



NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 STRUCTURE MANAGEMENT UNIT

ATTENTION: PRIORITY MAINTENANCE ISSUED; CHANGE TO APPROACH ROADWAY DATA

# Structure Safety Report

## Routine Element Inspection - Contract

INSPECTION DATE: 10/18/2018

DIVISION: 4 COUNTY: EDGECOMBE STRUCTURE NUMBER: 320035 FREQUENCY: 24 MONTHS

FACILITY CARRIED: SR 1616 MILE POST: \_\_\_\_\_

LOCATION: 1.1 MI SE. OF US 258

FEATURE INTERSECTED: OTTER CREEK

LATITUDE: 35° 43' 51.73" LONGITUDE: 77° 36' 48.67"

SUPERSTRUCTURE: RC FLOOR ON I-BEAMS

SUBSTRUCTURE: E.BTS & INT.BTS: RC CAPS/RC PILES

SPANS: 3 SPANS. SEE SPAN PROFILE SHEET FOR SPAN DETAILS

FRACTURE CRITICAL  TEMPORARY SHORING  SCOUR CRITICAL  SCOUR PLAN OF ACTION

NBI GRADES: DECK 5 SUPERSTRUCTURE 5 SUBSTRUCTURE 5 CULVERT N

POSTED SV: 18 POSTED TTST: 22

OTHER SIGNS PRESENT: 4 DELINEATORS



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 W-E

DIRECTION MATCHES PLANS \_\_\_\_\_

Looking east

INSPECTED BY Andrew S. Matlock	SIGNATURE <i>Andrew S. Matlock</i>	ASSISTED BY Jim Stocks
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# Structure Element Scoring

Structure Number: 320035

Inspection Date 10/18/201  
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Element Number	Parent Number	Element Name	Location	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity
12	0	Reinforced Concrete Deck	Deck	3464	3379	84	1	0
107	0	Steel Open Girder/Beam	Beam	488	298	180	6	4
515	107	Steel Protective Coating	Beam	3900	3383	500	17	0
215	0	Reinforced Concrete Abutment	Abutments	62	60	2	0	0
226	0	Prestressed Concrete Pile	Piles and Columns	10	10	0	0	0
234	0	Reinforced Concrete Pier Cap	Caps	52	3	22	27	0
316	0	Other Bearings	Bearing Device	24	11	9	4	0
515	316	Steel Protective Coating	Bearing Device	48	22	18	6	2
331	0	Reinforced Concrete Bridge Railing	Bridge Rail	244	0	244	0	0
510	0	Wearing Surface	Wearing Surfaces	2916	2816	0	64	36

# Summary of Maintenance Needs

Maintenance By Defect

Structure Number: **320035**

Inspection Date: **10/18/2018**

<b>MMS Code</b>	<b>Element Name</b>	<b>Defect Name</b>	<b>Recommended Quantity</b>
3326	Reinforced Concrete Deck	Delamination/Spall	1 Square Feet
3314	Steel Open Girder/Beam	Corrosion	11 Feet
3348	Reinforced Concrete Pier Cap	Cracking (RC and Other)	8 Feet
3348	Reinforced Concrete Pier Cap	Delamination/Spall	17 Feet
3334	Other Bearings	Corrosion	2 Each
3318	Reinforced Concrete Bridge Railing	Damage	244 Feet
2816	Wearing Surface	Crack (Wearing Surface)	64 Square Feet
2816	Wearing Surface	Patched Area/Pothole (Wearing Surface)	36 Square Feet
3342	Steel Protective Coating	Effectiveness (Steel Protective Coatings)	201 Square Feet

## Element Structure Maintenance Quantities

Structure Number: **320035**

Inspection Date **10/18/2018**

Location	MMS Code	Description	Maint Quantity	Total Quantity	Severe Quantity	Poor Quantity	Fair Quantity	Good Quantity
Abutments	3350	Maintenance of Concrete Wings and Wall	0	62	0	0	2	60
Beam	3314	Maintenance Steel Superstructure Components	11	488	4	6	180	298
Beam	3342	Clean and Paint Steel	199	3900	0	17	500	3383
Bearing Device	3334	Bridge Bearing	2	24	0	4	9	11
Bearing Device	3342	Clean and Paint Steel	2	48	2	6	18	22
Bridge Rail	3318	Maintenance of Concrete Bridge Rail	244	244	0	0	244	0
Caps	3348	Maintenance of Concrete Substructure	25	52	0	27	22	3
Deck	3326	Maintenance of Concrete Deck	1	3464	0	1	84	3379
Piles and Columns	3348	Maintenance of Concrete Substructure	0	10	0	0	0	10
Wearing Surfaces	2816	Asphalt Surface Repair	100	2916	36	64	0	2816

## Element Condition and Maintenance Data

Structure Number: 320035

Inspection Date: 10/18/2018

<b>Span 1</b>	<b>Deck</b>
<b>Reinforced Concrete Deck</b>	

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
12	Reinforced Concrete Deck	1,140	1,106	34	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
12	Efflorescence/Rust Staining	underside bay 1 at 10ft from bent 1, transverse crack (3ft x hairline) with efflorescence (similar at bays 2 and 3)	2	9	Square Feet
12	Efflorescence/Rust Staining	underside south overhang at drain, transverse crack (full width x hairline) with efflorescence (similar throughout) (north overhang similar)	2	25	Square Feet

**General Comments**

<b>Span 1</b>	<b>Beam 1</b>
<b>Plate Girder</b>	

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	40	25	15	0	0 Feet
515	Steel Protective Coating	321	276	45	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
107	Corrosion	Scattered surface rust throughout both flanges and webs	2	15	Feet
515	Effectiveness (Steel Protective Coatings)	Substantially effective.	2	45	Square Feet

**General Comments**

<b>Span 1</b>	<b>Beam 2</b>
<b>Plate Girder</b>	

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	40	25	15	0	0 Feet
515	Steel Protective Coating	321	276	45	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
107	Corrosion	Scattered surface rust throughout both flanges and webs	2	15	Feet
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	45	Square Feet

**General Comments**

<b>Span 1</b>	<b>Beam 3</b>
<b>Plate Girder</b>	

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	40	25	15	0	0 Feet
515	Steel Protective Coating	321	276	45	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
107	Corrosion	Scattered surface rust throughout both flanges and webs	2	15	Feet

<b>515</b>	Effectiveness (Steel Protective Coatings)	Substantially effective	2	45	Square Feet
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**General Comments****Span 1 Beam 4****Plate Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	40	24	15	1	0 Feet
515	Steel Protective Coating	321	273	45	3	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
107	Corrosion	1' long painted over corrosion with section loss (3/8" remaining thickness) on outer edges (1") of bottom flange with 9/16" average remaining thickness across full width. 11/16" original thickness.	3	1	1 Feet
107	Corrosion	Scattered surface rust throughout both flanges and webs	2	15	Feet
515	Effectiveness (Steel Protective Coatings)	Previously cleaned and painted with light surface rust present	3	3	Square Feet
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	45	Square 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	960	908	0	40	12 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
510	Patched Area/Pothole (Wearing Surface)	PM--12' long pothole starting at center line out in westbound travel lane over pier 1 up to 6" wide x 2" deep full width of bridge. Pothole is full of gravel 1" deep.	4	12	12 Square Feet
510	Crack (Wearing Surface)	Eastbound travel lane and both shoulders over end bent 1 have 2 transverse cracks up to 1/4" over pier 1.	3	16	16 Square Feet
510	Crack (Wearing Surface)	Full width transverse crack up to 1/4" wide over abutment.	3	24	24 Square Feet

**General Comments****Span 1 Left Bridge Rail****Concrete Railing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
331	Reinforced Concrete Bridge Railing	40	0	40	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Damage	top rail and parapet, scaling with exposed aggregate (full length x full width)	2	40	40 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	40	0	40	0	0 Feet

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Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Damage	top rail and parapet, scaling with exposed aggregate (full length x full width)	2	40	40 Feet

**General Comments**

**Span 1 Far Bearing**  
**Other Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
316	Other Bearings	1	-1	2	0	0 Each
515	Steel Protective Coating	2	0	2	0	0 Square Feet

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Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
316	Corrosion	Previously cleaned and painted with light surface rust present	2	2	Each
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	2	Square Feet

**General Comments**

**Span 1 Far Bearing**  
**Other Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
316	Other Bearings	1	0	1	0	0 Each
515	Steel Protective Coating	2	0	2	0	0 Square Feet

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Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
316	Corrosion	Previously cleaned and painted with light surface rust present	2	1	Each
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	2	Square Feet

**General Comments**

**Span 1 Far Bearing**  
**Other Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
316	Other Bearings	1	0	0	1	0 Each
515	Steel Protective Coating	2	0	0	2	0 Square Feet

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Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
316	Corrosion	Previously cleaned and painted, but corrosion has reactivated with no additional section loss (up to 1/8") and anchor bolt nut corroded (100%)	3	1	1 Each
515	Effectiveness (Steel Protective Coatings)	Paint failure with bare metal exposed	3	2	Square Feet

**General Comments**

**Span 2 Deck****Reinforced Concrete Deck**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
12	Reinforced Concrete Deck	1,155	1,130	25	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
12	Efflorescence/Rust Staining	underside south overhang at drain, transverse crack (full width x hairline) with efflorescence (similar throughout) (north overhang similar)	2	25	Square Feet

**General Comments****Span 2 Beam 1****Plate Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	41	24	15	2	0 Feet
515	Steel Protective Coating	325	280	45	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
107	Corrosion	web at end diaphragm on bent 1, pitting (1ft x 1in x 1/16in loss) (recently cleaned and painted to prevent further corrosion)	3	1	1 Feet
107	Corrosion	web at end diaphragm on bent 2, pitting (1ft x 1in x 1/16in loss) (recently cleaned and painted to prevent further corrosion)	3	1	1 Feet
107	Corrosion	Scattered surface rust throughout both flanges and webs	2	15	Feet
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	45	45 Square Feet

**General Comments****Span 2 Beam 2****Plate Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	41	25	15	1	0 Feet
515	Steel Protective Coating	325	280	45	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
107	Corrosion	web at end diaphragm on bent 1, pitting (1ft x 1in x up to 1/8in loss) (recently cleaned and painted to prevent further corrosion)	3	1	1 Feet
107	Corrosion	Scattered surface rust throughout both flanges and webs	2	15	Feet
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	45	Square Feet

**General Comments**



**Span 2****Beam 3****Plate Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	41	26	15	0	0 Feet
515	Steel Protective Coating	325	280	45	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
107	Corrosion	Scattered surface rust throughout both flanges and webs	2	15	Feet
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	45	45 Square Feet

**General Comments****Span 2****Beam 4****Plate Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	41	25	15	1	0 Feet
515	Steel Protective Coating	325	325	0	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
107	Corrosion	bottom flange at bent 2, pitting (1ft x 5in) (0.30in avg rem at outer 1/2" of flange) with 11/16in average remaining thickness throughout (recently cleaned and painted with rust staining)	3	1	1 Feet
107	Corrosion	Scattered surface rust throughout both flanges and webs	2	15	Feet

**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	972	948	0	0	24 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
510	Patched Area/Pothole (Wearing Surface)	PM--Full width pothole over pier 2 up to 6" wide x 2" deep full width of bridge. Pothole is full of gravel 1" deep.	4	24	24 Square Feet

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

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
331	Reinforced Concrete Bridge Railing	41	0	41	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Damage	top rail and parapet, scaling with exposed aggregate (full length x full width)	2	41	41 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	41	0	41	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Damage	top rail and parapet, scaling with exposed aggregate (full length x full width)	2	41	41 Feet

**General Comments****Span 2 Far Bearing****Other Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
316	Other Bearings	1	0	0	1	0 Each
515	Steel Protective Coating	2	0	0	0	2 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
316	Corrosion	PM--Previously cleaned and painted over section loss (approximately 40%) with reactivated corrosion with nearly 60% section remaining.	3	1	Each
515	Effectiveness (Steel Protective Coatings)	PM--Previously cleaned and painted over section loss (approximately 40%) with reactivated corrosion with nearly 60% section remaining.	4	2	2 Square Feet

**General Comments****Span 2 Near Bearing****Other Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
316	Other Bearings	1	1	0	0	0 Each
515	Steel Protective Coating	2	0	2	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
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**General Comments****Span 2 Far Bearing****Other Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
316	Other Bearings	1	0	1	0	0 Each
515	Steel Protective Coating	2	0	2	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
316	Corrosion	Previously cleaned and painted with light surface rust	2	1	Each
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	2	Square Feet

**General Comments**

**Span 2 Far Bearing**  
**Other Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	2	0	2	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	Previously cleaned and painted with light surface rust	2	1		Each
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	2		Square Feet

**General Comments**

**Span 2 Near Bearing**  
**Other Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	0	1	0	Each
515	Steel Protective Coating	2	0	0	2	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	Previously cleaned and painted, but corrosion has reactivated with no additional section loss (up to 1/8")	3	1		Each
515	Effectiveness (Steel Protective Coatings)	Paint failure with bare metal exposed	3	2		Square Feet

**General Comments**

**Span 2 Far Bearing**  
**Other Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	2	0	2	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	Previously cleaned and painted with light surface rust	2	1		Each
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	2		Square Feet

**General Comments**

**Span 3 Deck**  
**Reinforced Concrete Deck**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
12	Reinforced Concrete Deck	1,169	1,143	25	1	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
12	Delamination/Spall	7" diameter area of delamination on south overhang at 2' from pier 2	3	1	1	Square Feet
12	Efflorescence/Rust Staining	underside south overhang at drain, transverse crack (full width x hairline) with efflorescence (similar throughout) (north overhang similar)	2	25		Square Feet

**General Comments****Span 3****Beam 1****Plate Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	41	25	15	1	0 Feet
515	Steel Protective Coating	329	279	50	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
107	Corrosion	web at end diaphragm on bent 2, pitting (1ft x 1in x 1/16in loss) (recently cleaned and painted to prevent further corrosion)	3	1	1 Feet
107	Corrosion	Scattered surface rust throughout both flanges and web	2	15	Feet
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	50	50 Square Feet

**General Comments****Span 3****Beam 2****Plate Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	41	24	15	0	2 Feet
515	Steel Protective Coating	329	278	45	6	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
107	Corrosion	PM---2' long x full width x down to knife edge area of advanced section loss (0.33" average thickness remaining) on bottom flange at pier 2. 1.5" long x 3/4" wide area of 100% section loss on south bottom flange at 16" from bearing. Previously cleaned and painted with rust staining reactivated.	4	2	2 Feet
107	Corrosion	web at end diaphragm on bent 2, pitting (1ft x 1in x up to 1/8in loss) (recently cleaned and painted to prevent further corrosion)	3		1 Feet
107	Corrosion	Scattered surface rust throughout both flanges and web	2	15	Feet
515	Effectiveness (Steel Protective Coatings)	Previously cleaned and painted over section loss with reactivated corrosion (rust staining)	3	6	6 Square Feet
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	45	Square Feet

**General Comments****Span 3****Beam 3****Plate Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	41	26	15	0	0 Feet
515	Steel Protective Coating	329	284	45	0	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
107	Corrosion	Scattered surface rust throughout both flanges and web	2	15	Feet
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	45	45 Square Feet

**General Comments**

**Span 3** **Beam 4**  
**Plate Girder**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
107	Steel Open Girder/Beam	41	24	15	0	2 Feet
515	Steel Protective Coating	329	276	45	8	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
107	Corrosion	PM---2' long x full width x down to knife edge area of advanced section loss (0.20" average thickness remaining) on bottom flange at pier 2. 5" long x 1" wide area of 100% section loss on north bottom flange. Previously cleaned and painted with rust staining reactivated.	4	2	2 Feet
107	Corrosion	Scattered surface rust throughout both flanges and web	2	15	Feet
515	Effectiveness (Steel Protective Coatings)	Previously cleaned and painted over section loss with reactivated corrosion (rust staining)	3	8	8 Square Feet
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	45	Square 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	984	960	0	24	0 Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
510	Crack (Wearing Surface)	Full width transverse crack up to 1/4" wide over abutment.	3	24	24 Square Feet

General Comments

**Span 3** **Left Bridge Rail**  
**Concrete Railing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
331	Reinforced Concrete Bridge Railing	41	0	41	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Damage	top rail and parapet, scaling with exposed aggregate (full length x full width)	2	41	41 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	41	0	41	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
331	Damage	top rail and parapet, scaling with exposed aggregate (full length x full width)	2	41	41 Feet

General Comments

**Span 3 Near Bearing**  
**Other Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	2	0	2	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	Previously cleaned and painted with light surface rust	2	1		Each
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	2		Square Feet

**General Comments**

**Span 3 Near Bearing**  
**Other Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	2	0	2	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	Previously cleaned and painted with light surface rust	2	1		Each
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	2		Square Feet

**General Comments**

**Span 3 Near Bearing**  
**Other Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	1	0	0	Each
515	Steel Protective Coating	2	0	2	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	Previously cleaned and painted with light surface rust	2	1		Each
515	Effectiveness (Steel Protective Coatings)	Substantially effective	2	2		Square Feet

**General Comments**

**Span 3 Near Bearing**  
**Other Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
316	Other Bearings	1	0	0	1	0	Each
515	Steel Protective Coating	2	0	0	2	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
316	Corrosion	Previously cleaned and painted, but corrosion has reactivated with no additional section loss (up to 1/8") and anchor bolt nut corroded (100%)	3	1	1	Each
515	Effectiveness (Steel Protective Coatings)	Paint failure with bare metal exposed	3	2		Square 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	26	0	10	16	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
234	Delamination/Spall	2.5' long x 3" high x 4" wide area of delamination on bottom of east face of cap between piles 3 and 4	3	3	3 Feet
234	Delamination/Spall	3' long x 3" high x 1' wide area of delamination on bottom of west face of cap at pile 4	3	3	Feet
234	Delamination/Spall	3' long x 4" high x 1' wide area of delamination on bottom of east face of cap between piles 4 and 5	3	3	3 Feet
234	Delamination/Spall	3.5' long x 5" high area of delamination on bottom of east face of cap between piles 2 & 3	3	4	4 Feet
234	Delamination/Spall	33" long x 8" high x 8" under area of delamination on bottom of west face of cap at bay 2.	3	3	3 Feet
234	Patched Area	4' long x 2' high sound patched area on east face south end of cap	2	3	Feet
234	Patched Area	7' long x up to full height sound patched area on west face of cap starting at pile 4 and extending to south end of cap	2	7	Feet

**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	31	29	2	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
215	Cracking (RC and Other)	2' long x 1/32" wide diagonal crack on backwall in bay 2 at step down	2	2	Feet

**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	26	3	12	11	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
234	Cracking (RC and Other)	3' long x up to 1/16" wide horizontal crack on bottom of east face of cap at pile 3	3	3	3 Feet
234	Cracking (RC and Other)	Two up to 3' long x up to 1/8" wide horizontal cracks with rust staining on south end at top and bottom of cap	3	5	5 Feet
234	Delamination/Spall	3.5' long x 6" high x full width on bottom of cap on west face under beam 2	3	3	3 Feet
234	Delamination/Spall	8" long x 7" high x 3" deep spall with no exposed rebar between piles 2 and 3 on bottom of east face of cap	3		1 Feet
234	Cracking (RC and Other)	Full height vertical hairline cracks under beams 2 and 3 on west.	2	2	Feet
234	Patched Area	5' long x 6" high sound patched area starting at pile 3 extending out to pile 4 on west face	2	5	Feet
234	Patched Area	5ft x up to full height sound patched area with hairline map	2	5	Feet

cracking on west face at south end.

**General Comments**

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**Bent 53 Epoxy Coating 1**

**Epoxy Coating**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	

**General Comments**

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**Bent 59 Epoxy Coating 1**

**Epoxy Coating**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	

**General Comments**

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## Elements Verified

Location	Name	Component	Element Name	Amount
Span 1	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	1140
Span 1	Beam 1	Plate Girder	Steel Open Girder/Beam	40
Span 1	Beam 2	Plate Girder	Steel Open Girder/Beam	40
Span 1	Beam 3	Plate Girder	Steel Open Girder/Beam	40
Span 1	Beam 4	Plate Girder	Steel Open Girder/Beam	40
Span 1	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	40
Span 1	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	40
Span 1	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	960
Span 1	Near Bearing	Other Bearing	Other Bearings	1
Span 1	Far Bearing	Other Bearing	Other Bearings	1
Span 1	Near Bearing	Other Bearing	Other Bearings	1
Span 1	Far Bearing	Other Bearing	Other Bearings	1
Span 1	Near Bearing	Other Bearing	Other Bearings	1
Span 1	Far Bearing	Other Bearing	Other Bearings	1
Span 1	Near Bearing	Other Bearing	Other Bearings	1
Span 1	Far Bearing	Other Bearing	Other Bearings	1
Span 2	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	1155
Span 2	Beam 1	Plate Girder	Steel Open Girder/Beam	41
Span 2	Beam 2	Plate Girder	Steel Open Girder/Beam	41
Span 2	Beam 3	Plate Girder	Steel Open Girder/Beam	41
Span 2	Beam 4	Plate Girder	Steel Open Girder/Beam	41
Span 2	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	41
Span 2	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	41
Span 2	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	972
Span 2	Near Bearing	Other Bearing	Other Bearings	1
Span 2	Far Bearing	Other Bearing	Other Bearings	1
Span 2	Near Bearing	Other Bearing	Other Bearings	1
Span 2	Far Bearing	Other Bearing	Other Bearings	1
Span 2	Near Bearing	Other Bearing	Other Bearings	1
Span 2	Far Bearing	Other Bearing	Other Bearings	1
Span 2	Near Bearing	Other Bearing	Other Bearings	1
Span 2	Far Bearing	Other Bearing	Other Bearings	1
Span 3	Deck	Reinforced Concrete Deck	Reinforced Concrete Deck	1169
Span 3	Beam 1	Plate Girder	Steel Open Girder/Beam	41
Span 3	Beam 2	Plate Girder	Steel Open Girder/Beam	41
Span 3	Beam 3	Plate Girder	Steel Open Girder/Beam	41
Span 3	Beam 4	Plate Girder	Steel Open Girder/Beam	41
Span 3	Left Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	41
Span 3	Right Bridge Rail	Concrete Railing	Reinforced Concrete Bridge Railing	41
Span 3	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	984
Span 3	Near Bearing	Other Bearing	Other Bearings	1
Span 3	Far Bearing	Other Bearing	Other Bearings	1
Span 3	Near Bearing	Other Bearing	Other Bearings	1
Span 3	Far Bearing	Other Bearing	Other Bearings	1
Span 3	Near Bearing	Other Bearing	Other Bearings	1

## Elements Verified

Location	Name	Component	Element Name	Amount
Span 3	Far Bearing	Other Bearing	Other Bearings	1
Span 3	Near Bearing	Other Bearing	Other Bearings	1
Span 3	Far Bearing	Other Bearing	Other Bearings	1
Bent 1	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	26
Bent 1	Pile 1	Prestressed Concrete Pile	Prestressed Concrete Pile	1
Bent 1	Pile 2	Prestressed Concrete Pile	Prestressed Concrete Pile	1
Bent 1	Pile 3	Prestressed Concrete Pile	Prestressed Concrete Pile	1
Bent 1	Pile 4	Prestressed Concrete Pile	Prestressed Concrete Pile	1
Bent 1	Pile 5	Prestressed Concrete Pile	Prestressed Concrete Pile	1
End Bent 1	Abutment	Reinforced Concrete Abutment	Reinforced Concrete Abutment	31
Bent 2	Cap 1	Reinforced Concrete Pier Cap	Reinforced Concrete Pier Cap	26
Bent 2	Pile 1	Prestressed Concrete Pile	Prestressed Concrete Pile	1
Bent 2	Pile 2	Prestressed Concrete Pile	Prestressed Concrete Pile	1
Bent 2	Pile 3	Prestressed Concrete Pile	Prestressed Concrete Pile	1
Bent 2	Pile 4	Prestressed Concrete Pile	Prestressed Concrete Pile	1
Bent 2	Pile 5	Prestressed Concrete Pile	Prestressed Concrete Pile	1
End Bent 2	Abutment	Reinforced Concrete Abutment	Reinforced Concrete Abutment	31

# General Inspection Notes

# National Bridge and NC Inspection Items

Structure Number: 320035

Inspection Date: 10/18/2018

## National Bridge Inventory Items

Item	Grade Scale	Grade
Item 58: Deck	0 - 9 , N	5
Item 59: Superstructure	0 - 9 , N	5
Item 60: Substructure	0 - 9 , N	5
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	6

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	3464	3376
Drainage System	G, F, P, or C	G	0	3332
Utilities	G, F, P, or C			
Slope Protection	G, F, P, or C	F	10	3352
Scour	G, F, P, or C	G		
Wingwall	G, F, P, or C	G	0	3350
Field Scour Evaluation		O		
Drift	G, F, P, or C	F	4	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	12		
Superstructure Paint Code		A		

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	0
Snooper Time	Hours	0
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: 320035

Inspection Date: 10/18/2018

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<b>Item</b>	Deck Debris	<b>Grade</b>	F	<b>Maint Code</b>	3376	<b>Qty.</b>	3464
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**Details** Debris accumulation with vegetation growth entire length of right rail 10" wide with a few drains partially blocked.

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<b>Item</b>	Slope Protection	<b>Grade</b>	F	<b>Maint Code</b>	3352	<b>Qty.</b>	10
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**Details** End bent 1 slope protection south end ar waterline is settled for 2.5' long x up 1" deep  
End bent 1 slope protection 3' long x 2' wide area of delamination on front of slope in bay 3 at brace pile cap

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<b>Item</b>	Drift	<b>Grade</b>	F	<b>Maint Code</b>	3366	<b>Qty.</b>	4
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**Details** Drift accumulation between beams in bays 2 and 3 in span 2 and on top of pier 2 cap within all bays and south end



Span 3 Wearing Surface: Full width transverse crack up to 1/4" wide over abutment.



Span 2 Wearing Surface: PM--Full width pothole over pier 2 up to 6" wide x 2" deep full width of bridge. Pothole is full of gravel 1" deep.



Span 1 Wearing Surface: PM--12' long pothole starting at center line out in westbound travel lane over pier 1 up to 6" wide x 2" deep full width of bridge. Pothole is full of gravel 1" deep.



Span 1 Wearing Surface: Eastbound travel lane and both shoulders over end bent 1 have 2 transverse cracks up to 1/4" over pier 1.



Span 1 Wearing Surface: Full width transverse crack up to 1/4" wide over abutment.



Debris accumulation with vegetation growth entire length of right rail 10" wide with a few drains partially blocked.





Typical top rail and parapet, scaling with exposed aggregate (full length x full width), left rail span 1 shown, right rail similar.



Bent 1 Cap 1: 33" long x 8" high x 8" under area of delamination on bottom of west face of cap at bay 2.



Bent 1 Cap 1: 3' long x 3" high x 1' wide area of delamination on bottom of west face of cap at pile 4



Bent 1 Cap 1: 7' long x up to full height sound patched area on west face of cap starting at pile 4 and extending to south end of cap



Bent 1 Cap 1: 3.5' long x 5" high area of delamination on bottom of east face of cap between piles 2 & 3



Bent 1 Cap 1: 2.5' long x 3" high x 4" wide area of delamination on bottom of east face of cap between piles 3 and 4



Bent 1 Cap 1: 3' long x 4" high x 1' wide area of delamination on bottom of east face of cap between piles 4 and 5



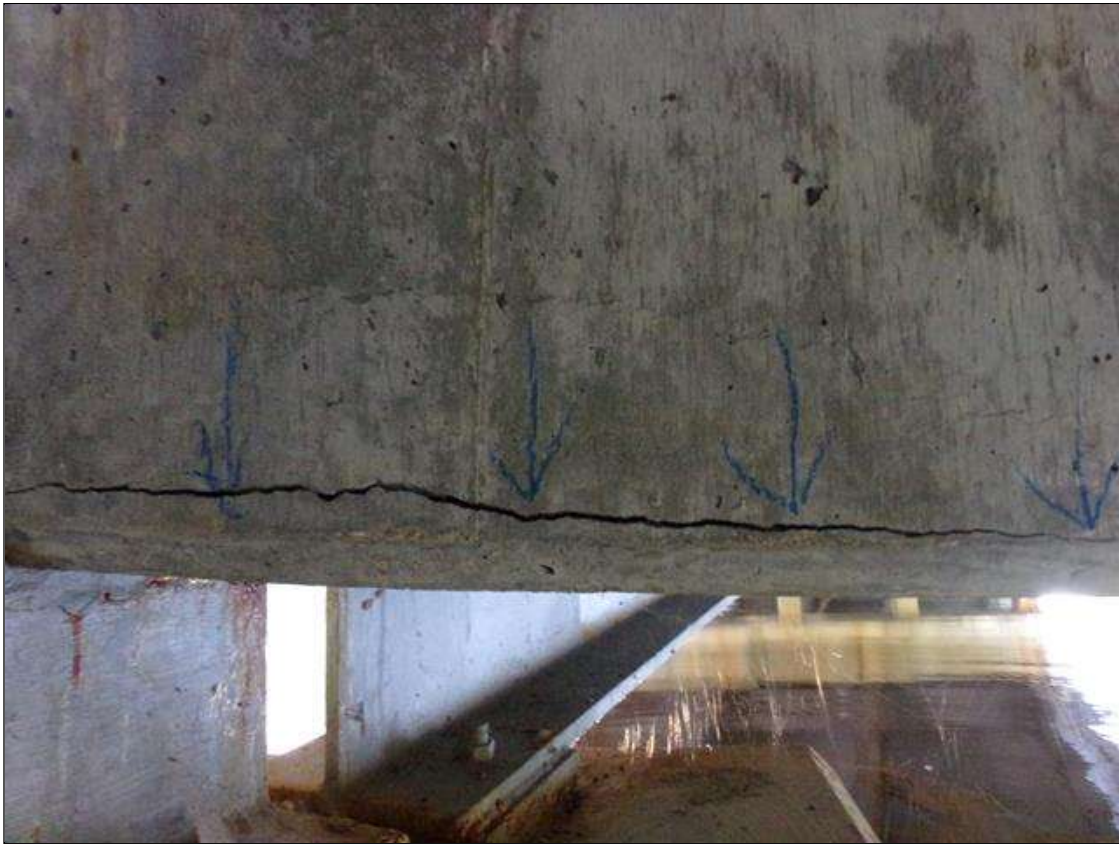
Bent 1 Cap 1: 4' long x 2' high sound patched area on east face south end of cap



Span 1 Beam 4: 2' high x 2' long x 3/8" thick steel plate added over pier 1 on both faces of web



Span 1 Beam 4 Far Bearing: Previously cleaned and painted, but corrosion has reactivated with no additional section loss (up to 1/8") and anchor bolt nut corroded (100%)



End Diaphragm at Pier: Typical cracking up to 1/8" wide on diaphragm (Span 1 in Bay 3 at Pier 1 shown; Others similar)



Span 1 Beam 4: 1' long painted over corrosion with section loss (3/8" remaining thickness) on outer edges (2") of bottom flange with 7/16" average remaining thickness across full width. 11/16" original thickness.



End Diaphragm: Full height x full width x up to 3" deep area of delamination/spall on southwest corner on south overhang in span 1



Drift accumulation between beams in bays 2 and 3 in span 2 and on top of pier 2 cap within all bays and south end



Span 2 Beam 1 Far Bearing: PM---Previously cleaned and painted over section loss (approximately 40%) with reactivated corrosion with nearly 60% section remaining.



End Diaphragm: Span 3 2' long x 3" wide x 3" d spall with exposed rebar with no measurable section on bottom west face corner





Span 2 Beam 4: bottom flange at bent 2, pitting (1ft x 5in) (0.30in avg rem) (recently cleaned and painted with rust staining)



18" long x 20" long added at end of beam 4 at pier 2 span 2



18" long x 20" long added at end of beam 4 at pier 2 span 3



Span 3 Beam 4: PM---2' long x full width x down to knife edge area of advanced section loss (0.20" average thickness remaining) on bottom flange at pier 2. 5" long x 1" wide area of 100% section loss on north bottom flange. Previously cleaned and painted with rust staining reactivated.



Span 3 Beam 2: PM---2' long x full width x down to knife edge area of advanced section loss (0.33" average thickness remaining) on bottom flange at pier 2. 1.5" long x 3/4" wide area of 100% section loss on south bottom flange at 16" from bearing. Previously cleaned and painted with rust staining reactivated.



Bent 2 Cap 1: 3.5' long x 6" high x full width on bottom of cap on west face under beam 2



Bent 2 Cap 1: 5' long x 6" high sound patched area starting at pile 3 extending out to pile 4 on west face



Bent 2 Cap 1: 5ft x up to full height sound patched area with hairline map cracking on west face at south end.



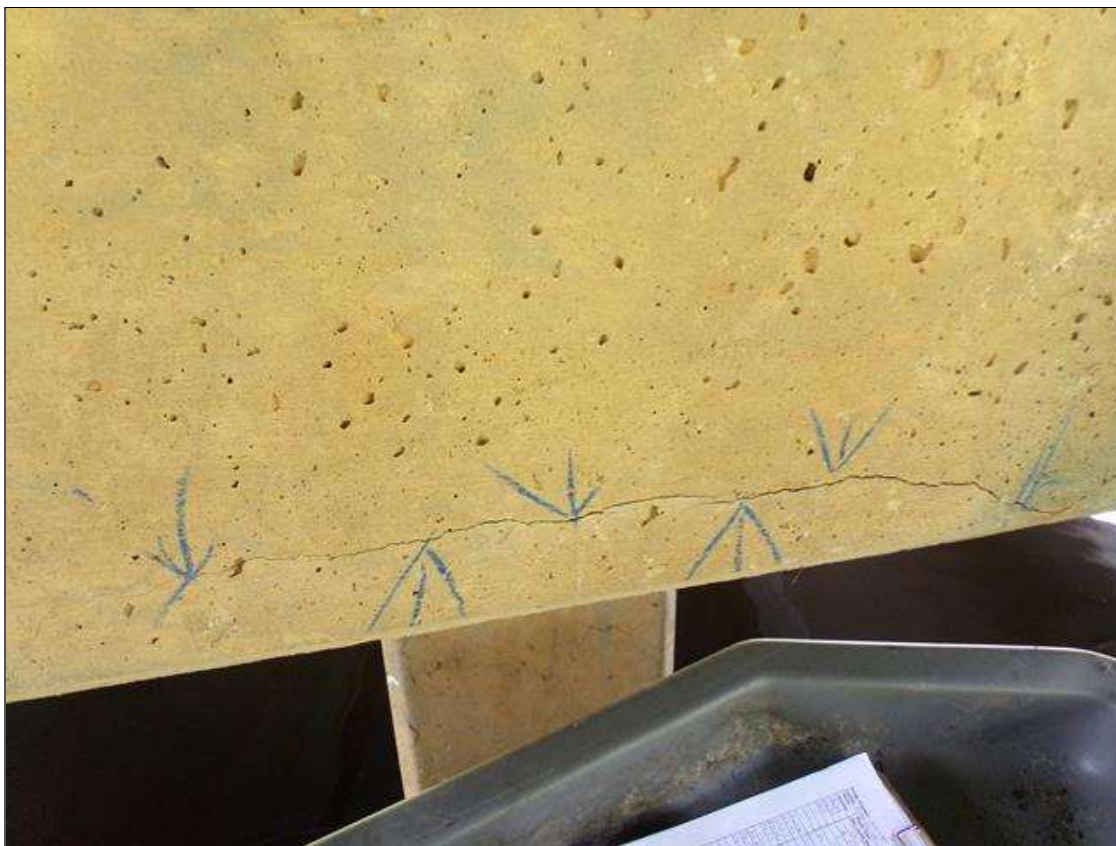
Bent 2 Cap 1: 3' long x up to 1/8" wide horizontal crack with rust staining on south end at bottom of cap that wraps around 3" on south end



Bent 2 Cap 1: 8" long x 7" high x 3" deep spall with no exposed rebar between piles 2 and 3 on bottom of east face of cap



Span 3 Deck: 7" diameter area of delamination on south overhang at 2' from pier 2



Bent 2 Cap 1: 3' long x up to 1/16" wide horizontal crack on bottom of east face of cap at pile 3



Span 1 Beam 2: Typical painted over pitting (1' long x 1" wide x up to 1/8" deep) at interface with concrete end diaphragms at piers.





Slope Protection: End bent 1 slope protection south end at waterline is settled for 2.5' long x up 1" deep



Slope Protection: End bent 1 slope protection 3' long x 2' wide area of delamination on front of slope in bay 3 at brace pile cap



Looking east



Posting sign at west approach



Looking south upstream



Looking north downstream



Joint over pier 1, pier 2 similar



Looking west



Posting sign at east approach



North elevation



South elevation



Abutment 2, abutment 1 similar



Abutment 1 (Abutment 2 Similar)



Pier 1 (Pier 2 Similar)



Typical bearing (Beam 2 Pier 1 Span 2)



General Superstructure Underside (Span 2 shown.)



# Stream Bed Soundings

(Profile diagram on following sheet)

County **EDGECOMBE**

Structure Number: **320035**

Inspection Date **10/17/2018**

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

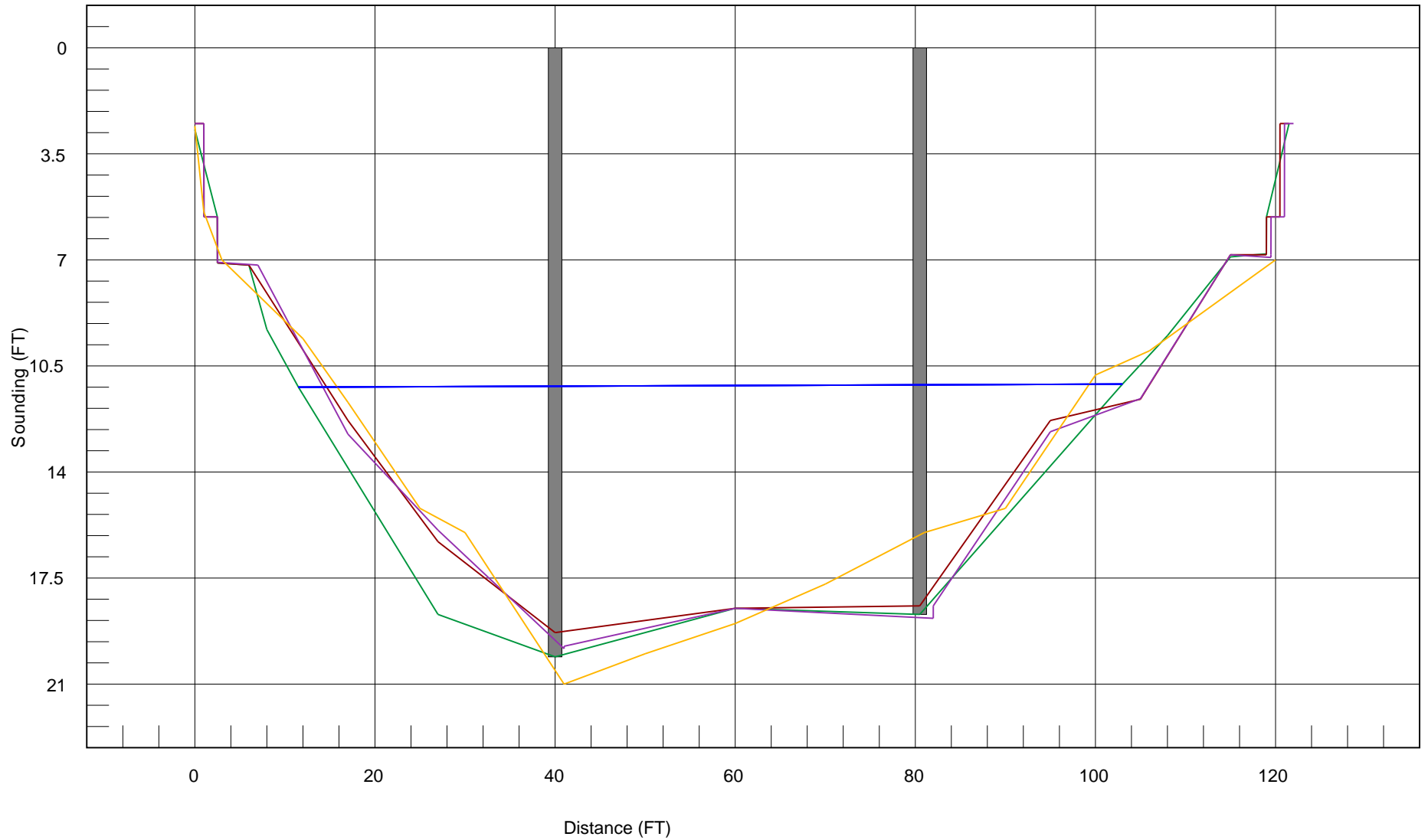
Highwater Mark Distance

Location of Highwater Mark

Distance (Station) ft.	Downstream Sounding ft.	Upstream Sounding ft.	Description
0.000	2.700	0.000	FF ABUT 1
2.500	5.580	0.000	TOP OF CAP
2.510	7.100	7.200	SF ABUT 1
6.000	7.170	0.000	TOP OF SLOPE
8.000	9.300	0.000	TOE OF SLOPE
11.500	11.200	0.000	WSWE
27.000	18.700	0.000	
40.000	20.100	19.800	PIER 1
60.000	18.500	0.000	
80.500	18.700	18.200	PIER 2
103.000	11.100	0.000	WSWE
108.000	9.500	0.000	TOE OF SLOPE
115.000	6.900	0.000	TOP OF SLOPE
118.990	6.800	6.700	SF ABUT 2
119.000	5.580	0.000	TOP OF CAP
121.500	2.500	0.000	FF ABUT 2

### STREAMBED PROFILE (Downstream)

Top of Rail = 0FT (Sounding)

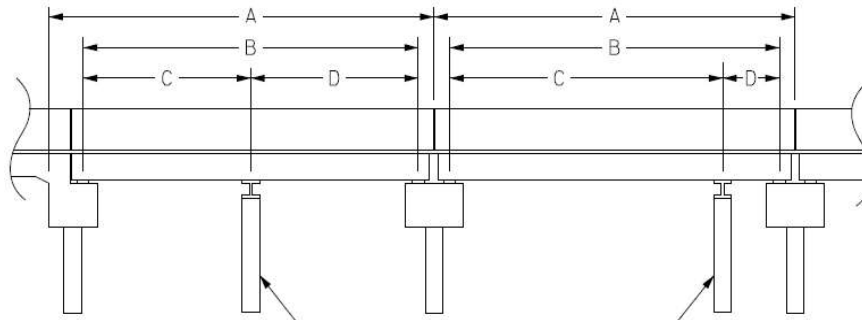


# Structure Data Worksheet

## Span Profile

County: **EDGECOMBE**

Structure Number: **320035**



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	40.000	38.250			
2	40.500	39.500			
3	41.000	39.250			

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

Run Date: 02/05/2019

**IDENTIFICATION**

(1) STATE NAME -NORTH CAROLINA BRIDGE **320035**  
 (8) STRUCTURE NUMBER(FEDERAL) 00000000650035  
 (5) INVENTORY ROUTE (ON/UNDER) - ON 31016160  
 (2) STATE HIGHWAY DEPARTMENT DISTRICT 1  
 (3) COUNTY CODE 65 (4) PLACE CODE 0  
 (6) FEATURE INTERSECTED - OTTER CREEK  
 (7) FACILITY CARRIED SR 1616  
 (9) LOCATION 1.1 MI SE. OF US 258  
 (11)MILEPOINT 0  
 (16)LAT 35° 43' 51.73" (17)LONG 77° 36' 48.67"  
 (98)BORDER BRIDGE STATE CODE PCT SHARE  
 (99)BORDER BRIDGE STRUCTURE NO

SUFFICIENCY RATING = 49.08  
 STATUS = Not 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 Mutlibeam or Girder CODE 302  
 (44) STRUCTURE TYPE APPR :  
 TYPE - CODE 000  
 (45) NUMBER OF SPANS IN MAIN UNIT 3  
 (46) NUMBER OF APPROACH SPANS  
 (107)DECK STRUCTURE TYPE - 1 CODE  
 (108)WEARING SURFACE / PROTECTIVE SYSTEM :  
 (A) TYPE OF WEARING SURFACE - Bituminous CODE 6  
 (B) TYPE OF MEMBRANE - None CODE 0  
 (C) TYPE OF DECK PROTECTION - None CODE 0

**CONDITION** **CODE**

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

**LOAD RATING AND POSTING** **CODE**

(31) DESIGN LOAD Unknown 0  
 (63) OPERATING RATING METHOD - Load Factor 1  
 (64) OPERATING RATING - HS-14 25  
 (65) INVENTORY RATING METHOD - Load Factor 1  
 (66) INVENTORY RATING - HS-8 15  
 (70) BRIDGE POSTING - Posting Required 0  
 (41) STRUCTURE OPEN, POSTED ,OR CLOSED P  
 DESCRIPTION - Posted for Load

**AGE AND SERVICE**

(27) YEAR BUILT 1957  
 (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 340  
 (30) YEAR OF ADT 2015 (109) TRUCK ADT PCT 6%  
 (19) BYPASS OR DETOUR LENGTH 3 MI

**APPRAISAL** **CODE**

(67) STRUCTURAL EVALUATION 4  
 (68) DECK GEOMETRY 5  
 (69) UNDERCLEARANCES,VERTI & HORIZ N  
 (71) WATERWAY ADEQUACY 7  
 (72) APPROACH ROADWAY ALIGNMENT 6  
 (36) TRAFFIC SAFETY FEATURES 0000  
 (113)SCOUR CRITICAL BRIDGES U

**GEOMETRIC DATA**

(48) LENGTH OF MAXIMUM SPAN 40 FT  
 (49) STRUCTURE LENGTH 122 FT  
 (50)CURB OR SIDEWALK: LEFT 1.2085 FT RIGHT 1.2085 FT  
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 24 FT  
 (52) DECK WIDTH OUT TO OUT 28.5 FT  
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 18.5 FT  
 (33) BRIDGE MEDIAN - No Median CODE 0  
 (34) SKEW 15° (35) STRUCTURE FLARED 0  
 (10) INVENTORY ROUTE MIN VERT CLEAR 999.9 FT  
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 24 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 680 (115) YEAR FUTURE ADT 2025

**INSPECTIONS**

(90) INSPECTION DATE 10/18/2018  
 (92) CRITICAL FEATURE INSPECTION : (93) CFI DATE  
 A) FRACTURE CRIT DETAIL - NO A)  
 B) UNDERWATER INSP - YES 48Mo B) 02/25/2015  
 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: 02/05/2019

COUNTY : EDGECOMBE DIVISION : 4 DISTRICT : 1 STRUCTURE NUMBER : 320035 LENGTH : 122 FEET

ROUTE CARRIED : SR 1616 FEATURE INTERSECTED : OTTER CREEK

LOCATED : 1.1 MI SE. OF US 258 BRIDGE NAME : CITY :

FUNC. CLASS : 09 SYST.ON : NFA SYST.UNDER : NFA ADT & YR : 340 2015 RAIL TYPE : LT 141 RT 141

BUILT : 1957 BY : SHC PROJ : 8.11356 FED.AID PROJ : DESIGN LOAD : Unknown

REHAB : BY : PROJ : ALIGNMENT : LT SKEW : 75 LANES : ON 2 UNDER 0

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 17 FT WATER DEPTH : 7 FT

SUPERSTRUCTURE : RC FLOOR ON I-BEAMS

SUBSTRUCTURE : E.BTS & INT.BTS: RC CAPS/RC PILES

SPANS : 1@40'-0"; 1@40'-6"; 1@41'-0"

BEAMS OR GIRDERS : 4 LINES 27" I-BEAMS @ 7'CENTERS

FLOOR : 8 RC/2 AWS ENCROACHMENT : DECK (OUT TO OUT) : 28.5 FT

CLEAR ROADWAY : 24 FT BETWEEN RAILS : 26.417 FT SIDEWALK OR CURB : LT 1.2085 FT RT 1.2085 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. : HS-8 OPE.RTG. : HS-14 CONTR.MEMBER : Int. Bm POSTED : SV 18 TTST 22 DATE 11/05/2012

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

UNDER ROUTES AND CLEARANCES

REMARKS :



# BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 320035

County EDGECOMBE

Date: 10/18/2018

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
 2816	Asphalt Surface Repair or Replacement	SY	24	Span 2 Wearing Surface: PM--Full width pothole over pier 2 up to 6" wide x 2" deep full width of bridge. Pothole is full of gravel 1" deep.	
 3314	Maintain Steel Superstructure Components	LF	2	Span 3 Beam 4: PM---2' long x full width x down to knife edge area of advanced section loss (0.20" average thickness remaining) on bottom flange at pier 2. 5" long x 1" wide area of 100% section loss on north bottom flange. Previously cleaned and painted with rust staining reactivated.	
 3342	Clean and Paint Structural Steel	SF	2	Span 2 Beam 1 Far Bearing: PM---Previously cleaned and painted over section loss (approximately 40%) with reactivated corrosion with nearly 60% section remaining.	
 3342	Clean and Paint Structural Steel	SF	0	Span 2 Beam 4 Near Bearing: PM-- Paint failure with bare metal exposed	
2816	Asphalt Surface Repair or Replacement	SY	12	Span 1 Wearing Surface: PM--12' long pothole starting at center line out in westbound travel lane over pier 1 up to 6" wide x 2" deep full width of bridge. Pothole is full of gravel 1" deep.	
3314	Maintain Steel Superstructure Components	LF	2	Span 3 Beam 2: PM---2' long x full width x down to knife edge area of advanced section loss (0.33" average thickness remaining) on bottom flange at pier 2. 1.5" long x 3/4" wide area of 100% section loss on south bottom flange at 16" from bearing. Previously cleaned and painted with rust staining reactivated.	
3334	Bridge Bearings	EA	0	Span 2 Beam 1 Far Bearing: PM---Previously cleaned and painted over section loss (approximately 40%) with reactivated corrosion with nearly 60% section remaining.	
3342	Clean and Paint Structural Steel	SF	6	Span 3 Beam 2: PM---Previously cleaned and painted over section loss with reactivated corrosion (rust staining)	
3342	Clean and Paint Structural Steel	SF	8	Span 3 Beam 4: PM---Previously cleaned and painted over section loss with reactivated corrosion (rust staining)	

**Key**

 Priority Maintenance Item

 Critical Finding Item

 Priority Maintenance Level Not Determined

## BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 320035

County EDGECOMBE

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

MMS Code	MMS Description	Quantity
2816	Asphalt Surface Repair or Replacement	24 SY
Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
10/17/2018	Andrew Matlock	
Details		
Span 2 Wearing Surface: PM--Full width pothole over pier 2 up to 6" wide x 2" deep full width of bridge. Pothole is full of gravel 1" deep.		

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	2 LF
Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
10/18/2018	Andrew Matlock	
Details		
Span 3 Beam 4: PM---2' long x full width x down to knife edge area of advanced section loss (0.20" average thickness remaining) on bottom flange at pier 2. 5" long x 1" wide area of 100% section loss on north bottom flange. Previously cleaned and painted with rust staining reactivated.		

## BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 320035

County EDGECOMBE

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

MMS Code	MMS Description	Quantity
3342	Clean and Paint Structural Steel	2      SF
Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
10/19/2018	Andrew Matlock	
Details		
Span 2 Beam 1 Far Bearing: PM---Previously cleaned and painted over section loss (approximately 40%) with reactivated corrosion with nearly 60% section remaining.		

MMS Code	MMS Description	Quantity
3342	Clean and Paint Structural Steel	0      SF
Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
10/19/2018	Andrew Matlock	
Details		
Span 2 Beam 4 Near Bearing:PM-- Paint failure with bare metal exposed		



## BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 320035

County EDGECOMBE

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

MMS Code	MMS Description	Quantity
2816	Asphalt Surface Repair or Replacement	12 SY
Location:		
Bent/Span No.		
Priority Level	Status	
Recommended	Routine Maintenance	
Submitted Date:	Submitted By:	Assisted By:
10/17/2018	Andrew Matlock	
Details		
<p>Span 1 Wearing Surface: PM--12' long pothole starting at center line out in westbound travel lane over pier 1 up to 6" wide x 2" deep full width of bridge. Pothole is full of gravel 1" deep.</p>		

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	2 LF
Location:		
Bent/Span No.		
Priority Level	Status	
Recommended	Routine Maintenance	
Submitted Date:	Submitted By:	Assisted By:
10/18/2018	Andrew Matlock	
Details		
<p>Span 3 Beam 2: PM---2' long x full width x down to knife edge area of advanced section loss (0.33" average thickness remaining) on bottom flange at pier 2. 1.5" long x 3/4" wide area of 100% section loss on south bottom flange at 16" from bearing. Previously cleaned and painted with rust staining reactivated.</p>		

## BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 320035

County EDGECOMBE

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

MMS Code	MMS Description	Quantity
3334	Bridge Bearings	0 EA
Location:		
Bent/Span No.		
Priority Level	Status	
Recommended	Routine Maintenance	
Submitted Date:	Submitted By:	Assisted By:
10/19/2018	Andrew Matlock	
Details		
Span 2 Beam 1 Far Bearing: PM---Previously cleaned and painted over section loss (approximately 40%) with reactivated corrosion with nearly 60% section remaining.		

MMS Code	MMS Description	Quantity
3342	Clean and Paint Structural Steel	6 SF
Location:		
Bent/Span No.		
Priority Level	Status	
Recommended	Routine Maintenance	
Submitted Date:	Submitted By:	Assisted By:
10/18/2018	Andrew Matlock	
Details		
Span 3 Beam 2: PM---Previously cleaned and painted over section loss with reactivated corrosion (rust staining)		

## BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 320035

County EDGECOMBE

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

MMS Code	MMS Description	Quantity	
3342	Clean and Paint Structural Steel	8	SF
Location:			
Bent/Span No.			
Priority Level		Status	
Recommended		Routine Maintenance	
Submitted Date:	Submitted By:	Assisted By:	
10/18/2018	Andrew Matlock		
Details			
Span 3 Beam 4: PM---Previously cleaned and painted over section loss with reactivated corrosion (rust staining)			

# Bridge Inspection Field Sketch

MEAS. TAKEN 125FT FROM WEST APPROACH



Roadway	18.5ft Wide	2 Paved Lanes	Looking East
Left Shoulder	3ft Wide		3ft Unpaved
Right Shoulder	6ft Wide		6ft Unpaved
Left Guardrail			
Right Guardrail			

MEAS. EDITED 10/18/2018...ASM  
 ROADWAY EDITED TO 18.5FT WIDE  
 LEFT SHOULDER EDITED TO 3FT WIDE/UNPAVED  
 RIGHT SHOULDER EDITED TO 6FT WIDE/UNPAVED

**Title**

APPROACH ROADWAY

**Description**

DATA WORKSHEET

Bridge No: 320035

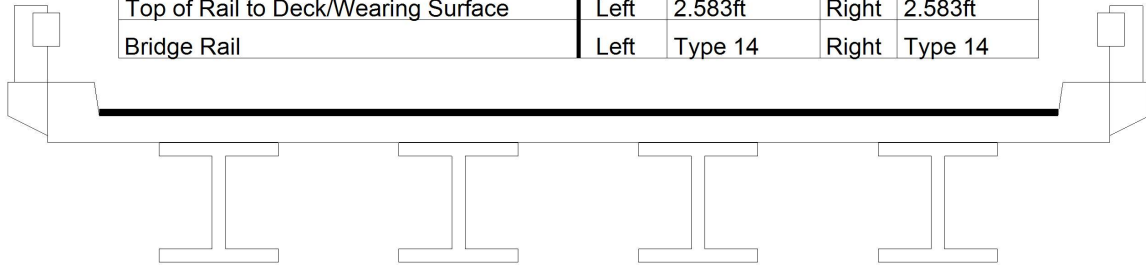
Drawn By: VMH

Date: 10/6/10

File Name: S0026000033

# Bridge Inspection Field Sketch

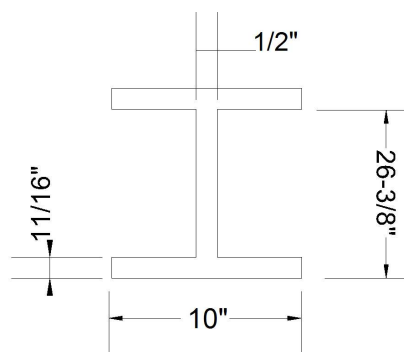
Deck Width/Out to Out	*28.5ft	Between Rails		26.417ft	
Clear Roadway	24ft	Wearing Surface		0.167ft	
Median Width		Median Height			
Curb Height		Left	0.75ft	Right	0.75ft
Sidewalk Width		Left		Right	
Clear Roadway (Rail to Median)		Left		Right	
Guardrail Width		Left	*0.75ft	Right	*0.75ft
Top of Rail to Deck/Wearing Surface		Left	2.583ft	Right	2.583ft
Bridge Rail		Left	Type 14	Right	Type 14



Measurements for Span #	1			
Deck Thickness	0.667	Left Overhang		*3.75
Top of Rail to Bottom of Beam	5.417	Right Overhang		*3.75

Beam Number	Beam Type	Spacing	Comments
1	Steel I Beam	7ft	
2	Steel I Beam	7ft	
3	Steel I Beam	7ft	
4	Steel I Beam	ft	

BEAM DIMENSIONS



MEAS. VERIFIED 10/25/2018...ASM

**Title**

TYPICAL SECTION

**Description**

TYPICAL SECTION

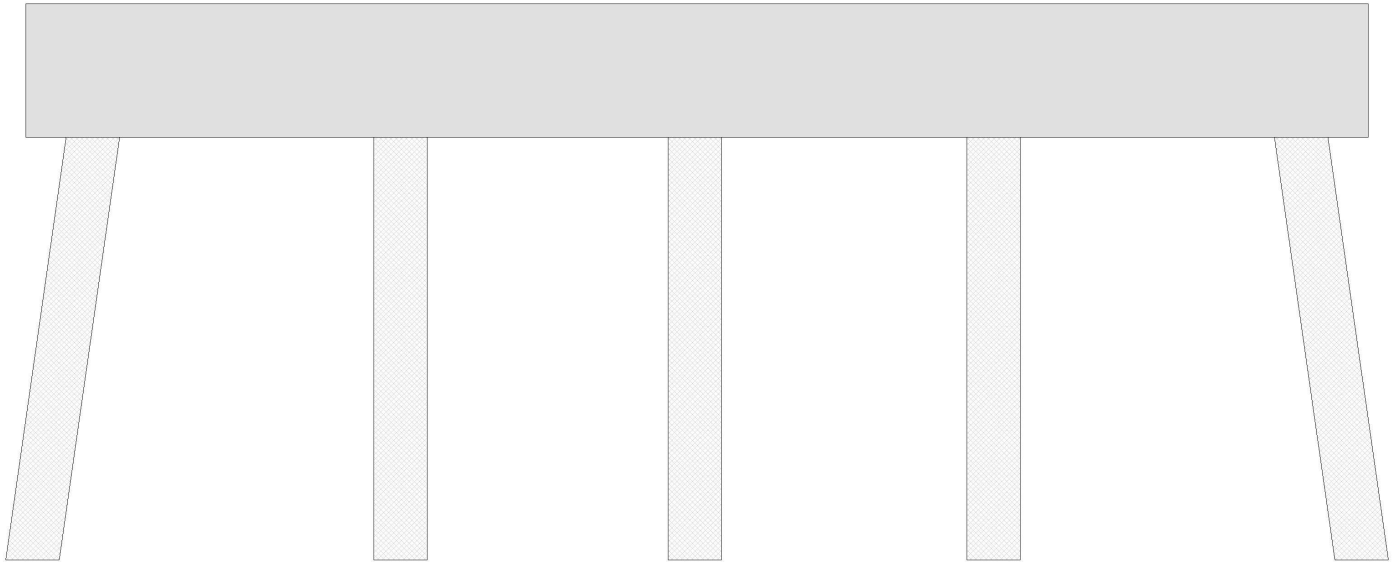
Bridge No: 320035

Drawn By: VMH

Date: 10/6/10

File Name: S0026000035

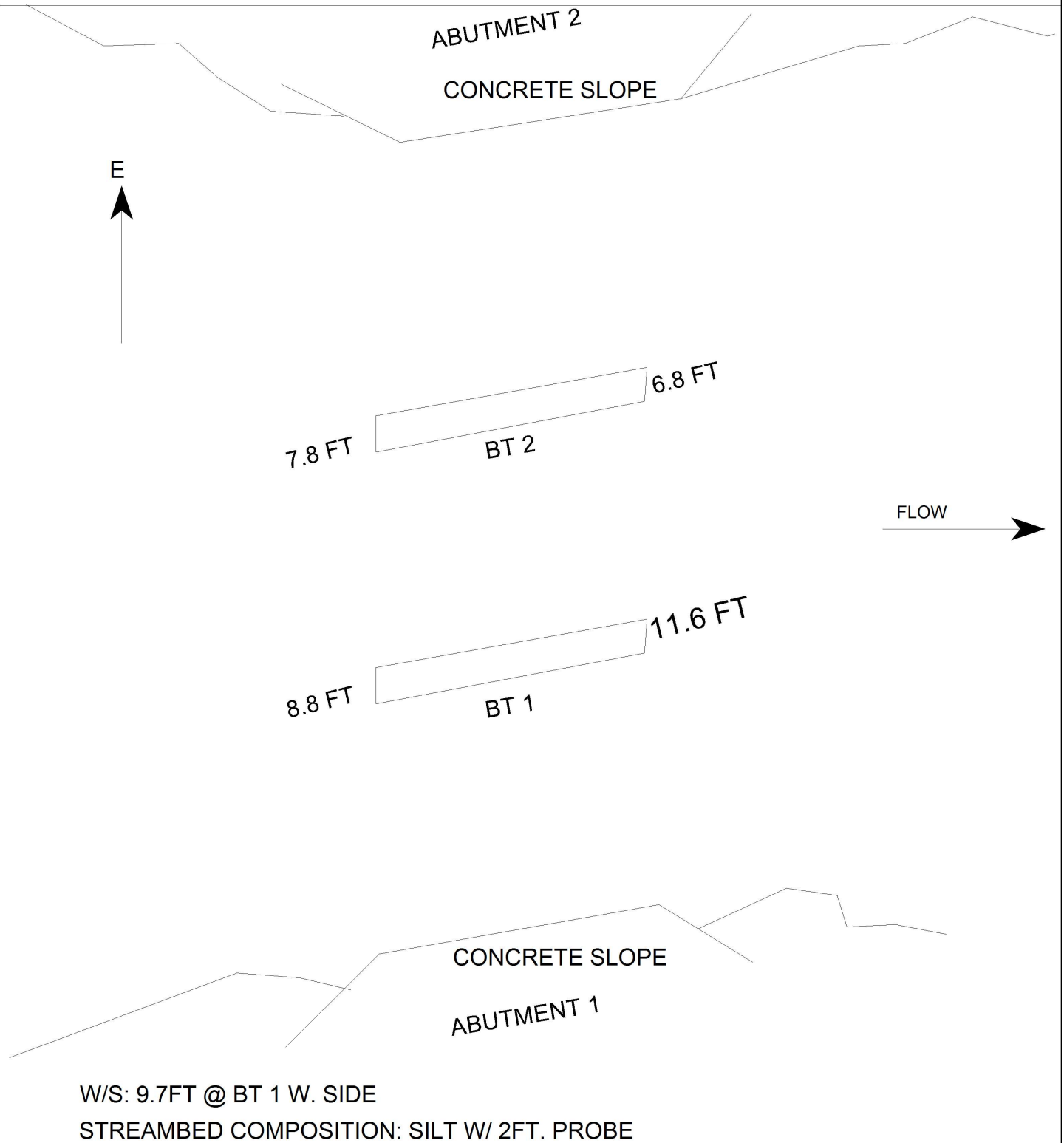
# Bridge Inspection Field Sketch



<b>Cap Information</b>			<b>Material</b> Cast-in-Place Concrete							
Length	Width	Height	Left Overhang	Right Overhang	Left Beam to End of Cap.	Right Beam to End of Cap.				
25.083 ft.	2.500 ft.	2.500 ft.	1.250 ft.	1.250 ft.	1.500 ft.	1.500 ft.				
<b>Subcap Information</b>			<b>Material</b>							
Length	Width	Height	Left Overhang	Right Overhang	Left Pile to Splice.					
<b>Sill Information</b>			<b>Material</b>							
Length	Width	Height								
Pile #	Material	Spacing	Width/Dia.	Height	Length	Orientation	Driven?	Replacement?	Removed?	Collar?
1	Concrete	5.75 ft.	1 ft.	1 ft.		Battered	Yes	No	No	No
2	Concrete	5.5 ft.	1 ft.	1 ft.		Vertical	Yes	No	No	No
3	Concrete	5.583 ft.	1 ft.	1 ft.		Vertical	Yes	No	No	No
4	Concrete	5.75 ft.	1 ft.	1 ft.		Vertical	Yes	No	No	No
5	Concrete		1 ft.	1 ft.		Battered	Yes	No	No	No
<p><b>MEAS. VERIFIED 10/18/2018...ASM</b></p>										
<b>Bent/Abutment #:</b> 1			<b>Similar Bents:</b> 2							

<b>Title</b>			<b>Description</b>			
SUBSTRUCTURE			DATA WORKSHEET			
<b>Bridge No:</b> 320035	<b>Drawn By:</b> PARKER GUFFEY	<b>Date:</b> 10/4/2016	<b>File Name:</b> S0026000036			

# Bridge Inspection Field Sketch



**Title**

EDGECOMBE 35

**Description**

CHANNEL PLAN VIEW

Bridge No: 320035

Drawn By: JCB

Date: 02/8/2011

File Name: S0166000179