



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: **PRIORITY MAINTENANCE TEMPORARY SHORING**

Structure Safety Report

Routine Element Inspection - Contract

COUNTY: SURRY STRUCTURE NUMBER: 850310 FREQUENCY: 24 MONTHS

FACILITY CARRIED: SR1774 MILE POST:

LOCATION: 150 FT.N.JCT.SR1818

FEATURE INTERSECTED: STONEY CREEK

LATITUDE: 36° 27' 20.52" LONGITUDE: 80° 32' 28.84"

SUPERSTRUCTURE: STEEL PLANK FLOOR ON I-BEAMS

SUBSTRUCTURE: E.BTS:TIM.CAPS/TIM.PILES 6'CTS.

SPANS: 1@40'-8"
1@40'-8"

☐ FRACTURE CRITICAL ☐ TEMPORARY SHORING ☐ SCOUR CRITICAL ☐ SCOUR PLAN OF ACTION

PRESENT CONDITION: Poor INSPECTION DATE: 08/11/2015

POSTED SV: 25 POSTED TTST: 32

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
MATTHEW TOM

SIGNATURE

Matthew Tom

ASSISTED BY KYLE COMPTON

BRIDGE INSPECTION RECORD AND SUMMARY FOR SHORED STRUCTURES OR STRUCTURES WITH TEMPORARY REPAIRS MADE TO KEEP A BRIDGE OPEN

BRIDGE: 850310 COUNTY: SURRY DATE: 9/30/09
3/7/2008

THE FOLLOWING S. I. & A ITEMS ARE TO BE CODED TO REFLECT THE FACT THAT THE STRUCTURE IS SHORED OR HAS HAD TEMPORARY REPAIRS MADE TO KEEP THE BRIDGE OPEN :

	<u>CODE</u>	<u>BY</u>
S I & A ITEM 103 - TEMPORARY STRUCTURE DESIGNATION	<u>T</u>	<u>TSE</u>
S I & A ITEM 59 - SUPERSTRUCTURE		
S I & A ITEM 60 - SUBSTRUCTURE	<u>5</u>	<u>TSE 5/28/08</u>
S I & A ITEM 64 OPERATING RATING		
HS <u>0</u> BY: FK		
S I & A ITEM 66 - INVENTORY RATING		
HS <u>0</u> BY: FK		

COMMENTS

PILE # 5 AT ABUTMENT # 1 HAS BEEN ENCASED IN CONCRETE.

Not Temp TMS 03/05/16

Span Element Report

Structure Number: 850310

Inspection Date: 08/11/2015

Span Number 1

Span Length 40.667 Feet

Number of Beams/Girders: 10

Element Number	Parent Number	Element Name	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity	Maint. Quantity	Maint. Code
30		Steel Deck Corrugated/Orthotropic/Etc.	980	882	98	0	0	98	3328
107		Steel Open Girder/Beam	410	37	323	50	0	373	3314
515	107	Steel Protective Coating	2210	0	1723	487	0	2210	3342
206		Timber Column	10	0	10	0	0	50	3344
216		Timber Abutment	66	0	39	27	0	66	3346
235		Timber Pier Cap	56	0	56	0	0	56	3344
330		Metal Bridge Railing	82	0	82	0	0	82	3322
515	330	Steel Protective Coating	164	0	0	164	0	164	3342
510		Wearing Surface	980	0	812	168	0	980	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: 850310

Inspection Date: 08/11/2015

Span Number 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
☒ Deck	1	30	Steel Deck Corrugated/Orthotropic/Etc.	980	882	98	0	0	98	3328	☐ Requested
☒ Bridge Rail	1	330	Metal Bridge Railing	41	0	41	0	0	41	3322	☐ Requested
Protective System		515	Steel Protective Coating	82	0	0	82	0	82	3342	
☒ Bridge Rail	2	330	Metal Bridge Railing	41	0	41	0	0	41	3322	☐ Requested
Protective System		515	Steel Protective Coating	82	0	0	82	0	82	3342	
☒ Wearing Surfaces		510	Wearing Surface	980	0	812	168	0	980	2816	☐ Requested
☒ Beam	1	107	Steel Open Girder/Beam	41	0	41	0	0	41	3314	☐ Requested
Protective System		515	Steel Protective Coating	221	0	121	100	0	221	3342	
☒ Beam	2	107	Steel Open Girder/Beam	41	0	37	4	0	41	3314	☐ Requested
Protective System		515	Steel Protective Coating	221	0	181	40	0	221	3342	
☒ Beam	3	107	Steel Open Girder/Beam	41	0	33	8	0	41	3314	☐ Requested
Protective System		515	Steel Protective Coating	221	0	201	20	0	221	3342	
☒ Beam	4	107	Steel Open Girder/Beam	41	0	33	8	0	41	3314	☐ Requested
Protective System		515	Steel Protective Coating	221	0	201	20	0	221	3342	
☒ Beam	5	107	Steel Open Girder/Beam	41	0	37	4	0	41	3314	☐ Requested
Protective System		515	Steel Protective Coating	221	0	206	15	0	221	3342	
☒ Beam	6	107	Steel Open Girder/Beam	41	37	0	4	0	4	3314	☐ Requested
Protective System		515	Steel Protective Coating	221	0	201	20	0	221	3342	
☒ Beam	7	107	Steel Open Girder/Beam	41	0	37	4	0	41	3314	☐ Requested
Protective System		515	Steel Protective Coating	221	0	206	15	0	221	3342	
☒ Beam	8	107	Steel Open Girder/Beam	41	0	37	4	0	41	3314	☐ Requested
Protective System		515	Steel Protective Coating	221	0	206	15	0	221	3342	
☒ Beam	9	107	Steel Open Girder/Beam	41	0	37	4	0	41	3314	☐ Requested
Protective System		515	Steel Protective Coating	221	0	100	121	0	221	3342	
☒ Beam	10	107	Steel Open Girder/Beam	41	0	31	10	0	41	3314	☐ Requested
Protective System		515	Steel Protective Coating	221	0	100	121	0	221	3342	

Superstructure Element Defect Descriptions

Structure Number: 850310

Inspection Date: 08/11/2015

Span Number 1

Span	1	Deck	1	Component Name:		Steel Deck Corrugated							
Element:	30	Name	Steel Deck Corrugated/Orthotrc	Qty:	980	Lvl 2:	98	Lvl 3	0	Lvl 4	0	Maint. Qty	98
Defect Description:													

98 Square Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

Span	1	Bridge Rail	1	Component Name:				Steel Rail					
Element:	330	Name	Metal Bridge Railing	Qty:	41	Lvl 2:	41	Lvl 3	0	Lvl 4	0	Maint. Qty	41
Defect Description:													

41 Square Feet of Corrosion: Freckled rust. Corrosion of the steel has initiated.

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

Span	1	Bridge Rail	2	Component Name:				Steel Rail					
Element:	330	Name	Metal Bridge Railing	Qty:	41	Lvl 2:	41	Lvl 3	0	Lvl 4	0	Maint. Qty	41
Defect Description:													

41 Square Feet of Corrosion: Freckled rust. Corrosion of the steel has initiated.

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

Span	1	Wearing Surfaces			Component Name:		Asphalt Wearing Surface						
Element:	510	Name	Wearing Surface	Qty:	980	Lvl 2:	812	Lvl 3	168	Lvl 4	0	Maint. Qty	980
Defect Description:													

24 Square Feet of Crack (Wearing Surface): Width of more than 0.05 in. or spacing of less than 1.0 ft. at end bent 1

120 Square Feet of Crack (Wearing Surface): Width of more than 0.05 in. or spacing of less than 1.0 ft. in southbound lane

812 Square Feet of Crack (Wearing Surface): Width 0.012-0.05 in. or spacing of 1.0-3.0 ft.

Span 1	Beam 1	Component Name:		Rolled Steel Joist								
Element: 107	Name	Steel Open Girder/Beam	Qty:	41	Lvl 2:	41	Lvl 3	0	Lvl 4	0	Maint. Qty	41
Defect Description:												

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

121 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

41 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

Span	1	Beam	2	Component Name:		Rolled Steel Joist							
Element:	107	Name	Steel Open Girder/Beam	Qty:	41	Lvl 2:	37	Lvl 3	4	Lvl 4	0	Maint. Qty	41
Defect Description:													

4 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review 6 feet from end bent 1.

37 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

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

181 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

Span 1	Beam 3	Component Name:		Rolled Steel Joist							
Element: 107	Name Steel Open Girder/Beam	Qty:	41	Lvl 2:	33	Lvl 3	8	Lvl 4	0	Maint. Qty	41
Defect Description:											

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

201 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

8 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review.

33 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

Span 1	Beam 4	Component Name:		Rolled Steel Joist							
Element: 107	Name Steel Open Girder/Beam	Qty:	41	Lvl 2:	33	Lvl 3	8	Lvl 4	0	Maint. Qty	41
Defect Description:											

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

201 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

8 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review.

33 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

Span	1	Beam	5	Component Name:		Rolled Steel Joist						
Element:	107	Name	Steel Open Girder/Beam	Qty:	41	Lvl 2:	37	Lvl 3	4	Lvl 4	0 Maint. Qty	41
Defect Description:												

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

206 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

4 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review.

37 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

Span	1	Beam	6	Component Name:		Rolled Steel Joist						
Element:	107	Name	Steel Open Girder/Beam	Qty:	41	Lvl 2:	0	Lvl 3	4	Lvl 4	0 Maint. Qty	4
Defect Description:												

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

201 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

4 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review.

Span	1	Beam	7	Component Name:		Rolled Steel Joist						
Element:	107	Name	Steel Open Girder/Beam	Qty:	41	Lvl 2:	37	Lvl 3	4	Lvl 4	0 Maint. Qty	41
Defect Description:												

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

206 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

4 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review.

37 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

Span	1	Beam	8	Component Name:		Rolled Steel Joist						
Element:	107	Name	Steel Open Girder/Beam	Qty:	41	Lvl 2:	37	Lvl 3	4	Lvl 4	0 Maint. Qty	41
Defect Description:												

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

206 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

4 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review.

37 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

Span	1	Beam	9	Component Name:		Rolled Steel Joist							
Element:	107	Name	Steel Open Girder/Beam	Qty:	41	Lvl 2:	37	Lvl 3	4	Lvl 4	0	Maint. Qty	41
Defect Description:													

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

121 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

4 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review.

37 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

Span	1	Beam	10	Component Name:				Rolled Steel Joist					
Element:	107	Name	Steel Open Girder/Beam	Qty:	41	Lvl 2:	31	Lvl 3	10	Lvl 4	0	Maint. Qty	41
Defect Description:													

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

121 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only.

10 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review.

31 Feet of Corrosion: Freckled Rust. Corrosion of the steel has initiated.

Substructure Detailed Element Quantities

Structure Number: 850310

Inspection Date: 08/11/2015

End 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
☒ Abutments	1	216	Timber Abutment	33	0	6	27	0	33	3346	☐ Requested
☒ Caps	1	235	Timber Pier Cap	28	0	28	0	0	28	3344	☐ Requested
☒ Piles and Columns	1	206	Timber Column	1	0	1	0	0	5	3344	☐ Requested
☒ Piles and Columns	2	206	Timber Column	1	0	1	0	0	5	3344	☐ Requested
☒ Piles and Columns	3	206	Timber Column	1	0	1	0	0	5	3344	☐ Requested
☒ Piles and Columns	4	206	Timber Column	1	0	1	0	0	5	3344	☐ Requested
☒ Piles and Columns	5	206	Timber Column	1	0	1	0	0	5	3344	☐ 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
☒ Abutments	1	216	Timber Abutment	33	0	33	0	0	33	3346	☐ Requested
☒ Caps	1	235	Timber Pier Cap	28	0	28	0	0	28	3344	☐ Requested
☒ Piles and Columns	1	206	Timber Column	1	0	1	0	0	5	3344	☐ Requested
☒ Piles and Columns	2	206	Timber Column	1	0	1	0	0	5	3344	☐ Requested
☒ Piles and Columns	3	206	Timber Column	1	0	1	0	0	5	3344	☐ Requested
☒ Piles and Columns	4	206	Timber Column	1	0	1	0	0	5	3344	☐ Requested
☒ Piles and Columns	5	206	Timber Column	1	0	1	0	0	5	3344	☐ Requested

Substructure Element Defect Descriptions

Structure Number: 850310

Inspection Date: 08/11/2015

End Bent 1

End Bent 1	Row 1	Abutments	1
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Element: 216 Name Timber Abutment Qty: 33 Lvl 2: 6 Lvl 3: 27 Lvl 4: 0 Maint. Qty 33

Defect Description:

27 Feet of Decay/Section Loss: Affects 10% or more of the member but does not warrant structural review.

6 Feet of Decay/Section Loss: Affects less than 10% of the member section

End Bent 1	Row 1	Caps	1
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Element: 235 Name Timber Pier Cap Qty: 28 Lvl 2: 28 Lvl 3: 0 Lvl 4: 0 Maint. Qty 28

Defect Description:

28 Feet of Crack (Timber): Crack that has been arrested through effective measures.

3" rotation of abutment 1 cap

End Bent 1	Row 1	Piles and Columns	1
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Element: 206 Name Timber Column Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty 5

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: 206 Name Timber Column Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty 5

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: 206 Name Timber Column Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty 5

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: 206 Name Timber Column Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty 5

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	5
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Element: 206 Name Timber Column Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty 5

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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Element: 216 Name Timber Abutment Qty: 33 Lvl 2: 33 Lvl 3: 0 Lvl 4: 0 Maint. Qty 33

Defect Description:

33 Feet of Decay/Section Loss: Affects less than 10% of the member section

End Bent 2	Row 1	Caps	1
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Element: 235 Name Timber Pier Cap Qty: 28 Lvl 2: 28 Lvl 3: 0 Lvl 4: 0 Maint. Qty 28

Defect Description:

28 Feet of Check/Shake: Penetrates 5%-50% of the thickness of the member and not in a tension zone.

4" rotation of abutment 2 cap

End Bent 2	Row 1	Piles and Columns	1
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Element: 206 Name Timber Column Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 5
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
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Element: 206 Name Timber Column Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 5
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
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Element: 206 Name Timber Column Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 5
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
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Element: 206 Name Timber Column Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 5
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	5
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Element: 206 Name Timber Column Qty: 1 Lvl 2: 1 Lvl 3: 0 Lvl 4: 0 Maint. Qty: 5
Defect Description:

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

Pile encased in concrete

National Bridge and NC Inspection Items

Structure Number: 850310

Inspection Date: 08/11/2015

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	4
Item 61: Channel and Channel Protection	0 - 9 , N	6
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	82	3376
Drainage System	G, F, P, or C	G	0	3332
Utilities	G, F, P, or C			
Slope Protection	G, F, P, or C	G	0	3352
Wingwall	G, F, P, or C	P	30	3350
Scour	G, F, P, or C	G		
Field Scour Evaluation		O		
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	F		
Estimated Remaining Life	0 - 100 Years	13		

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	8
Traffic Control Time	Hours	0
Snooper Time	Hours	0
Ladder Used	YES/NO	N
Bucket Truck Used	YES/NO	N
Boat Used	YES/NO	N
Other Equipment Used	YES/NO	N

National Bridge and NC SMU Inspection Item Details

Structure Number: 850310

Inspection Date: 08/11/2015

Item	Deck - Item 58	Grade	6	Maint Code	Qty.	0
Details	Minor corrosion of structural elements					
Item	Superstructure - Item 59	Grade	6	Maint Code	Qty.	0
Details	STRUCTURAL ELEMENTS SHOW SOME MINOR DETERIORATION.					
Item	Substructure - Item 60	Grade	4	Maint Code	Qty.	0
Details	ADVANCED SECTION LOSS, DETERIORATION, OF ELEMENTS					
Item	Channel and Channel Protection - Item 61	Grade	6	Maint Code	Qty.	0
Details	RIP RAP HAS BEEN PLACED AT EACH WING TO CONTROL SCOUR					
Item	Deck Debris	Grade	F	Maint Code	3376	Qty. 82
Details	VEGETATION GROWTH ON BOTH SIDES OF STRUCTURE					
Item	Response to live load	Grade	F	Maint Code	Qty.	0
Details	MINOR VIBRATION DUE TO LIVE LOAD					
Item	Wingwalls	Grade	P	Maint Code	3350	Qty. 30
Details	MAJOR DETERIORATION TO THE SOUTHEAST WINGWALL					



Span 1 Wearing Surface: 24 Square Feet of Crack (Wearing Surface): Width of more than 0.05 in. or spacing of less than 1.0 ft. at end bent 1



Vegetation overgrowth at upstream rail



Span 1 Wearing Surface: 120 Square Feet of Crack (Wearing Surface): southbound lane



End bent 2 pile 5 concrete encasement



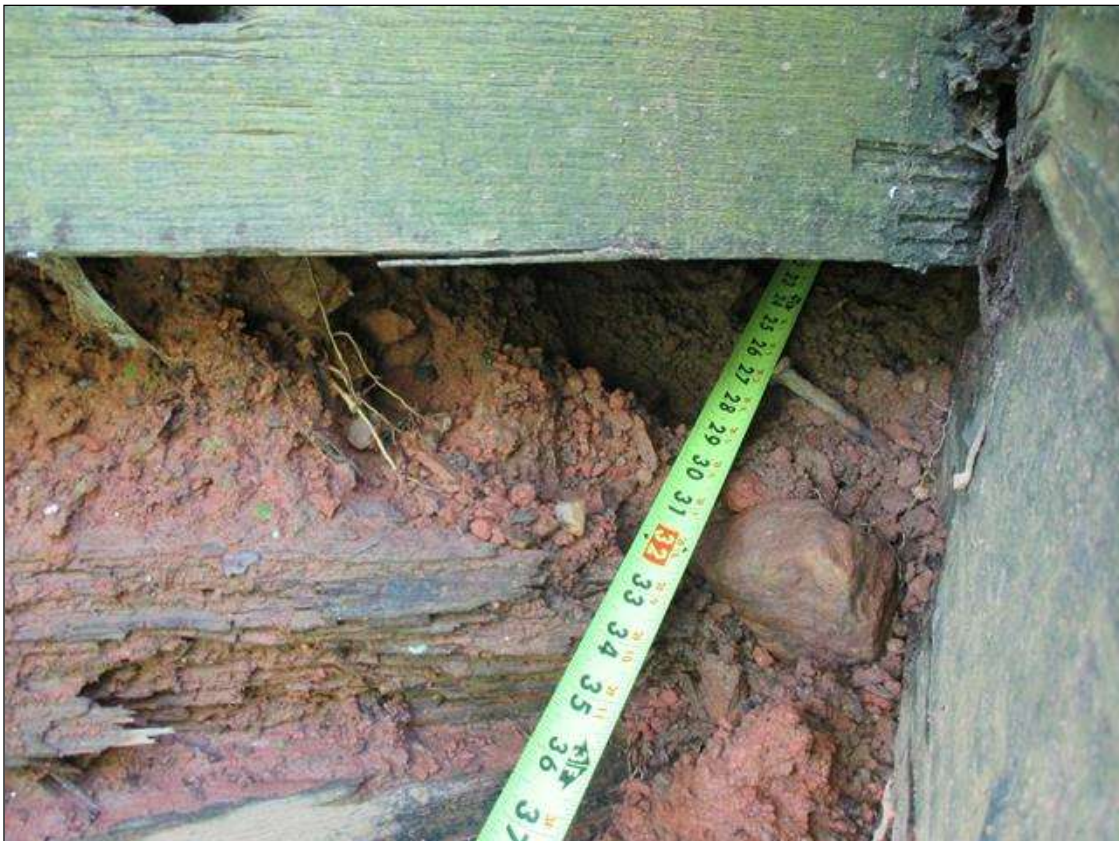
Repar to end bent 2 abutment



End Bent 1 Abutment/Backwall : 27 Feet of Decay/Section Loss: Affects 10% or more of the member but does not warrant structural review.



Missing timber board at southeast wingwall behind abutment



Erosion up to 3 feet behind abutment at southeast corner at missing wingwall timbers



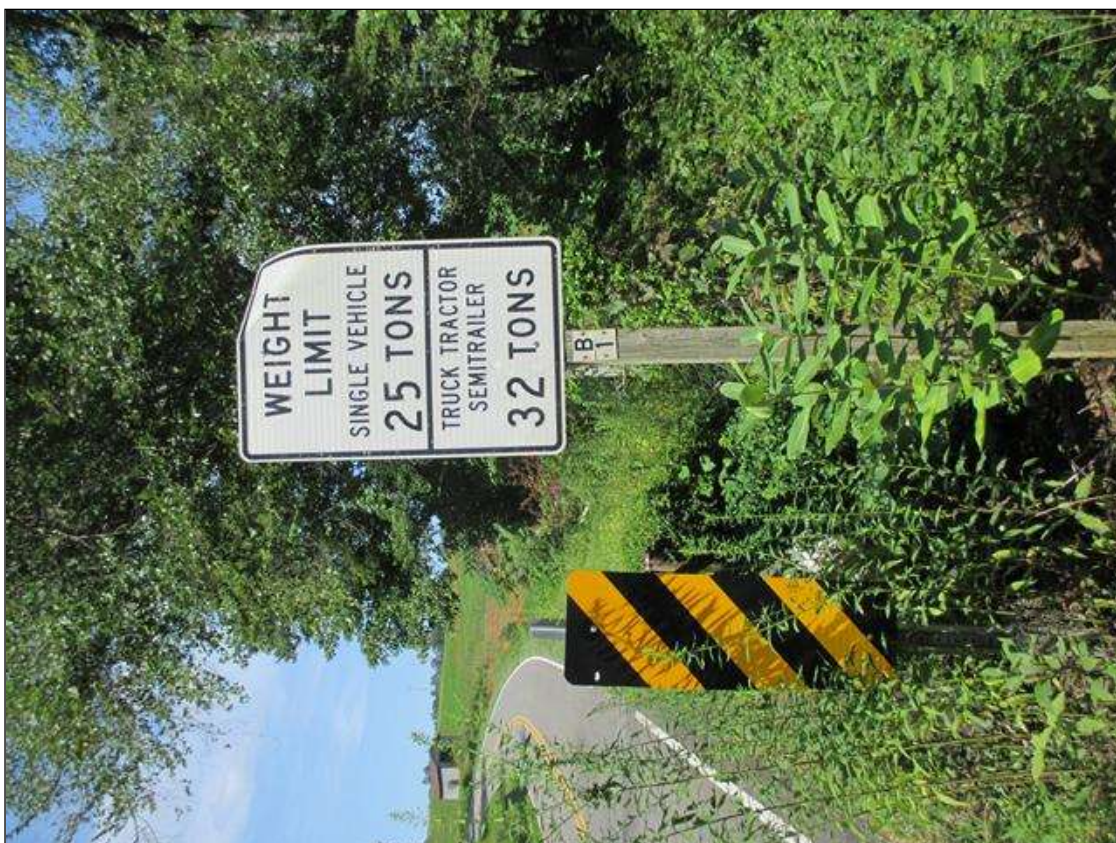
3" rotation of abutment 1 cap



Span 1 Beam 2: 4 Feet of Corrosion: Section loss is evident or pack rust is present but does not warrant structural review 6 feet from end bent 1.



Looking north



South approach posting sign



Upstream guardrail



Looking upstream



Looking downstream



Span 1 wearing surface



Looking south



North approach posting sign



Downstream structure profile



End bent 1



End bent 2



Span 1 underside



Southwest wingwall



Upstream profile



South approach posting sign

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

Update Date: 03/09/2016

IDENTIFICATION

(1) STATE NAME -NORTH CAROLINA BRIDGE 850310
 (8) STRUCTURE NUMBER(FEDERAL) 000000001710310
 (5) INVENTORY ROUTE (ON/UNDER) - ON 31017740
 (2) STATE HIGHWAY DEPARTMENT DISTRICT 1
 (3) COUNTY CODE 171 (4) PLACE CODE 0
 (6) FEATURE INTERSECTED - STONEY CREEK
 (7) FACILITY CARRIED SR1774
 (9) LOCATION 150 FT.N.JCT.SR1818
 (11)MILEPOINT 0
 (16)LAT 36° 27' 20.52" (17)LONG 80° 32' 28.84"
 (98)BORDER BRIDGE STATE CODE PCT SHARE
 (99)BORDER BRIDGE STRUCTURE NO

SUFFICIENCY RATING = 38.46

STATUS = Structurally Deficient

CLASSIFICATION CODE

(112)NBIS BRIDGE SYSTEM - YES
 (104)HIGHWAY SYSTEM Is not on NHS 0
 (26) FUNCTIONAL CLASS - Local 09
 (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: Steel
 TYPE - Stringer Multibeam or Girder CODE 302
 (44) STRUCTURE TYPE APPR :
 TYPE - CODE 000
 (45) NUMBER OF SPANS IN MAIN UNIT 1
 (46) NUMBER OF APPROACH SPANS
 (107)DECK STRUCTURE TYPE - 6 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 4
 (61) CHANNEL & CHANNEL PROTECTION 6
 (62) CULVERTS N

LOAD RATING AND POSTING CODE

(31) DESIGN LOAD Unknown 0
 (63) OPERATING RATING METHOD - Load Factor 1
 (64) OPERATING RATING - HS-21 38
 (65) INVENTORY RATING METHOD - Load Factor 1
 (66) INVENTORY RATING - HS-12 22
 (70) BRIDGE POSTING - Posting Required 2
 (41) STRUCTURE OPEN, POSTED ,OR CLOSED P
 DESCRIPTION - Posted for Load

AGE AND SERVICE

(27) YEAR BUILT 1968
 (106)YEAR RECONSTRUCTED
 (42) TYPE OF SERVICE : ON - Highway
 UNDER - Waterway CODE 15
 (28) LANES: ON STRUCTURE 2 UNDER STRUCTURE 0
 (29) AVERAGE DAILY TRAFFIC 2200
 (30) YEAR OF ADT 2012 (109) TRUCK ADT PCT 6%
 (19) BYPASS OR DETOUR LENGTH 2 MI

APPRAISAL CODE

(67) STRUCTURAL EVALUATION 4
 (68) DECK GEOMETRY 2
 (69) UNDERCLEARANCES,VERTI & HORIZ N
 (71) WATERWAY ADEQUACY 7
 (72) APPROACH ROADWAY ALIGNMENT 8
 (36) TRAFFIC SAFETY FEATURES 0000
 (113)SCOUR CRITICAL BRIDGES 5

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN 39 FT
 (49) STRUCTURE LENGTH 41 FT
 (50)CURB OR SIDEWALK: LEFT .3 FT RIGHT .3 FT
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 24.083 FT
 (52) DECK WIDTH OUT TO OUT 24.083 FT
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 18 FT
 (33) BRIDGE MEDIAN - No Median CODE 0
 (34) SKEW 20° (35) STRUCTURE FLARED 0
 (10) INVENTORY ROUTE MIN VERT CLEAR 999.9 FT
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 24.083 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 4400 (115) YEAR FUTURE ADT 2025

INSPECTIONS

(90) INSPECTION DATE 08/11/2015

(92) CRITICAL FEATURE INSPECTION : (93) CFI DATE

A) FRACTURE CRIT DETAIL - NO A)
 B) UNDERWATER INSP - NO B)
 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

Update Date: 03/09/2016

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
SURRY	11	1	850310	41	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1774	STONE CREEK

LOCATED :	BRIDGE NAME :	CITY :
150 FT.N.JCT.SR1818		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	2200 2012	LT 233 RT 233

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1968	BMU			Unknown

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :
			TAN	70	ON 2 UNDER 0

NAVIGATION :	HT. CRN. TO BED :	WATER DEPTH :
VC 0 FT HC 0 FT	12 FT	1 FT

SUPERSTRUCTURE : STEEL PLANK FLOOR ON I-BEAMS

SUBSTRUCTURE : E.BTS:TIM.CAPS/TIM.PILES 6'CTS.

SPANS : 1@40'-8

BEAMS OR GIRDERS : 10 LINES 18 I-BEAMS@ 2'-6.75 CENTERS

FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
STL.PLK/3 AWS		24.083 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
24.083 FT	24.667 FT	LT .3 FT RT .3 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :	TTST	DATE
HS-12	HS-21	int bm	SV 31	36	02/10/2016

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

UNDER ROUTES AND CLEARANCES

REMARKS :

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 850310

County SURRY

Date:

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
 3344	Repair / Replace Timber Substructure Components	LF	8	EROSION UP TO 3 FEET BEHIND ABUTMENT 1 AT SOUTHEAST CORNER AT MISSING WINGWALL TIMBERS	

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined

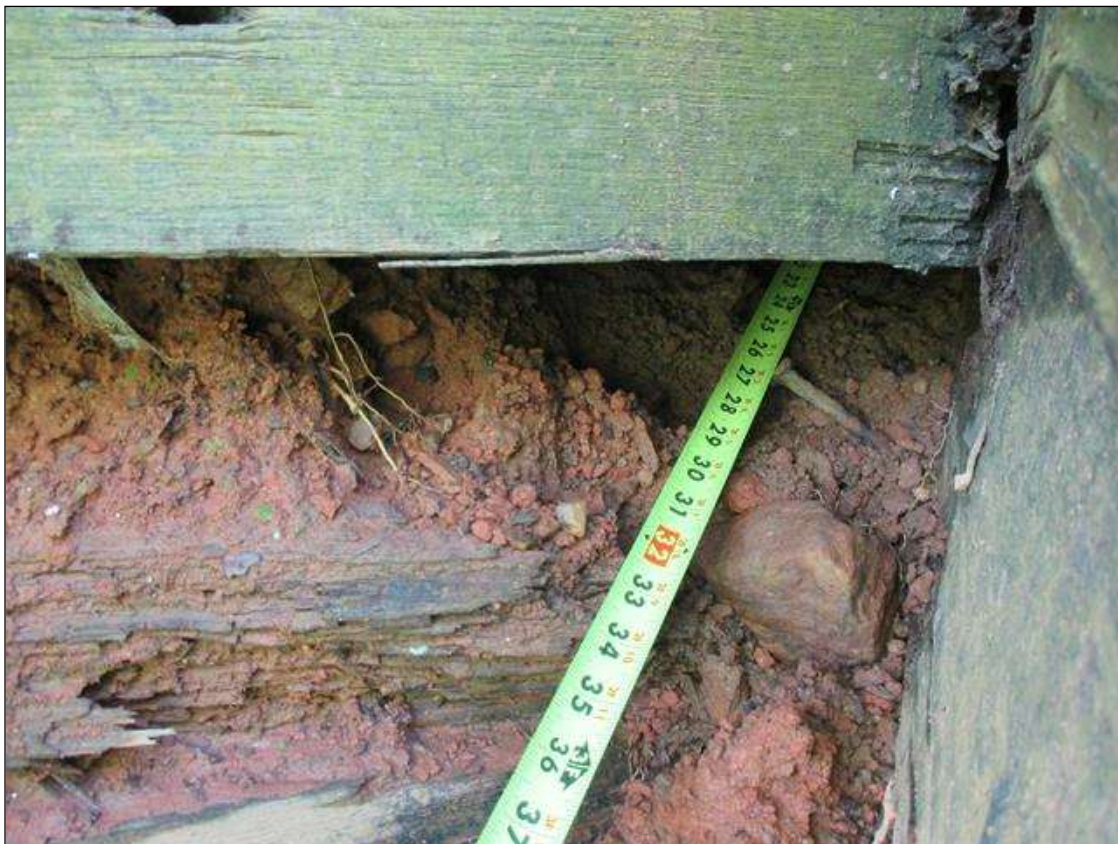
BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 850310

County SURRY

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

MMS Code	MMS Description	Quantity
3344	Repair / Replace Timber Substructure Components	8 LF
Location:		
Abutment Substructure	Bent/Span No. 1	Timber backwall
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
08/14/2015	MATTHEW TOM	KYLE COMPTON
Details		
EROSION UP TO 3 FEET BEHIND ABUTMENT 1 AT SOUTHEAST CORNER AT MISSING WINGWALL TIMBERS		

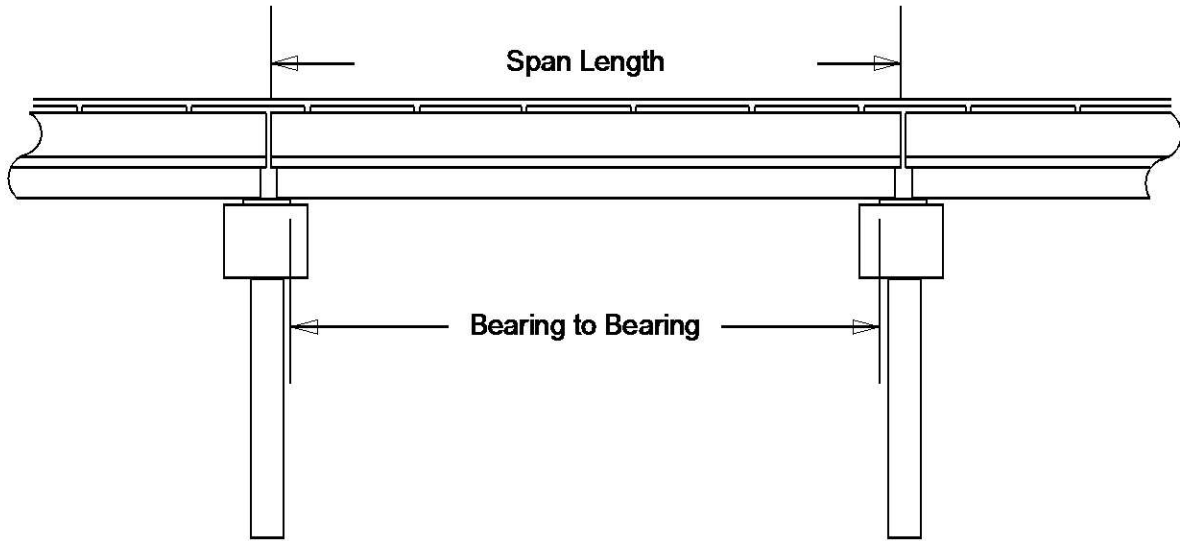


EROSION UP TO 3 FEET BEHIND ABUTMENT AT SOUTHEAST CORNER AT MISSING WINGWALL TIMBERS

Structure Data Worksheet

Spans

County: SURRY Structure No: 850310 Date: Inspected By: MKT



Span No	Span Length	Bearing to Bearing	Comments
1	40.667 FT.	39.167 ft.	FACE OF CAP TO FACE OF CAP = 38.709

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 850310 County: SURRY Date: _____ By: MKT

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	2.6	FILL FACE			
0.1	4.4	Top of Cap			
1.75	4.4	Top of Cap			
1.8	10.2	FACE OF CAP	1.8	10.7	FACE OF CAP
7.5	13.4	Water Surface/Water Edge (WSWE)			
11.5	14.2	STREAMBED			
33.8	13.1	Water Surface/Water Edge (WSWE)			
37.9	12.7	FACE OF CAP	37.9	12	FACE OF CAP
38	4.3	Top of Cap			
40.6	4.3	Top of Cap			
40.7	2.6	FILL FACE			

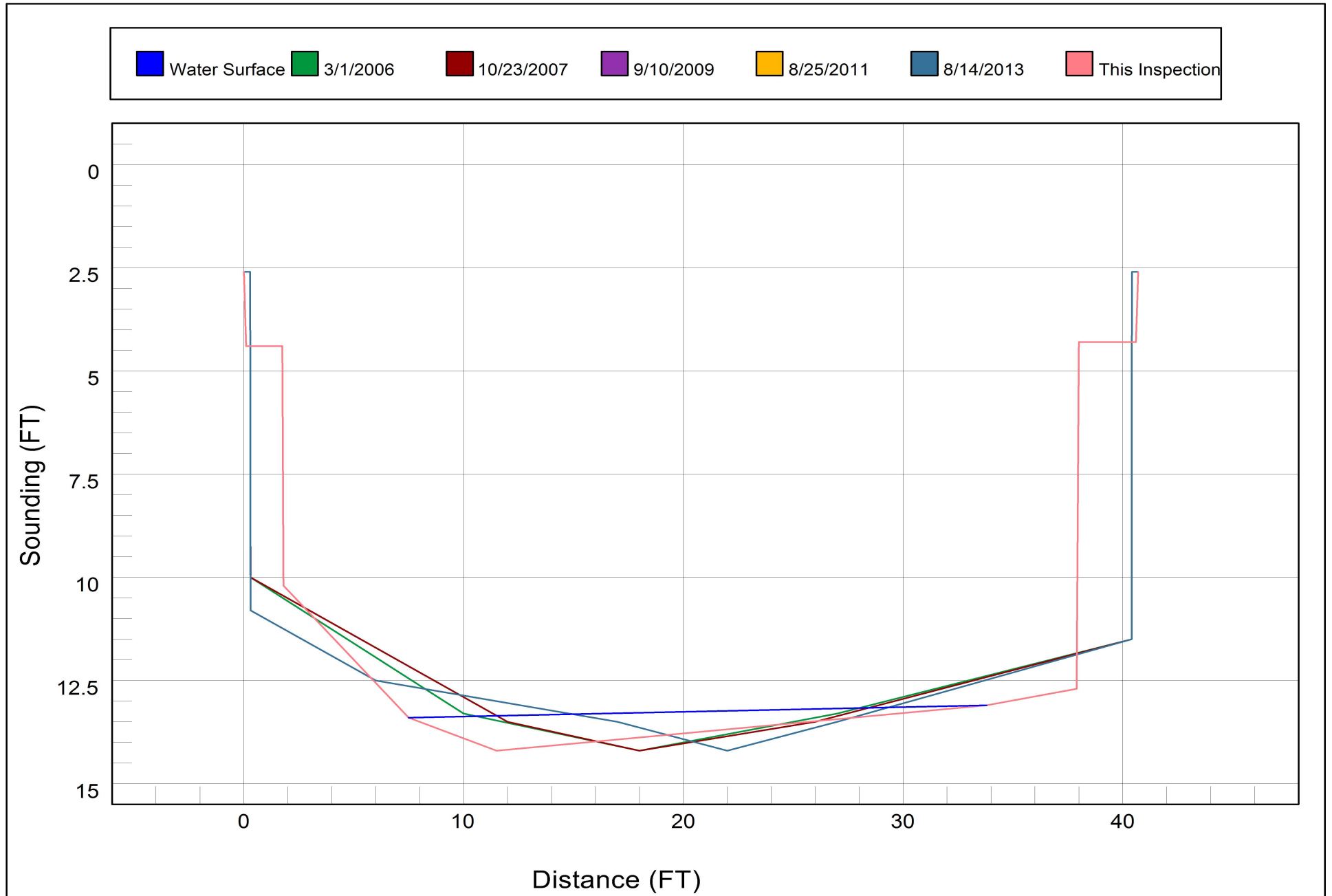
Bridge: 850310

County SURRY

Date:

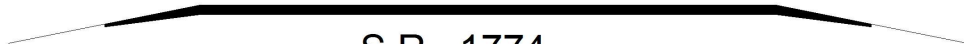
STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch

VERIFIED 8/11/15 M. TOM & K. COMPTON



S.R. 1774

LOOKING NORTH

Roadway	18ft Wide	2 Paved Lanes	Looking North
Left Shoulder	4ft Wide		4ft Unpaved
Right Shoulder	4ft Wide		4ft Unpaved
Left Guardrail			
Right Guardrail			

Title

APPR. RDWY.

Description

APPR. RDWY.

Bridge No: 850310

Drawn By: RAP

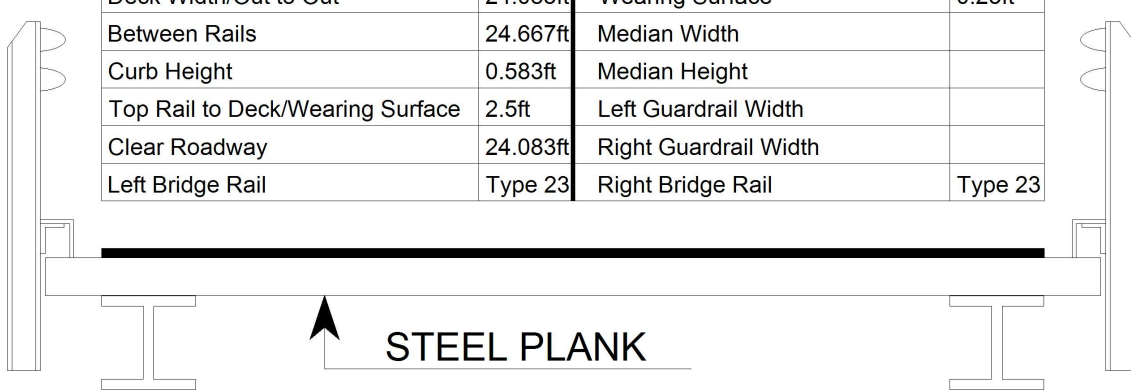
Date: 02/15/2006

File Name: S0138000905

Bridge Inspection Field Sketch

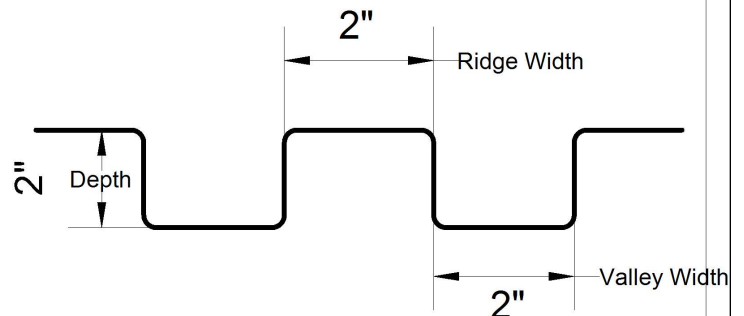
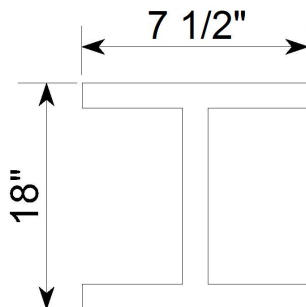
VERIFIED 8/14/13 A. GLASCO, M. FORD

Deck Width/Out to Out	24.083ft	Wearing Surface	0.25ft
Between Rails	24.667ft	Median Width	
Curb Height	0.583ft	Median Height	
Top Rail to Deck/Wearing Surface	2.5ft	Left Guardrail Width	
Clear Roadway	24.083ft	Right Guardrail Width	
Left Bridge Rail	Type 23	Right Bridge Rail	Type 23



Measurements for Span #	1		
Deck Thickness	0.167	Left Overhang	0.5
Top of Rail to Bottom of Beam	4.417	Right Overhang	0.5

Beam No	Beam Type	Spacing	Comments
1	Steel I Beam	2.562ft	
2	Steel I Beam	2.562ft	
3	Steel I Beam	2.562ft	
4	Steel I Beam	2.562ft	
5	Steel I Beam	2.562ft	
6	Steel I Beam	2.562ft	
7	Steel I Beam	2.562ft	
8	Steel I Beam	2.562ft	
9	Steel I Beam	2.562ft	
10	Steel I Beam	2.562ft	



FLANGE THICKNESS: $\frac{5}{8}$ "
WEB THICKNESS: $\frac{7}{16}$ "

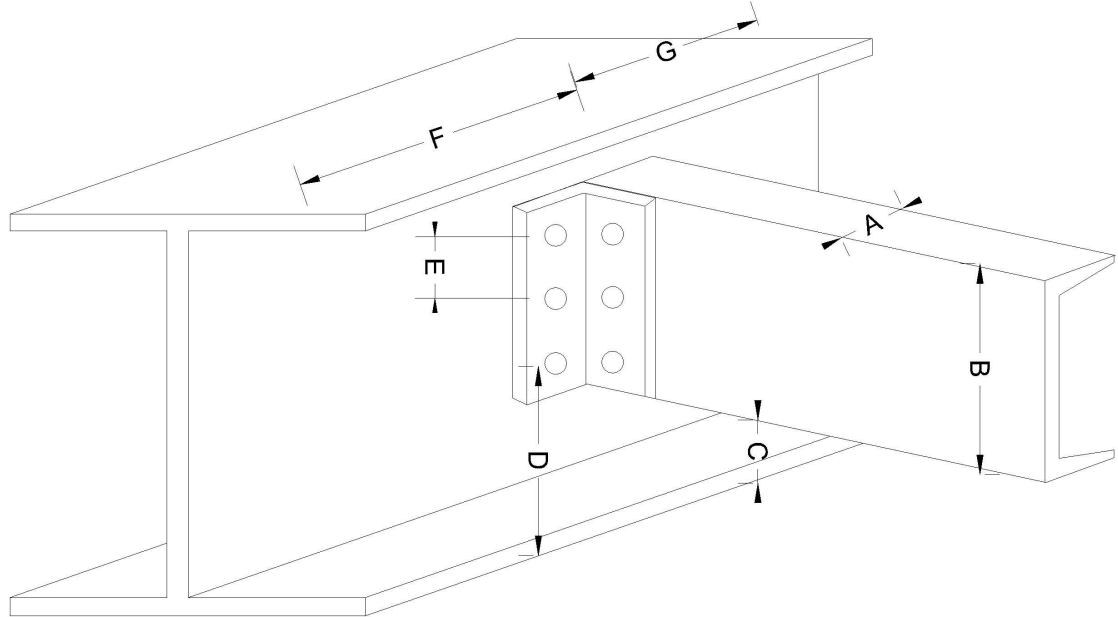
Title		Description	
SUPER.		DECK SECTION	
Bridge No: 850310	Drawn By: RAP	Date: 02/15/2006	File Name: S0138000906

Bridge Inspection Field Sketch

VERIFIED 8/11/15 M. TOM & K. COMPTON

SPAN: 1

LOCATION: 1/3 POINTS



3 BOLTS

SPAN	DIM. A	DIM. B	DIM. C	DIM. D	DIM. E	DIM. F	DIM. G	BOLT SIZE
1	2 1/2"	10"	6 1/2"	8"	2 1/2"	13' - 4"	13' - 4"	3/4"

Title

DIAPH.

Description

DIAPH.

Bridge No: 850310

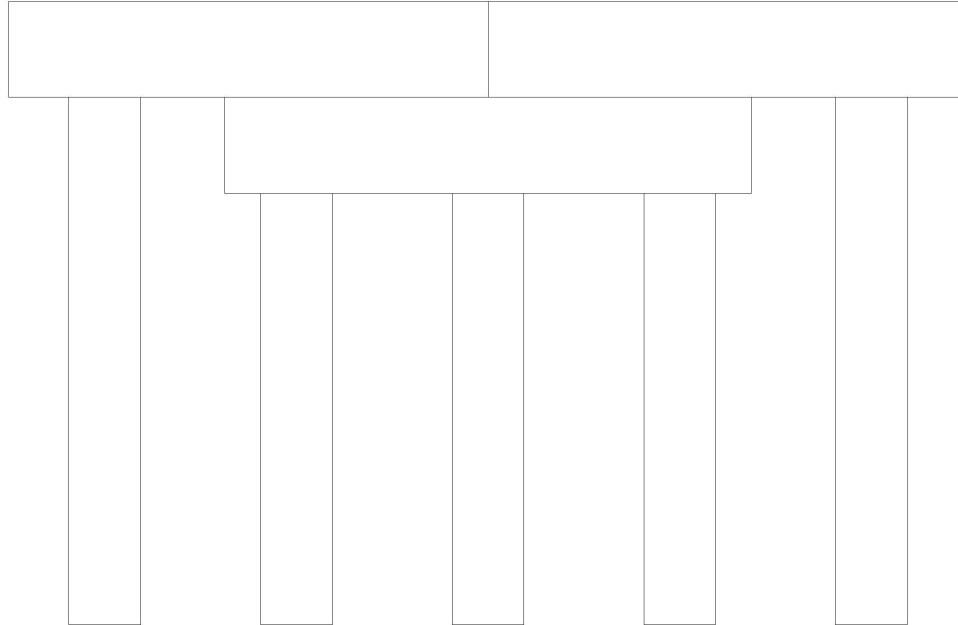
Drawn By: RAP

Date: 02/15/2006

File Name: S0138000907

Bridge Inspection Field Sketch

VERIFIED 8/11/15 M. TOM & K. COMPTON



Abutment #	1	Abutment 2 similar	
Cap - Beam Type (Wood or Steel)			
Cap Size	27.167ft Long	0.979ft Wide	0.979ft High
Left Overhang	1.583ft	Lt Cap/Beam Overhang	1.25ft
Right Overhang	1.583ft	Rt Cap/Beam Overhang	0.917ft
Timber Sub Cap			
Size	17.583ft Long	0.979ft Wide	0.979ft High
Left pile to splice	6ft		
Left Overhang	2.75ft		
Right Overhang	2.833ft		

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Pile Bent	6		1		Vertical
2	Wood or Timber	Pile Bent	6		1		Vertical
3	Wood or Timber	Pile Bent	6		1		Vertical
4	Wood or Timber	Pile Bent	6		1		Vertical
5	Wood or Timber	Pile Bent			1		Vertical

Title

SUBST.

Description

ABUT. # 1

Bridge No: 850310

Drawn By: RAP

Date: 02/15/2006

File Name: S0138000908

Bridge Inspection Field Sketch

VERIFIED 8/11/15 M. TOM & K. COMPTON

NO SPLICE; SINGLE CAP

Abutment #	2	Abutment 1 similar	
Cap - Beam Type (Wood or Steel)			
Cap Size	27.167ft Long	0.979ft Wide	0.979ft High
Left Overhang	1.583ft	Lt Cap/Beam Overhang	1.25ft
Right Overhang	1.583ft	Rt Cap/Beam Overhang	0.917ft
Timber Sub Cap			
Size	17.417ft Long	0.979ft Wide	0.979ft High
Left pile to splice			
Left Overhang	2.667ft		
Right Overhang	2.75ft		

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Pile Bent	6		1		Vertical
2	Wood or Timber	Pile Bent	6		1		Vertical
3	Wood or Timber	Pile Bent	6		1		Vertical
4	Wood or Timber	Pile Bent	6		1		Vertical
5	Wood or Timber	Pile Bent			1		Vertical

PILE # 5 ENCASED IN CONC.

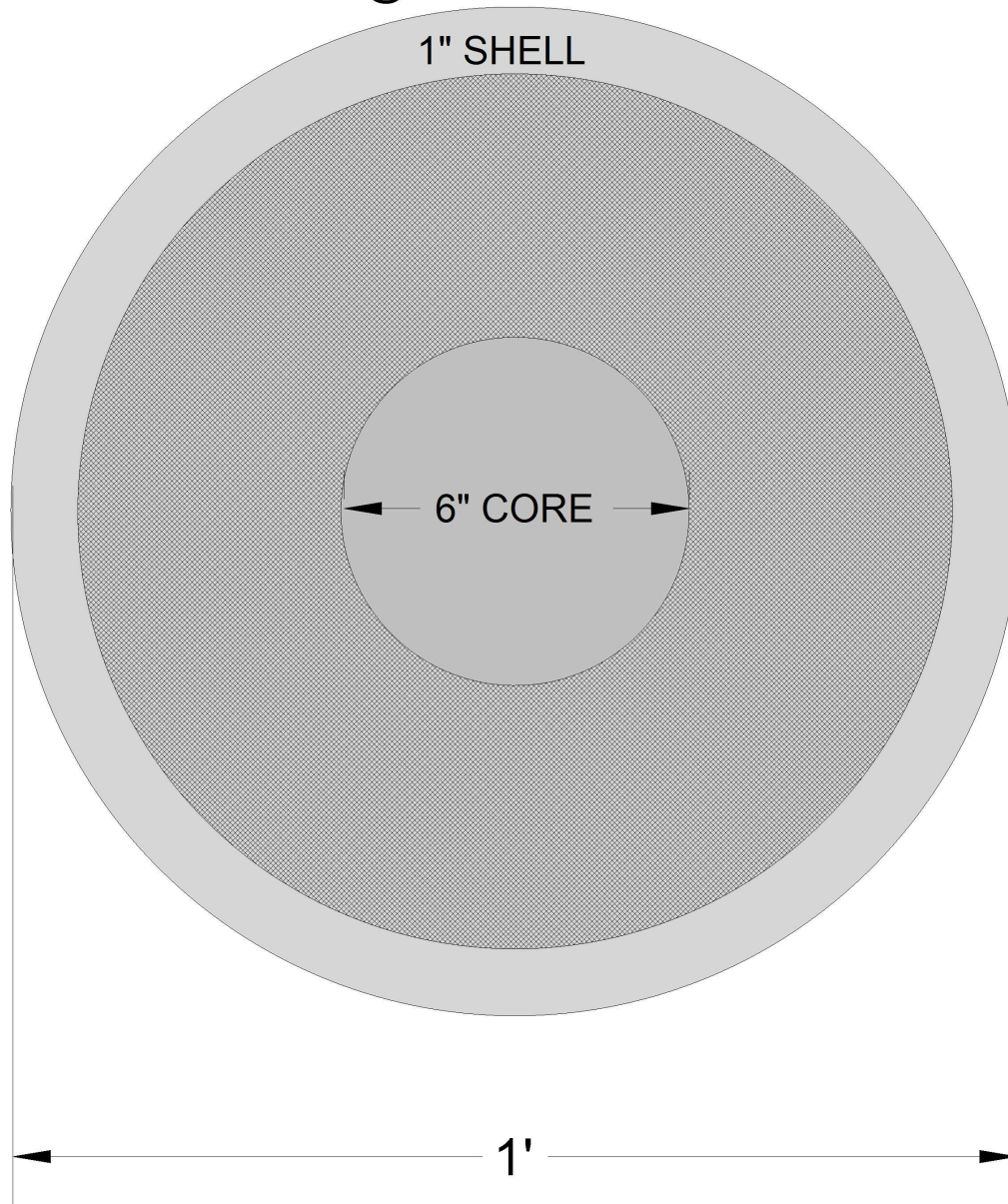
Title		Description	
SUBST. 2		ABUT. # 2	
Bridge No: 850310	Drawn By: RAP	Date: 02/15/2006	File Name: S0138000909

Bridge Inspection Field Sketch

VERIFIED 8/11/15 M. TOM & K. COMPTON

9/10/09 - PILE HAS BEEN ENC. IN CONC. 24" W X 16" D X 61" HIGH

PILE # 5 @ ABUT. # 2 DECAYED



DECAY BEGINS APPROX. 1' FROM GROUND & EXTENDS 5' UP PILE
WITH 34 % REMAINING MATERIAL

Title

PILE DECAY

Description

PILE DECAY

Bridge No: 850310

Drawn By: RAP

Date: 02/15/2006

File Name: S0138000911

Bridge Inspection Field Sketch

SKETCH NOT NEEDED

Title

SCOUR

Description

SCOUR @ RT. END ABUT. # 2

Bridge No: 850310

Drawn By: RAP

Date: 02/15/2006

File Name: S0138000910