> Requested

End Bent 2

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
<input checked="" type="checkbox"/> Caps	1	234	Reinforced Concrete Pier Cap	28	28	0	0	0	0	3348	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	1	228	Timber Pile	1	0	1	0	0	1	3344	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	2	228	Timber Pile	1	0	1	0	0	1	3344	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	3	228	Timber Pile	1	0	1	0	0	1	3344	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	4	228	Timber Pile	1	0	1	0	0	0	3344	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Abutments	1	216	Timber Abutment	33	9	8	16	0	24	3346	<input type="checkbox"/> Requested

Span 2 Crutch Bent

Element Location	Location Number	Element Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code	Priority Maintenance
<input checked="" type="checkbox"/> Caps	1	231	Steel Pier Cap	26	11	15	0	0	15	3354	<input type="checkbox"/> Requested
<input type="checkbox"/> Caps	1	515	Steel Protective Coating	130	115	0	15	0	15	3342	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	1	225	Steel Pile	1	0	1	0	0	1	3354	<input type="checkbox"/> Requested
<input type="checkbox"/> Piles and Columns	1	515	Steel Protective Coating	13	10	0	3	0	3	3342	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	2	225	Steel Pile	1	0	1	0	0	1	3354	<input type="checkbox"/> Requested
<input type="checkbox"/> Piles and Columns	2	515	Steel Protective Coating	35	34	0	1	0	1	3342	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	3	225	Steel Pile	1	0	1	0	0	1	3354	<input type="checkbox"/> Requested
<input type="checkbox"/> Piles and Columns	3	515	Steel Protective Coating	35	35	0	0	0	0	3342	<input type="checkbox"/> Requested
<input checked="" type="checkbox"/> Piles and Columns	4	225	Steel Pile	1	0	1	0	0	0	3354	<input type="checkbox"/> Requested
<input type="checkbox"/> Piles and Columns	4	515	Steel Protective Coating	35	33	0	2	0	2	3342	<input type="checkbox"/> Requested

Substructure Element Defect Descriptions

Structure Number: 500232

Inspection Date: 05/26/2015

End Bent 1

End Bent 1	Row 1	Piles and Columns	1
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Element: 228 Name Timber Pile Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 1
 Defect Description:

1 Each of Check/Shake: Penetrates 5%-50% of the thickness of the member and not in the tension zone.

End Bent 1	Row 1	Piles and Columns	2
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Element: 228 Name Timber Pile Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 1
 Defect Description:

1 Each of Check/Shake: Penetrates 5%-50% of the thickness of the member and not in the tension zone.

End Bent 1	Row 1	Piles and Columns	3
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Element: 228 Name Timber Pile Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 1
 Defect Description:

1 Each of Check/Shake: Penetrates 5%-50% of the thickness of the member and not in the tension zone.

End Bent 1	Row 1	Piles and Columns	4
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Element: 228 Name Timber Pile Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 0
 Defect Description:

1 Each of Check/Shake: Penetrates 5%-50% of the thickness of the member and not in the tension zone.

End Bent 1	Row 1	Abutments	1
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Element: 216 Name Timber Abutment Qty: 33 Lvl 2: 10 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 10
 Defect Description:

10 Feet of Check/Shake: in bulkhead boards and bulkhead piles.

Span 1	Row 1	Caps	1
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Crutch Bent

Element: 231 Name Steel Pier Cap Qty: 26 Lvl 2: 10 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 10
 Defect Description:

10 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
 20 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

Span 1	Row 1	Piles and Columns	1
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Crutch Bent

Element: 225 Name Steel Pile Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 1
 Defect Description:

1 Each of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
 6 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

Span 1	Row 1	Piles and Columns	2
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Crutch Bent

Element: 225 Name Steel Pile Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 1
 Defect Description:

1 Each of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
 2 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

Span 1	Row 1	Piles and Columns	3
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Crutch Bent

Element: 225 Name Steel Pile Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 1
 Defect Description:

1 Each of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
 1 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

Span 1 Crutch Bent	Row 1	Piles and Columns	4									
Element: 225	Name	Steel Pile	Qty:	1	Lvl 2:	1	Lvl 3:	0	Lvl 4:	0	Maint. Qty:	1
Defect Description:												

1 Each of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
 2 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

Bent 1	Row 1	Piles and Columns	1									
Element: 228	Name	Timber Pile	Qty:	1	Lvl 2:	1	Lvl 3:	0	Lvl 4:	0	Maint. Qty:	1
Defect Description:												

1 Each of Check/Shake: Penetrates 5%-50% of the thickness of the member and not in the tension zone.

Bent 1	Row 1	Piles and Columns	2									
Element: 228	Name	Timber Pile	Qty:	1	Lvl 2:	1	Lvl 3:	0	Lvl 4:	0	Maint. Qty:	1
Defect Description:												

1 Each of Check/Shake: Penetrates 5%-50% of the thickness of the member and not in the tension zone.

Bent 1	Row 1	Piles and Columns	3									
Element: 228	Name	Timber Pile	Qty:	1	Lvl 2:	1	Lvl 3:	0	Lvl 4:	0	Maint. Qty:	0
Defect Description:												

1 Each of Check/Shake: Penetrates 5%-50% of the thickness of the member and not in the tension zone.

Bent 1	Row 1	Piles and Columns	4									
Element: 228	Name	Timber Pile	Qty:	1	Lvl 2:	1	Lvl 3:	0	Lvl 4:	0	Maint. Qty:	0
Defect Description:												

1 Each of Check/Shake: Penetrates 5%-50% of the thickness of the member and not in the tension zone.

End Bent 2	Row 1	Piles and Columns	1									
Element: 228	Name	Timber Pile	Qty:	1	Lvl 2:	1	Lvl 3:	0	Lvl 4:	0	Maint. Qty:	1
Defect Description:												

1 Each of Check/Shake: Penetrates 5%-50% of the thickness of the member and not in the tension zone.

End Bent 2	Row 1	Piles and Columns	2									
Element: 228	Name	Timber Pile	Qty:	1	Lvl 2:	1	Lvl 3:	0	Lvl 4:	0	Maint. Qty:	1
Defect Description:												

1 Each of Check/Shake: Penetrates 5%-50% of the thickness of the member and not in the tension zone.

End Bent 2	Row 1	Piles and Columns	3									
Element: 228	Name	Timber Pile	Qty:	1	Lvl 2:	1	Lvl 3:	0	Lvl 4:	0	Maint. Qty:	1
Defect Description:												

1 Each of Check/Shake: Penetrates 5%-50% of the thickness of the member and not in the tension zone.

End Bent 2	Row 1	Piles and Columns	4									
Element: 228	Name	Timber Pile	Qty:	1	Lvl 2:	1	Lvl 3:	0	Lvl 4:	0	Maint. Qty:	0
Defect Description:												

1 Each of Check/Shake: Penetrates 5%-50% of the thickness of the member and not in the tension zone.

End Bent 2	Row 1	Abutments	1						
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Structure Number: 500232

Inspection Date: 05/26/2015

Element: 216 Name Timber Abutment Qty: 33 Lvl 2: 8 Lvl 3: 16 Lvl 4: 0 Maint. Qty: 24
Defect Description:

16 Feet of Decay in bulkhead board at waterline from pile 1 to pile 3 with spots of exposed fill.
8 Feet of Check/Shake in ends of bulkhead boards and bulkhead piles.

Span 2 Row 1 Caps 1
Crutch Bent

Element: 231 Name Steel Pier Cap Qty: 26 Lvl 2: 15 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 15
Defect Description:

15 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
15 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

Span 2 Row 1 Piles and Columns 1
Crutch Bent

Element: 225 Name Steel Pile Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 1
Defect Description:

1 Each of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
3 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

Span 2 Row 1 Piles and Columns 2
Crutch Bent

Element: 225 Name Steel Pile Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 1
Defect Description:

1 Each of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
1 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

Span 2 Row 1 Piles and Columns 3
Crutch Bent

Element: 225 Name Steel Pile Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 1
Defect Description:

1 Each of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

Span 2 Row 1 Piles and Columns 4
Crutch Bent

Element: 225 Name Steel Pile Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 0
Defect Description:

1 Each of Corrosion: Freckled Rust. Corrosion of the steel has initiated.
2 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness.

National Bridge and NC Inspection Items

Structure Number: 500232

Inspection Date: 05/26/2015

National Bridge Inventory Items

Item	Grade Scale	Grade
Item 58: Deck	0 - 9 , N	5
Item 59: Superstructure	0 - 9 , N	4
Item 60: Substructure	0 - 9 , N	6
Item 61: Channel and Channel Protection	0 - 9 , N	7
Item 62: Culvert	0 - 9 , N	
Item 71: Waterway Adequacy	0 - 9 , N	5
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	72	3376
Drainage System	G, F, P, or C	P	0	3332
Utilities	G, F, P, or C			
Slope Protection	G, F, P, or C	F	0	3352
Wingwall	G, F, P, or C	F	4	3350
Scour	G, F, P, or C	G		
Field Scour Evaluation		G		
Drift	G, F, P, or C	G	0	3366
Fender System	G, F, P, or C		0	3364
Response to Live Load	G, F, P, or C	G		
Estimated Remaining Life	0 - 100 Years	5		

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

Inspection Information

Item	Grade Scale	Grade
Regulatory Sign Noticed Issued	YES/NO	N
Priority Maintenance Request Submitted	YES/NO	N
Inspection Time	Hours	10
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: 500232

Inspection Date: 05/26/2015

Item	Waterway Adequacy - Item 71	Grade	5	Maint Code		Qty.	0
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Details Drift on top of cap.

Item	Presently Posted	Grade	Y	Maint Code		Qty.	0
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Details SV 16 TTST 24

Item	Deck Debris	Grade	F	Maint Code	3376	Qty.	72
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Details Dirt , debris , and vegetation out 1 ft along guardrails.

Item	Drainage System	Grade	P	Maint Code	3332	Qty.	0
------	-----------------	-------	---	------------	------	------	---

Details All of the dk drains are clogged.

Item	Wingwalls	Grade	F	Maint Code	3350	Qty.	4
------	-----------	-------	---	------------	------	------	---

Details Right wingwall pile at end bent 1 has been crushed and split the full height.

Item	Field Scour Evaluation	Grade	G	Maint Code		Qty.	0
------	------------------------	-------	---	------------	--	------	---

Details Plan of action code z:
No change in mudline from established baseline.



Dirt and Vegetation along curblines



Transverse crack in Wearing surface over End Bent 1



4 square feet of asphalt settled in the Southbound lane of Span 2



Transverse crack in Wearing surface over End Bent 2



Section loss in the end of Beam 2 in Span 1 over Bent 1 - other beams similar throughout structure



Spalling with Exposed rebar in Bottom of deck where crutch bents were added



Corrosion along beam flanges and webs throughout structure



Areas of failed protective coating throughout structure



Section loss in the end of Beam 2 in Span 1 over Bent 1 - other beams similar throughout structure



Looking north



Weight posting



Asphalt wearing surface overview



Looking west upstream



Looking east downstream



East profile



Superstructure over End of cap



Looking south



West profile



End Bent 2 overview



End Bent 1 overview



Bent 1 Span 1 side



Superstructure overview

IDENTIFICATION				CLASSIFICATION			
(1) STATE NAME -NORTH CAROLINA	BRIDGE	500232		SUFFICIENCY RATING =			27.34
(8) STRUCTURE NUMBER(FEDERAL)		000000001010232		STATUS =	Structurally Deficient		
(5) INVENTORY ROUTE (ON/UNDER) - ON		31021100					
(2) STATE HIGHWAY DEPARTMENT DISTRICT		3					
(3) COUNTY CODE	101	(4) PLACE CODE	0	(112)NBIS BRIDGE SYSTEM -			YES
(6) FEATURE INTERSECTED -	LITTLE BUFFALO CREEK			(104)HIGHWAY SYSTEM	Is not on NHS		0
(7) FACILITY CARRIED	SR2110			(26) FUNCTIONAL CLASS -	Local		09
(9) LOCATION	0.2 MI S JCT NC222			(100)STRAHNET HIGHWAY -	Not a STRAHNET Route		0
(11)MILEPOINT		0		(101)PARALLEL STRUCTURE -	No Parallel Structure		N
(16)LAT	35° 39' 14.52"	(17)LONG	78° 10' 53.81"	(102)DIRECTION OF TRAFFIC -	2-way Traffic		2
(98)BORDER BRIDGE STATE CODE		PCT SHARE		(103)TEMPORARY STRUCTURE -	Temporary Structure/Conditions		T
(99)BORDER BRIDGE STRUCTURE NO				(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				CONDITION			
(43) STRUCTURE TYPE MAIN:	Steel			(58) DECK			5
TYPE -	Stringer Mutlibeam or Girder	CODE	302	(59) SUPERSTRUCTURE			4
(44) STRUCTURE TYPE APPR :				(60) SUBSTRUCTURE			5
TYPE -		CODE	000	(61) CHANNEL & CHANNEL PROTECTION			7
(45) NUMBER OF SPANS IN MAIN UNIT			2	(62) CULVERTS			N
(46) NUMBER OF APPROACH SPANS							
(107)DECK STRUCTURE TYPE -	1	CODE		LOAD RATING AND POSTING			
(108)WEARING SURFACE / PROTECTIVE SYSTEM :				(31) DESIGN LOAD	Unknown		0
(A) TYPE OF WEARING SURFACE -		CODE		(63) OPERATING RATING METHOD -	Load Factor		1
(B) TYPE OF MEMBRANE -		CODE		(64) OPERATING RATING -	HS-1		1
(C) TYPE OF DECK PROTECTION -		CODE		(65) INVENTORY RATING METHOD -	Load Factor		1
				(66) INVENTORY RATING -	HS-1		1
				(70) BRIDGE POSTING -	Posting Required		0
				(41) STRUCTURE OPEN, POSTED ,OR CLOSED			P
				DESCRIPTION -	Posted for Load		
AGE AND SERVICE				APPRAISAL			
(27) YEAR BUILT			1951	(67) STRUCTURAL EVALUATION			3
(106)YEAR RECONSTRUCTED				(68) DECK GEOMETRY			4
(42) TYPE OF SERVICE : ON -	Highway			(69) UNDERCLEARANCES,VERTI & HORIZ			N
UNDER -	Waterway	CODE	15	(71) WATERWAY ADEQUACY			5
(28) LANES: ON STRUCTURE	2 UNDER STRUCTURE		0	(72) APPROACH ROADWAY ALIGNMENT			8
(29) AVERAGE DAILY TRAFFIC			560	(36) TRAFFIC SAFETY FEATURES			0000
(30) YEAR OF ADT	2012	(109) TRUCK ADT PCT	6%	(113)SCOUR CRITICAL BRIDGES			U
(19) BYPASS OR DETOUR LENGTH			1 MI	PROPOSED IMPROVEMENTS			
GEOMETRIC DATA				(75) TYPE OF WORK -			CODE
(48) LENGTH OF MAXIMUM SPAN			18 FT	(76) LENGTH OF STRUCTURE IMPROVEMENT			
(49) STRUCTURE LENGTH			37 FT	(94) BRIDGE IMPROVEMENT COST			
(50)CURB OR SIDEWALK: LEFT	.75 FT	RIGHT	.75 FT	(95) ROADWAY IMPROVEMENT COST			
(51) BRIDGE ROADWAY WIDTH CURB TO CURB			24.25 FT	(96) TOTAL PROJECT COST			
(52) DECK WIDTH OUT TO OUT			25.667 FT	(97) YEAR OF IMPROVEMENT COST ESTIMATE			
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)			20 FT	(114)FUTURE ADT	1120	(115) YEAR FUTURE ADT	2025
(33) BRIDGE MEDIAN -	No Median	CODE	0	INSPECTIONS			
(34) SKEW	0°	(35) STRUCTURE FLARED	0	(90) INSPECTION DATE			05/26/2015
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9 FT	(92) CRITICAL FEATURE INSPECTION :		(93) CFI DATE	
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			24.25 FT	A) FRACTURE CRIT DETAIL -	NO	A)	
(53) MIN VERT CLEAR OVER BRIDGE RDWY			999.9 FT	B) UNDERWATER INSP -	YES 48Mo	B)	12/11/2012
(54) MIN VERT UNDERCLEAR REF	Not a Highway or Railroad		0 FT	C) OTHER SPECIAL INSP	NO	C)	
(55) MIN LAT UNDERCLEAR RT REF	Not a Highway or Railroad		000 FT	SCOUR			
(56) MIN LAT UNDERCLEAR LT REF -			000 FT	NAVIGATION DATA			
(38) NAVIGATION CONTROL -	No Navigational Control	CODE	0	(99) NAVIGATION VERTICAL CLEARANCE			0
(111)PIER PROTECTION -		CODE		(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR			FT
(39) NAVIGATION VERTICAL CLEARANCE			0	(40) NAVIGATION HORIZONTAL CLEARANCE			0 FT
(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR			FT				
(40) NAVIGATION HORIZONTAL CLEARANCE			0 FT				

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 10/22/2015

COUNTY : JOHNSTON DIVISION : 4 DISTRICT : 3 STRUCTURE NUMBER : 500232 LENGTH : 37 FEET

ROUTE CARRIED : SR2110 FEATURE INTERSECTED : LITTLE BUFFALO CREEK

LOCATED : 0.2 MI S JCT NC222 BRIDGE NAME : CITY :

FUNC. CLASS : 09 SYST.ON : NFA SYST.UNDER : NFA ADT & YR : 560 2012 RAIL TYPE : LT 241 RT 241

BUILT : 1951 BY : BMU PROJ : FED.AID PROJ : DESIGN LOAD : Unknown

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

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 16 FT WATER DEPTH : 12 FT

SUPERSTRUCTURE : RC DECK ON I-BEAMS (BMD 6-2)

SUBSTRUCTURE : END & INTERIOR BENTS:RC CAPS ON TIMBER PILES, INTERIOR BENT W/STEEL CAP & PILE CRUTCHES

SPANS : 2@18' 7.5"

BEAMS OR GIRDERS : 12 LINES OF 12" I-BEAMS @ VARIOUS CENTERS

FLOOR : 5 RC/4.5 AWS ENCROACHMENT : DECK (OUT TO OUT) : 25.667 FT

CLEAR ROADWAY : 24.25 FT BETWEEN RAILS : 25.75 FT SIDEWALK OR CURB : LT .75 FT RT .75 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. : HS-1 OPE.RTG. : HS-1 CONTR.MEMBER : Int Bm POSTED : SV 16 TTST 24 DATE 09/08/2008

SYSTEM : Secondary S.R. Route GREEN LINE ROUTE : N

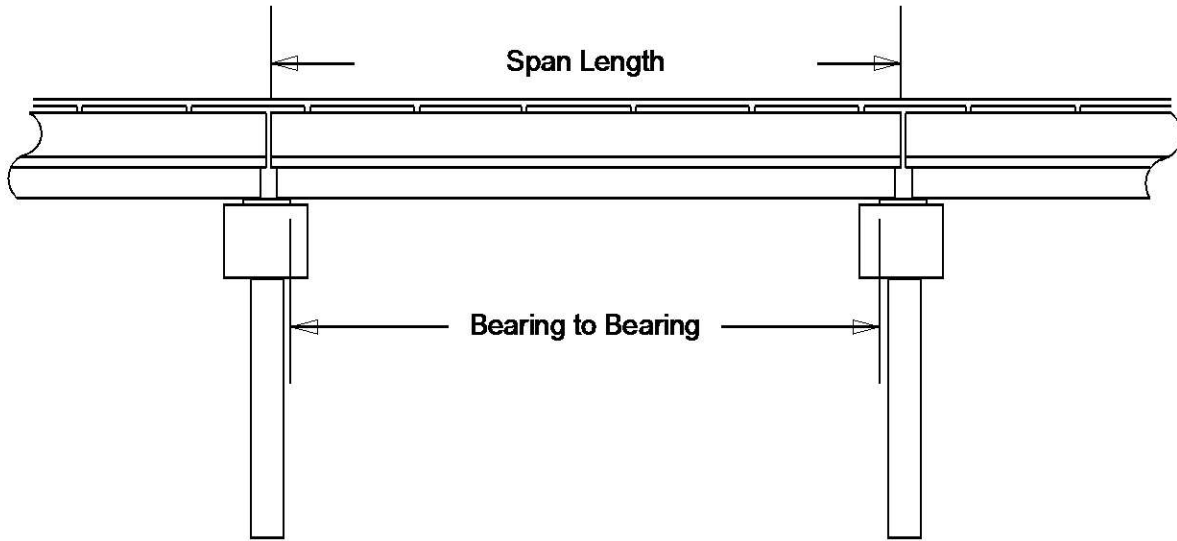
UNDER ROUTES AND CLEARANCES

REMARKS :

Structure Data Worksheet

Spans

County: JOHNSTON Structure No: 500232 Date: _____ Inspected By: WCM



Span No	Span Length	Bearing to Bearing	Comments
1	18.625	17.5	
2	18.625	17.5	NBIS : 33.75 FT

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 500232 County: JOHNSTON Date: _____ By: WCM

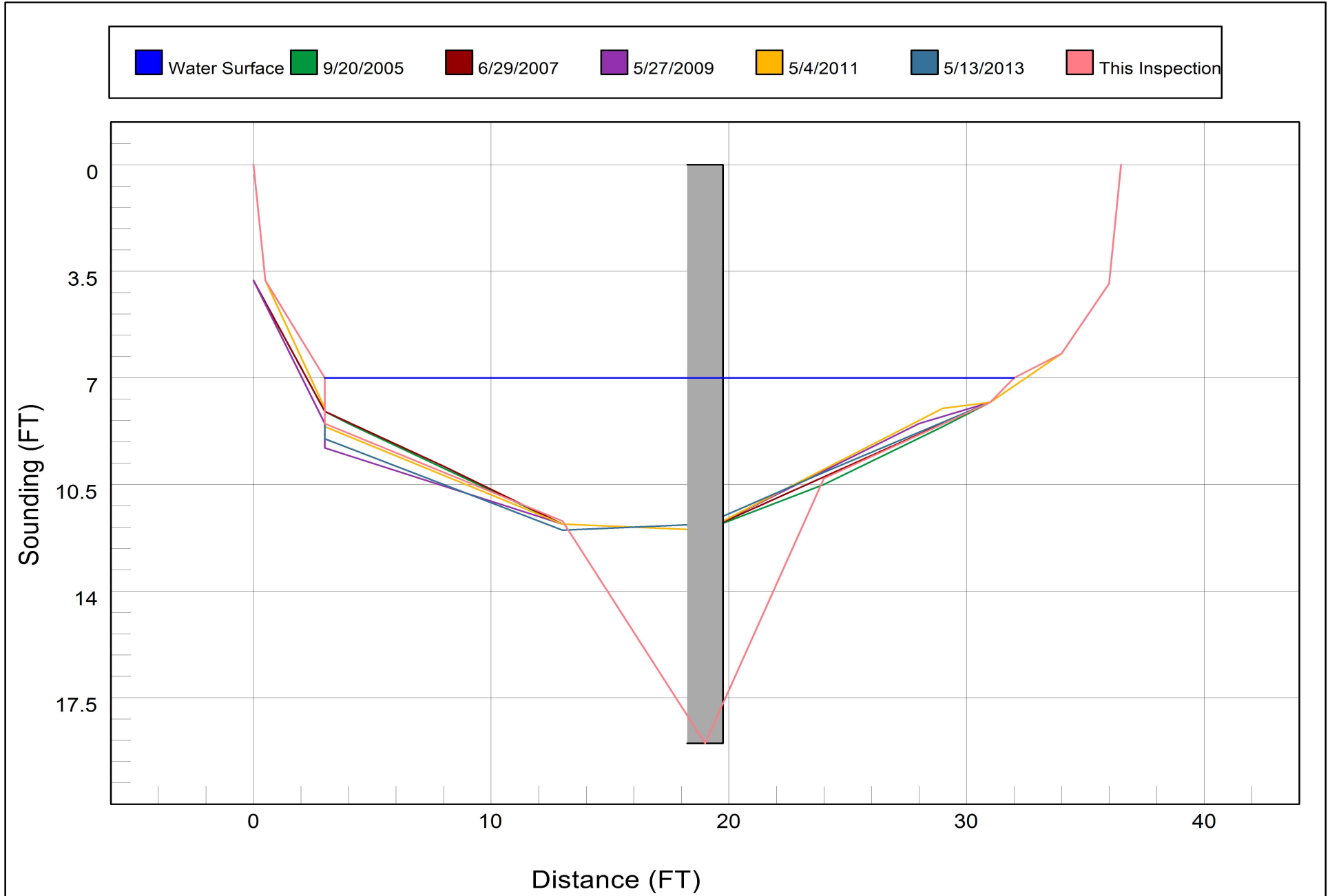
Record sounding from top of rail. Other location if needed: _____

Distance from Highwater Mark to top of rail: _____ Location of Highwater Mark: _____

DOWNSTREAM			UPSTREAM		
Distance (Station) (ft)	Sounding (ft)	Description	Distance (Station) (ft)	Sounding (ft)	Description
0	0	TOP OF RAIL			
0.5	3.8	TOP OF CAP			
3	7	Water Surface/Water Edge (WSWE)	3	7.3	GROUND AT CAP ON RIP RAP
3	8.5	GROUND AT CAP ON RIP RAP			
13	11.7				
19	19	BENT 1	19	10.7	BENT 1
24	10.3				
31	7.8	RIP RAP			
32	7	Water Surface/Water Edge (WSWE)			
34	6.2	GROUND AT CAP	34	7.5	GROUND AT CAP ON RIP RAP
36	3.9	TOP OF CAP			
36.5	0	TOP OF RAIL			

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch



Roadway	20ft Wide	2 Paved Lanes	Looking North
Left Shoulder	5ft Wide		5ft Unpaved
Right Shoulder	5ft Wide		5ft Unpaved
Left Guardrail			
Right Guardrail			

CHECKED BY: WTW 05/26/2015

Title

APPROACH ROADWAY

Description

LOOKING NORTH.

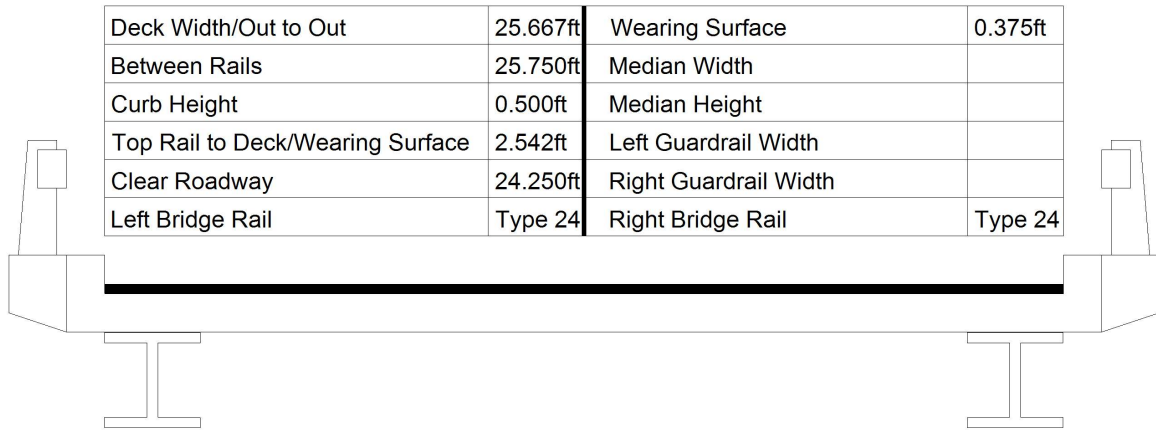
Bridge No: 500232

Drawn By: KES

Date: 08/18/2005

File Name: S0018000505

Bridge Inspection Field Sketch



Measurements for Span #	1	ALL SPANS SIMILAR	
Deck Thickness	.417	Left Overhang	.5
Top of Rail to Bottom of Beam	4	Right Overhang	.5

Beam No	Beam Type	Spacing	Comments
1	Steel I Beam	2.250ft	FLANGE THICKNESS 0.25 INCHES
2	Steel I Beam	2.250ft	FLANGE WIDTH 4 INCHES
3	Steel I Beam	2.292ft	
4	Steel I Beam	2.208ft	BEAM HEIGHT 12 INCHES
5	Steel I Beam	2.125ft	
6	Steel I Beam	2.292ft	WEB THICKNESS 0.25 INCHES
7	Steel I Beam	2.125ft	
8	Steel I Beam	2.354ft	
9	Steel I Beam	2.167ft	
10	Steel I Beam	2.250ft	
11	Steel I Beam	2.250ft	
12	Steel I Beam		

CHECKED BY: WTW 05/26/2015

Title

TYPICAL SECTION

Description

LOOKING NORTH.

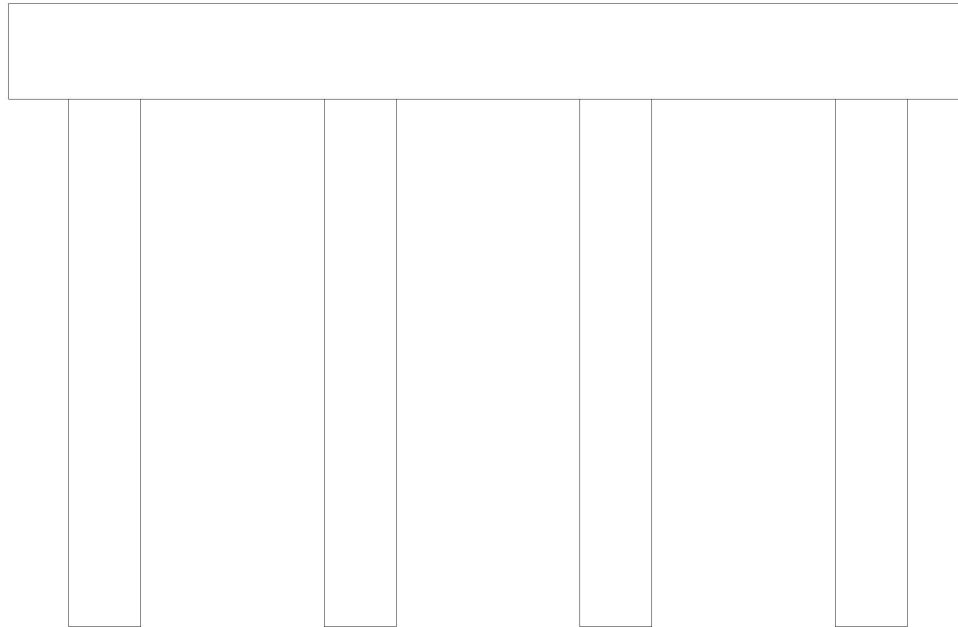
Bridge No: 500232

Drawn By: KES

Date: 08/18/2005

File Name: S0018000506

Bridge Inspection Field Sketch



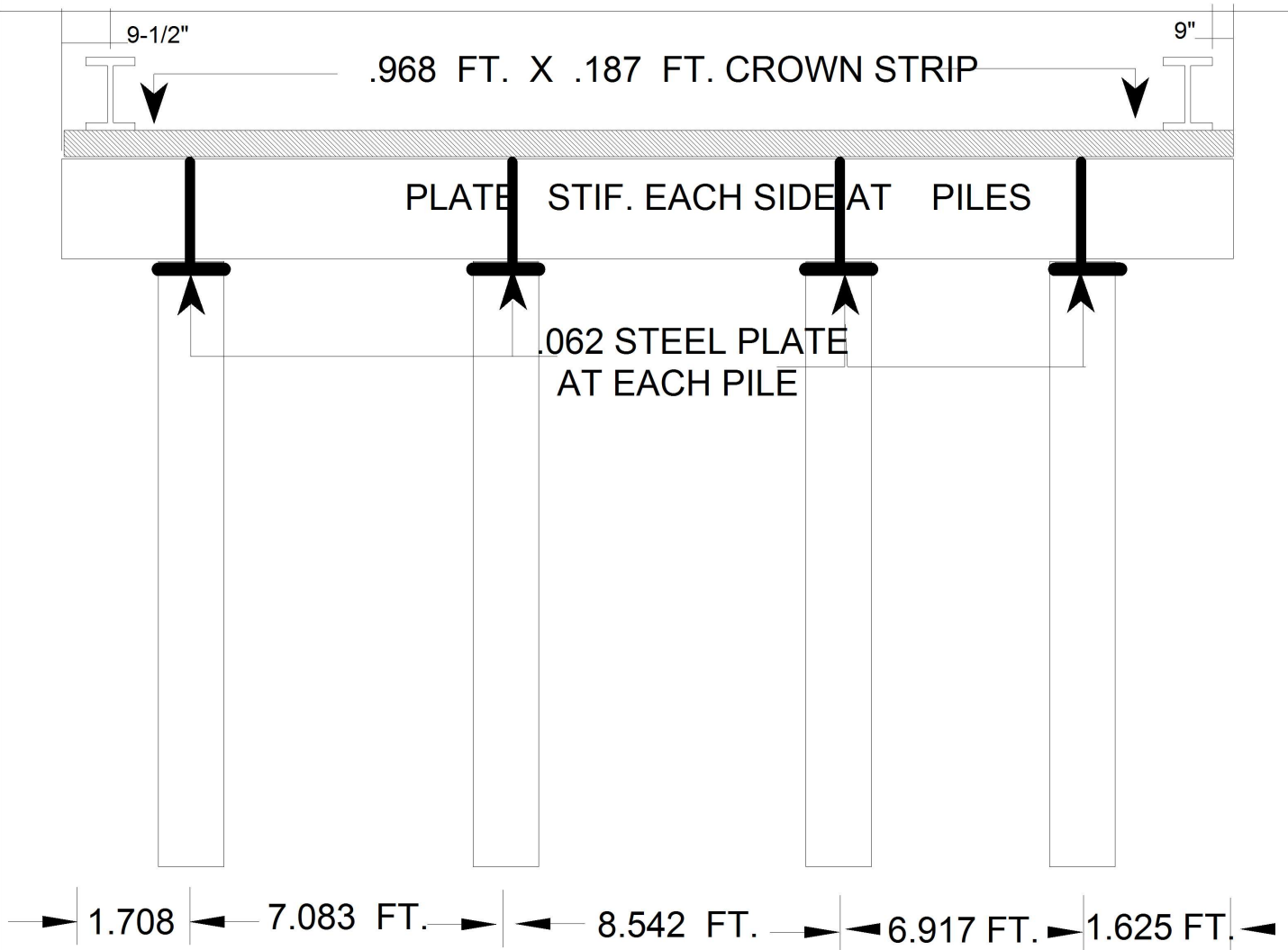
Abutment #	2	Abutments 1, 2, and Bent 1 similar	
Cap - Cast In Place			
Cap Size	27.417ft Long	2ft Wide	2ft High
Left Overhang	2.667ft	Lt Cap/Beam Overhang	1.417ft
Right Overhang	2.667ft	Rt Cap/Beam Overhang	1.417ft

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Pile Bent	7.33		0.833		Vertical
2	Wood or Timber	Pile Bent	7.33		0.833		Vertical
3	Wood or Timber	Pile Bent	7.33		0.833		Vertical
4	Wood or Timber	Pile Bent			0.833		Vertical

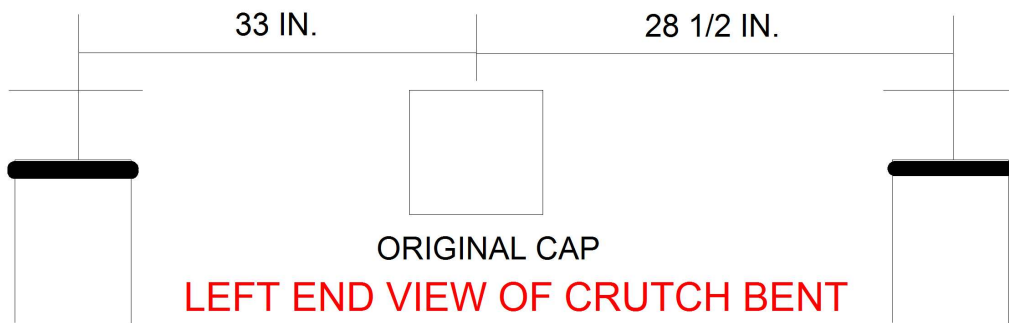
CHECKED BY: WTW 05/26/2015

Title SUBSTRUCTURE	Description LOOKING NORTH.
Bridge No: 500232	Drawn By: KES
Date: 08/19/2005	File Name: S0018000507

Bridge Inspection Field Sketch

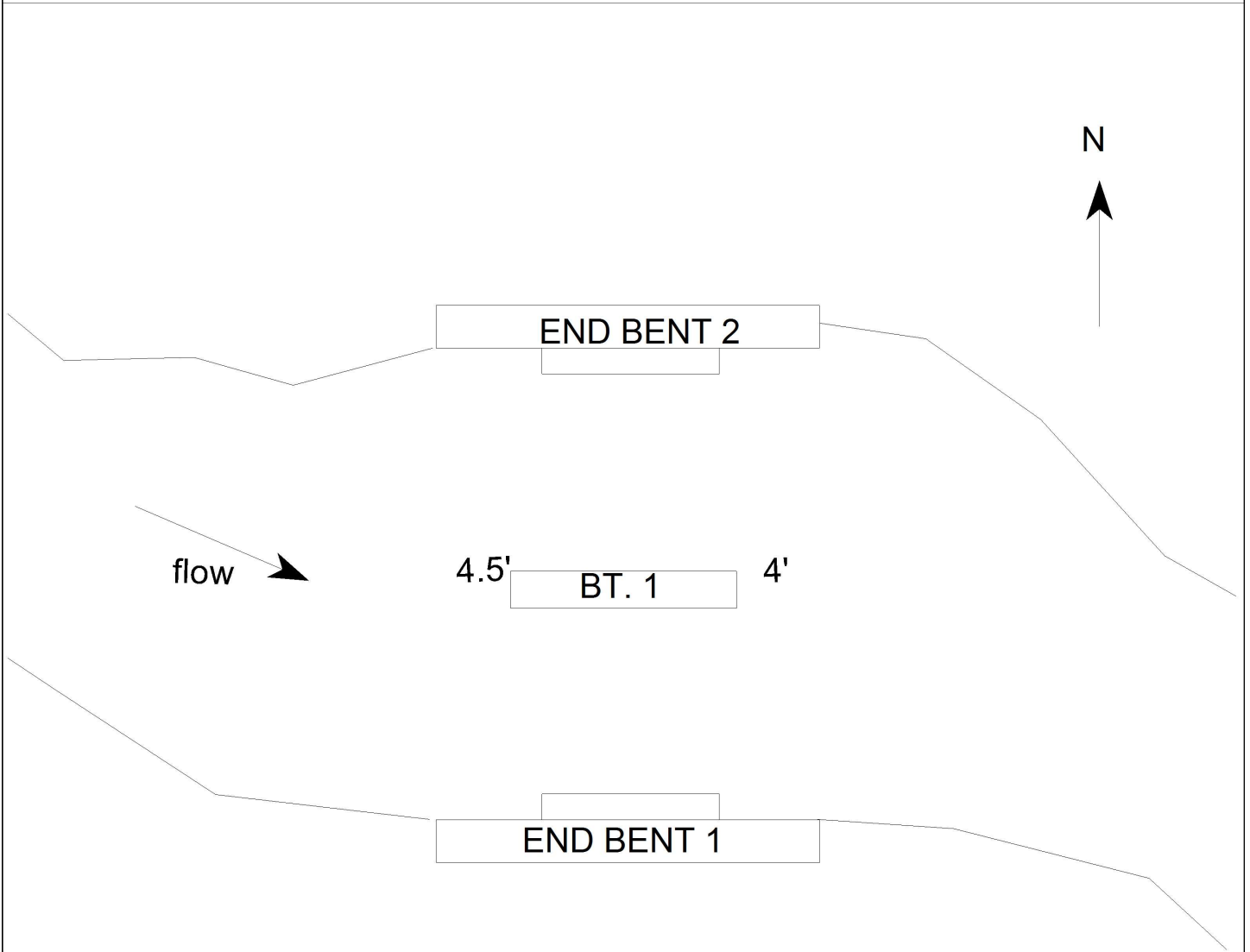


**CRUTCH INTERIOR BENT SOUTH SIDE OF EXISTING BENT
NORTH SIDE SIM. EACH SIDE CONSISTS OF .792 FT. H - PILE CAP
WITH .036 FT. WEB AND FLANGE ON .833 FT. H - PILES WITH .042 FT. FLANGE**



Title CRUTCH BENT		CHECKED BY: WTW 05/26/2015	Description 4 / .833 FT. H - PILES	
Bridge No: 500232	Drawn By: A. D. OSBORNE		Date: 08/18/2005	File Name: S0154000120

Bridge Inspection Field Sketch



W/S EAST SIDE BENT 1: 7.3'
BOTTOM COMP: SILT, CLAY
PROBE: +/- 1FT

Title PLAN VIEW		Description STEEL H-PILE CRUTCH BENT	
Bridge No: 500232	Drawn By: JCB	Date: 12/16/2008	File Name: S0158000658