NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION: PRIORITY MAINTENANCE, MODIFIED TYPICAL SECTION SKETCH, ADDED CRUTCH BENT SKETCH; POOR DUE TO UNDERMINING OF CRUTCH BENT AND SECTION LOSS TO BEAMS

Structure Safety Report

Routine Element Inspection - Contract

COUNTY: BURKE **STRUCTURE NUMBER:** 110126 **FREQUENCY:** 24 MONTHS

FACILITY CARRIED: SR1115 **MILE POST:**

LOCATION: .3 MI.S.JCT.SR1116

FEATURE INTERSECTED: DOUBLE BRANCH

LATITUDE: 35° 40' 38.74" **LONGITUDE:** 81° 45' 15.71"

SUPERSTRUCTURE: TIMBER FLOOR ON CONT. I-BEAMS (STD.BMD-8)

SUBSTRUCTURE: E.BTS.& CRUTCH BT: TIMBER CAPS/TIMBER POST&SILLS @ VAR. CENTERS

SPANS: 2 @ 17' 9" CONT.

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

PRESENT CONDITION: Poor **INSPECTION DATE:** 01/08/2018

POSTED SV: 18 **POSTED TTST:** 27

OTHER SIGNS PRESENT: 3 DELINEATORS, 2 WEIGHT LIMIT, 2 NARROW BRIDGE



SOUTH APPROACH LOOKING NORTH

Sign noticed issued for		Number Required
NO	**WEIGHT LIMIT**	0
YES	**DELINEATORS**	1
NO	**NARROW BRIDGE**	0
NO	**ONE LANE BRIDGE**	0
NO	**LOW CLEARANCE**	0

DIRECTION OF INSPECTION S-N

DIRECTION MATCHES PLANS

INSPECTED BY	SIGNATURE	ASSISTED BY
BRANDON ELLIOT		SETH POOLE

Structure Element Scoring

Structure Number: **110126**

Inspection Date **1/8/2018**

Element Number	Parent Number	Element Name	Location	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity
31	0	Timber Deck	Deck	713	713	0	0	0
107	0	Steel Open Girder/Beam	Beam	288	22	241	0	25
515	107	Steel Protective Coating	Beam	1424	664	0	0	760
206	0	Timber Column	Piles and Columns	5	5	0	0	0
216	0	Timber Abutment	Abutments	50	42	0	8	0
228	0	Timber Pile	Piles and Columns	9	9	0	0	0
235	0	Timber Pier Cap	Caps	66	66	0	0	0
316	0	Other Bearings	Bearing Device	16	0	7	9	0
515	316	Steel Protective Coating	Bearing Device	16	0	4	8	4
332	0	Timber Bridge Railing	Bridge Rail	72	72	0	0	0
510	0	Wearing Surface	Wearing Surfaces	681	0	0	681	0

Summary of Maintenance Needs

Maintenance By Defect

Structure Number: **110126** Inspection Date: **01/08/2018**

MMS Code	Element Name	Defect Name	Recommended Quantity
3314	Steel Open Girder/Beam	Corrosion	25 Feet
3346	Timber Abutment	Decay/Section Loss	8 Feet
2816	Wearing Surface	Crack (Wearing Surface)	681 Square Feet
3342	Steel Protective Coating	Effectiveness (Steel Protective Coatings)	760 Square Feet

Element Structure Maintenance Quantities

Structure Number: **110126** Inspection Date **01/08/2018**

Location	MMS Code	Description	Maint Quantity	Total Quantity	Severe Quantity	Poor Quantity	Fair Quantity	Good Quantity
Abutments	3346	Maintenance of Timber Bulkheads or Wingwalls	8	50	0	8	0	42
Beam	3314	Maintenance Steel Superstructure Components	25	288	25	0	241	22
Beam	3342	Clean and Paint Steel	760	1424	760	0	0	664
Bearing Device	3334	Bridge Bearing	16	16	0	9	7	0
Bearing Device	3342	Clean and Paint Steel	16	16	4	8	4	0
Bridge Rail	3316	Maintenance of Timber Bridge Rail	0	72	0	0	0	72
Caps	3344	Maintenance To Timber Substrcutre	0	66	0	0	0	66
Deck	3324	Maintenance of Timber Deck Components	0	713	0	0	0	713
Piles and Columns	3344	Maintenance To Timber Substrcutre	0	14	0	0	0	14
Wearing Surfaces	2816	Asphalt Surface Repair	681	681	0	681	0	0

Element Condition and Maintenance Data

Structure Number: **110126** Inspection Date: **01/08/2018**

Span 1 Beam 1

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	36	0	36	0	0	Feet
515	Steel Protective Coating	178	78	0	0	100	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	BEAM 1: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING THROUGHOUT STRUCTURE	2	36		Feet
515	Effectiveness (Steel Protective Coatings)	PAINT FAILURE IN AREAS OF SECTION LOSS	4	100	100	Square Feet

General Comments

Span 1 Beam 2

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	36	0	36	0	0	Feet
515	Steel Protective Coating	178	78	0	0	100	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	BEAM 2: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING THROUGHOUT STRUCTURE	2	36		Feet
515	Effectiveness (Steel Protective Coatings)	PAINT FAILURE IN AREAS OF SECTION LOSS	4	100	100	Square Feet

General Comments

Span 1 Beam 3

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	36	11	25	0	0	Feet
515	Steel Protective Coating	178	98	0	0	80	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	BEAM 3: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING FOR 25' STARTING AT END BENT 2	2	25		Feet
515	Effectiveness (Steel Protective Coatings)	PAINT FAILURE IN AREAS OF SECTION LOSS	4	80	80	Square Feet

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	36	11	0	0	25	Feet
515	Steel Protective Coating	178	98	0	0	80	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	BEAM 4: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING FOR 25' STARTING AT END BENT 2	4	25	25	Feet
515	Effectiveness (Steel Protective Coatings)	PAINT FAILURE IN AREAS OF SECTION LOSS	4	80	80	Square Feet

General Comments

Span 1 Beam 5

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	36	0	36	0	0	Feet
515	Steel Protective Coating	178	78	0	0	100	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	BEAM 5: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING THROUGHOUT STRUCTURE	2	36		Feet
515	Effectiveness (Steel Protective Coatings)	PAINT FAILURE IN AREAS OF SECTION LOSS	4	100	100	Square Feet

General Comments

Span 1 Beam 6

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	36	0	36	0	0	Feet
515	Steel Protective Coating	178	78	0	0	100	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	BEAM 6: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING THROUGHOUT STRUCTURE	2	36		Feet
515	Effectiveness (Steel Protective Coatings)	PAINT FAILURE IN AREAS OF SECTION LOSS	4	100	100	Square Feet

General Comments

Span 1 Beam 7

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	36	0	36	0	0	Feet
515	Steel Protective Coating	178	78	0	0	100	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

107	Corrosion	BEAM 7: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING THROUGHOUT STRUCTURE	2	36		Feet
515	Effectiveness (Steel Protective Coatings)	PAINT FAILURE IN AREAS OF SECTION LOSS	4	100	100	Square Feet

General Comments

Span 1 Beam 8

Plate Girder

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
107	Steel Open Girder/Beam	36	0	36	0	0	Feet
515	Steel Protective Coating	178	78	0	0	100	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	BEAM 8: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING THROUGHOUT STRUCTURE	2	36		Feet
515	Effectiveness (Steel Protective Coatings)	PAINT FAILURE IN AREAS OF SECTION LOSS	4	100	100	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	681	0	0	681	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
510	Crack (Wearing Surface)	UP TO 0.125" MAPCRACKING THROUGHOUT ASPHALT WEARING SURFACE	3	681	681	Square Feet

General Comments

Span 1 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	1	0	0	1	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Section loss up to 1/16" along plate edges.

1 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness on plate surfaces.

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	1	0	0	1	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated on plate surfaces.

1 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness on plate surfaces.

Span 1 — 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	1	0	0	0	1	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Section loss up to 1/16" along plate edges with additional pitting up to 1/8" on plate surfaces.

1 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal on plate surfaces.

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	1	0	0	1	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated on plate surfaces.

1 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness on plate surfaces.

Span 1 — 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	1	0	0	0	1	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Section loss up to 1/8" along plate edges with pitting 1/8" on plate surfaces.

1 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal on plate surfaces.

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	1	0	0	1	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated on plate surfaces.

1 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness on plate surfaces.

Span 1 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	1	0	0	1	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Section loss up to 1/16" along plate edges.

1 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness on plate surfaces.

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	1	0	0	1	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Section loss up to 1/16" along plate edges.

1 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness on plate surfaces.

Span 1 — 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	1	0	0	1	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Section loss up to 1/16" along plate edges with additional pitting 1/8" on plate surfaces.

1 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness on plate surfaces.

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	1	0	1	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated on plate surfaces.

1 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only on plate surfaces.

Span 1 — 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	1	0	0	0	1	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Section loss up to 1/8" along plate edges with additional pitting 1/16" on plate surfaces.

1 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal on plate surfaces.

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	1	0	1	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated on plate surfaces.

1 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only along plate edges.

Span 1 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	1	0	0	1	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Section loss up to 1/16" along plate edges.

1 Square Feet of Effectiveness (Steel Protective Coatings): Limited effectiveness on plate surfaces.

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	1	0	1	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated on plate edges.

1 Square Feet of Peeling/Bubbling/Cracking (steel Protective Coatings): Finish coats only along plate edges.

Span 1 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	1	0	0	0	1	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty

General Comments

1 Each of Corrosion: Section loss up to 1/8" along plate edges.

1 Square Feet of Effectiveness (Steel Protective Coatings): Failed; no protection of the underlying metal on plate surfaces.

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	1	0	1	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	

General Comments

1 Each of Corrosion: Freckled rust. Corrosion of the steel has initiated on plate surfaces.

1 Square Feet of Effectiveness (Steel Protective Coatings): Substantially effective on plate surfaces.

End Bent 2 — Abutment

Timber Abutment

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
216	Timber Abutment	25	17	0	8	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
216	Decay/Section Loss	END BENT 2 BACKWALL: 2' WIDE X 3" HIGH X 1.5" DEEP DECAY AT RIGHT END	3	2	2	Feet
216	Decay/Section Loss	END BENT 2 BACKWALL: 6' X 8" AREA OF 100% DECAY BETWEEN PILES 1 AND 2 (PRIORITY MAINTENANCE)	3	6	6	Feet

General Comments

Crutch Bent 1 Span 1 — Cap 1

Timber Pier Cap

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
235	Timber Pier Cap	26	26	0	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	

General Comments

BEAMS 3-8 ARE NOT BEARING ON THE CRUTCH BENT.

CRUTCH BENT FOOTING IS COMPLETELY UNDERMINED FOR 10' STARTING AT THE UPSTREAM END (PRIORITY MAINTENANCE).

CRUTCH BENT FOOTING IS COMPLETELY UNDERMINED FOR 12' BETWEEN COLUMNS 1 AND 3 (PRIORITY MAINTENANCE).

Elements Verfied

Location	Name	Component	Element Name	Amount
Span 1	Deck	Timber Deck	Timber Deck	713
Span 1	Beam 1	Plate Girder	Steel Open Girder/Beam	36
Span 1	Beam 2	Plate Girder	Steel Open Girder/Beam	36
Span 1	Beam 3	Plate Girder	Steel Open Girder/Beam	36
Span 1	Beam 4	Plate Girder	Steel Open Girder/Beam	36
Span 1	Beam 5	Plate Girder	Steel Open Girder/Beam	36
Span 1	Beam 6	Plate Girder	Steel Open Girder/Beam	36
Span 1	Beam 7	Plate Girder	Steel Open Girder/Beam	36
Span 1	Beam 8	Plate Girder	Steel Open Girder/Beam	36
Span 1	Left Bridge Rail	Timber Rail	Timber Bridge Railing	36
Span 1	Right Bridge Rail	Timber Rail	Timber Bridge Railing	36
Span 1	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	681
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 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
End Bent 1	Cap 1	Timber Pier Cap	Timber Pier Cap	20
End Bent 1	Pile 1	Timber Pile	Timber Pile	1
End Bent 1	Pile 2	Timber Pile	Timber Pile	1
End Bent 1	Pile 3	Timber Pile	Timber Pile	1
End Bent 1	Pile 4	Timber Pile	Timber Pile	1
End Bent 1	Abutment	Timber Abutment	Timber Abutment	25
End Bent 2	Cap 1	Timber Pier Cap	Timber Pier Cap	18
End Bent 2	Cap 2	Timber Pier Cap	Timber Pier Cap	2
End Bent 2	Pile 1	Timber Pile	Timber Pile	1
End Bent 2	Pile 2	Timber Pile	Timber Pile	1
End Bent 2	Pile 3	Timber Pile	Timber Pile	1
End Bent 2	Pile 4	Timber Pile	Timber Pile	1
End Bent 2	Pile 5	Timber Pile	Timber Pile	1
End Bent 2	Abutment	Timber Abutment	Timber Abutment	25
Crutch Bent 1 Span 1	Cap 1	Timber Pier Cap	Timber Pier Cap	26
Crutch Bent 1 Span 1	Cap 1	Timber Pier Cap	Reinforced Concrete Pile Cap/Footing	29

Elements Verfied

Location	Name	Component	Element Name	Amount
Crutch Bent 1 Span 1	Pile 1	Timber Column	Reinforced Concrete Pile Cap/Footing	29
Crutch Bent 1 Span 1	Pile 1	Timber Column	Timber Column	1
Crutch Bent 1 Span 1	Pile 2	Timber Column	Timber Column	1
Crutch Bent 1 Span 1	Pile 2	Timber Column	Timber Pile	1
Crutch Bent 1 Span 1	Pile 3	Timber Column	Timber Pile	1
Crutch Bent 1 Span 1	Pile 3	Timber Column	Timber Column	1
Crutch Bent 1 Span 1	Pile 4	Timber Column	Timber Pile	1
Crutch Bent 1 Span 1	Pile 4	Timber Column	Timber Column	1
Crutch Bent 1 Span 1	Pile 5	Timber Column	Timber Column	1
Crutch Bent 1 Span 1	Pile 5	Timber Column	Timber Pile	1

General Inspection Notes

Bent 1 Cap 1

BEAMS 3-8 ARE NOT BEARING ON THE CRUTCH BENT.

CRUTCH BENT FOOTING IS COMPLETELY UNDERMINED FOR 10' STARTING AT THE UPSTREAM END (PRIORITY MAINTENANCE).

CRUTCH BENT FOOTING IS COMPLETELY UNDERMINED FOR 12' BETWEEN COLUMNS 1 AND 3 (PRIORITY MAINTENANCE).

National Bridge and NC Inspection Items

Structure Number: 110126 **Inspection Date:** 01/08/2018

National Bridge Inventory Items

Item	Grade Scale	Grade
Item 58: Deck	0 - 9 , N	**7**
Item 59: Superstructure	0 - 9 , N	**4**
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	**6**
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	**G**	**0**	**3376**
Drainage System	G, F, P, or C	**G**	**0**	**3332**
Utilities	G, F, P, or C			
Slope Protection	G, F, P, or C		**0**	**3352**
Scour	G, F, P, or C	**P**		
Wingwall	G, F, P, or C		**0**	**3350**
Field Scour Evaluation		**S**		
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	**F**		
Estimated Remaining Life	0 - 100 Years	**3**		
Superstructure Paint Code		**A**		

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

Inspection Information

Item	Grade Scale	Grade
Regulatory Sign Noticed Issued	YES/NO	**Y**
Priority Maintenance Request Submitted	YES/NO	**Y**
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: 110126 **Inspection Date:** 01/08/2018

Item	Superstructure - Item 59	**Grade**	4	**Maint Code**		**Qty.**	0
Details	STRUCTURE RETAINS GRADE OF 4 BECAUSE REPAIRS TO BEAMS 3 AND 4 ARE CONSIDERED TEMPORARY						
Item	Regulatory Sign Notice Issued	**Grade**	Y	**Maint Code**		**Qty.**	0
Details	MISSING DELINEATOR AT SOUTHEAST CORNER.						
Item	Priority Maintenance Issued	**Grade**	Y	**Maint Code**		**Qty.**	0
Details	MISSING DELINEATOR AT SOUTHEAST CORNER. END BENT 2 BACKWALL: 6' X 8" AREA OF 100% DECAY BETWEEN PILES 1 AND 2. CRUTCH BENT FOOTING IS COMPLETELY UNDERMINED FOR 10' STARTING AT THE UPSTREAM END. CRUTCH BENT FOOTING IS COMPLETELY UNDERMINED FOR 12' BETWEEN COLUMNS 1 AND 3.						
Item	Drift	**Grade**	F	**Maint Code**	3366	**Qty.**	4
Details	DRIFT BUILDUP ON THE CRUTCH BENT						
Item	Scour	**Grade**	P	**Maint Code**		**Qty.**	0
Details	CRUTCH BENT IS UNDERMINED FOR A TOTAL OF 22'						
Item	Response to live load	**Grade**	F	**Maint Code**		**Qty.**	0
Details	SUPERSTRUCTURE RATTLES UNDER LIVE LOADING						
Item	Field Scour Evaluation	**Grade**	S	**Maint Code**		**Qty.**	0
Details	CRUTCH BENT IS UNDERMINED FOR A TOTAL OF 22'						



MISSING DELINEATOR AT SOUTHEAST CORNER (PRIORITY MAINTENANCE)



UP TO 0.125" MAPCRACKING THROUGHOUT ASPHALT WEARING SURFACE



END BENT 2 BACKWALL: 6' X 8" AREA OF 100% DECAY BETWEEN PILES 1 AND 2 (PRIORITY MAINTENANCE)



BEAMS 3-8 ARE NOT BEARING ON THE CRUTCH BENT



END BENT 2 BACKWALL: 2' WIDE X 3" HIGH X 1.5" DEEP DECAY AT RIGHT END



BEAMS 3 AND 4 AT END BENT 1 HAVE BEEN EFFECTIVELY REPAIRED FROM PREVIOUS PRIORITY MAINTENANCE REQUEST



TYPICAL CORROSION OF BEARING PLATES AT BOTH END BENTS



BEAM 1: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING THROUGHOUT STRUCTURE



BEAM 2: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING THROUGHOUT STRUCTURE



BEAM 5: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING THROUGHOUT STRUCTURE



BEAM 6: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING THROUGHOUT STRUCTURE



BEAM 7: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING THROUGHOUT STRUCTURE



BEAM 8: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING THROUGHOUT STRUCTURE



BEAM 3: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING FOR 25' STARTING AT END BENT 2



BEAM 4: SECTION LOSS TO TOP AND BOTTOM FLANGES WITH 5/16" REMAINING AND BOTTOM 6" OF WEB WITH 5/16" REMAINING FOR 25' STARTING AT END BENT 2



CRUTCH BENT FOOTING IS COMPLETELY UNDERMINED FOR 10' STARTING AT THE UPSTREAM END (PRIORITY MAINTENANCE)



CRUTCH BENT FOOTING IS COMPLETELY UNDERMINED FOR 12' BETWEEN COLUMNS 1 AND 3 (PRIORITY MAINTENANCE)



SOUTH APPROACH NARROW BRIDGE SIGN (0.1 MILES FROM BRIDGE)



NORTH APPROACH LOOKING SOUTH



TYPICAL WEIGHT LIMIT SIGN



DOWNSTREAM STRUCTURE ELEVATION



UPSTREAM STRUCTURE ELEVATION



DECK OVERVIEW



SOUTH APPROACH LOOKING NORTH



LOOKING UPSTREAM



LOOKING DOWNSTREAM



END BENT 2



CRUTCH BENT



END BENT 1



UNDERSIDE SPAN



DRIFT BUILDUP ON THE CRUTCH BENT



NORTH APPROACH NARROW BRIDGE SIGN (0.2 MILES FROM STRUCTURE)

Stream Bed Soundings

(Profile diagram on following sheet)

County **BURKE** Structure Number: **110126** Inspection Date **01/08/2018**

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

Highwater Mark Distance Location of Highwater Mark

Distance (Station) ft.	Downstream Sounding ft.	Upstream Sounding ft.	Description
0.700	5.100	0.000	TOP OF CAP
1.300	9.600	9.500	FACE OF CAP
5.000	10.600	0.000	
8.000	12.700	0.000	WSWE
12.000	13.300	0.000	
18.000	13.200	0.000	WSWE
18.100	13.000	13.500	CRUTCH BENT
34.500	8.400	9.000	FACE OF CAP
35.300	4.800	0.000	TOP OF CAP

Bridge: 110126 County: BURKE Date: 01/08/2018

STREAMBED PROFILE (Downstream)

Top of Rail = 0FT (Sounding)

