



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE MANAGEMENT UNIT

ATTENTION:

TEMPORARY REPAIRS - WELDED PLATES ON
BEAMS. PRIORITY MAINTENANCE FOR SOUTHEAST
WINGWALL. CHANGE TO STRUCTURE DATA.

Structure Safety Report

Routine Element Inspection - Contract

COUNTY: BUNCOMBE STRUCTURE NUMBER: 100088 FREQUENCY: 24 MONTHS

FACILITY CARRIED: SR3137 MILE POST:

LOCATION: .01 MI.S.JCT.SR3136

FEATURE INTERSECTED: CANE CREEK

LATITUDE: 35° 30' 25.66" LONGITUDE: 82° 24' 50.65"

SUPERSTRUCTURE: TIMBER FLOOR ON I-BEAMS

SUBSTRUCTURE: ABUTS:EXISTING REINFORCED CONCRETE

SPANS: 1 @ 45'-5.5

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

PRESENT CONDITION: Fair INSPECTION DATE: 11/03/2016

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: (4) DELINEATORS, (2) ONE LANE BRIDGE



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

DIRECTION OF INSPECTION S-N

DIRECTION MATCHES PLANS NO PLANS

LOOKING NORTH

INSPECTED BY BYRON ATKINSON	SIGNATURE <i>Byron Atkinson</i>	ASSISTED BY ALLYSON ORR
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Structure Element Scoring

Structure Number: 100088

Inspection Date 11/3/2016

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	686	686	0	0	0
107	0	Steel Open Girder/Beam	Beam	276	272	4	0	0
515	107	Steel Protective Coating	Beam	1650	1462	180	8	0
215	0	Reinforced Concrete Abutment	Abutments	35	32	3	0	0
313	0	Fixed Bearing	Bearing Device	12	0	12	0	0
515	313	Steel Protective Coating	Bearing Device	12	0	0	12	0
332	0	Timber Bridge Railing	Bridge Rail	92	87	2	3	0
510	0	Wearing Surface	Wearing Surfaces	641	0	0	636	5

Summary of Maintenance Needs

Maintenance By Defect

Structure Number: 100088

Inspection Date: 11/03/2016

MMS Code	Element Name	Defect Name	Recommended Quantity
3350	Reinforced Concrete Abutment	Delamination/Spall	1 Feet
3350	Reinforced Concrete Abutment	Scour	3 Feet
3316	Timber Bridge Railing	Connection	3 Feet
3316	Timber Bridge Railing	Split/Delamination (Timber)	1 Feet
3316	Timber Bridge Railing	Damage	1 Feet
2816	Wearing Surface	Crack (Wearing Surface)	636 Square Feet
2816	Wearing Surface	Damage	5 Square Feet
3342	Steel Protective Coating	Effectiveness (Steel Protective Coatings)	200 Square Feet

Element Structure Maintenance Quantities

Structure Number: 100088

Inspection Date 11/03/2016

Location	MMS Code	Description	Maint Quantity	Total Quantity	Severe Quantity	Poor Quantity	Fair Quantity	Good Quantity
Abutments	3350	Maintenance of Concrete Wings and Wall	4	35	0	0	3	32
Beam	3314	Maintenance Steel Superstructure Components	0	276	0	0	4	272
Beam	3342	Clean and Paint Steel	188	1650	0	8	180	1462
Bearing Device	3334	Bridge Bearing	0	12	0	0	12	0
Bearing Device	3342	Clean and Paint Steel	12	12	0	12	0	0
Bridge Rail	3316	Maintenance of Timber Bridge Rail	5	92	0	3	2	87
Deck	3324	Maintenance of Timber Deck Components	0	686	0	0	0	686
Wearing Surfaces	2816	Asphalt Surface Repair	641	641	5	636	0	0

Element Condition and Maintenance Data

Structure Number: 100088

Inspection Date: 11/03/2016

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	46	44	2	0	0	Feet
515	Steel Protective Coating	275	241	30	4	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	SURFACE CORROSION ON BOTTOM FLANGE AT BEAM ENDS	2	2		Feet
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS AT BOTTOM FLANGE AT ENDS	3	4	4	Square Feet
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING IS SUBSTANTIALLY EFFECTIVE, WITH RANDOM SPOTS OF SURFACE RUST ALONG EDGES OF TOP FLANGE	2	30	30	Square Feet

General Comments

THERE IS TWO PLATES WELDED TO BOTH ENDS OF BOTTOM FLANGE 18" LONG X 4" WIDE.

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	46	45	1	0	0	Feet
515	Steel Protective Coating	275	243	30	2	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
107	Corrosion	SURFACE CORROSION ON BOTTOM FLANGE AT END BENT 1	2	1		Feet
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS ON BOTTOM FLANGE AT END BENT 1	3	2	2	Square Feet
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING IS SUBSTANTIALLY EFFECTIVE, WITH RANDOM SPOTS OF SURFACE RUST ALONG EDGES OF TOP FLANGE	2	30	30	Square Feet

General Comments

THERE IS TWO PLATES WELDED TO BOTTOM FLANGE AT BOTH ENDS 18" LONG X 4" WIDE

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	46	46	0	0	0	Feet
515	Steel Protective Coating	275	245	30	0	0	Square Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING IS SUBSTANTIALLY EFFECTIVE, WITH RANDOM SPOTS OF SURFACE RUST ALONG EDGES OF TOP FLANGE	2	30	30	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	46	46	0	0	0	Feet
515	Steel Protective Coating	275	245	30	0	0	Square Feet
Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty		
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING IS SUBSTANTIALLY EFFECTIVE, WITH RANDOM SPOTS OF SURFACE RUST ALONG EDGES OF TOP FLANGE	2	30	30	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	46	46	0	0	0	Feet
515	Steel Protective Coating	275	245	30	0	0	Square Feet
Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty		
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING IS SUBSTANTIALLY EFFECTIVE, WITH RANDOM SPOTS OF SURFACE RUST ALONG EDGES OF TOP FLANGE	2	30	30	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	46	45	1	0	0	Feet
515	Steel Protective Coating	275	243	30	2	0	Square Feet
Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty		
107	Corrosion	SURFACE CORROSION AT BOTTOM FLANGE AT END BENT 1	2	1		Feet	
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS AT BOTTOM FLANGE AT END BENT 1	3	2	2	Square Feet	
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING IS SUBSTANTIALLY EFFECTIVE, WITH RANDOM SPOTS OF SURFACE RUST ALONG EDGES OF TOP FLANGE	2	30	30	Square Feet	
General Comments							

THERE IS TWO PLATES WELDED TO THE BOTTOM FLANGE AT BOTH ENDS 18" LONG X 4" WIDE

Span 1

Wearing Surface

Asphalt Wearing Surface

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
510	Wearing Surface	641	0	0	636	5	Square Feet
Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty		
510	Damage	LOSS OF ASPHALT WEARING SURFACE AT SOUTHEAST CORNER	4	3	3	Square Feet	
510	Damage	LOSS OF ASPHALT WEARING SURFACE AT SOUTHWEST	4	2	2	Square Feet	

Structure Number: 100088Inspection Date: 11/03/2016

510	Crack (Wearing Surface)	CORNER TRANSVERSE REFLECTIVE CRACKING UP TO 1/2" WIDE WITH RANDOM AREAS OF BROKEN PAVEMENT OVER ENTIRE SURFACE	3	636	636 Square Feet
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General Comments

Span 1 Left Bridge Rail

Timber Rail

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
332	Timber Bridge Railing	46	43	0	3	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
332	Connection	POST #2, #3, AND #6 HAVE DECAYED RAIL POST TO BEAM CONNECTION BLOCK	3	3	3 Feet

General Comments

Span 1 Right Bridge Rail

Timber Rail

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
332	Timber Bridge Railing	46	44	2	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
332	Damage	IMPACT DAMAGE TO END POST AT NORTHEAST CORNER	2	1	1 Feet
332	Split/Delamination (Timber)	SPLIT IN TOP RAIL AT RAIL POST #4	2	1	1 Feet

General Comments

Span 1 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
313	Fixed Bearing	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
313	Corrosion	SURFACE CORROSION	2	1	Each
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS	3	1	1 Square Feet

General Comments

Span 1 Far Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
313	Fixed Bearing	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
313	Corrosion	SURFACE CORROSION	2	1	Each

Structure Number: 100088Inspection Date: 11/03/2016

515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS	3	1	1 Square Feet
General Comments					

Span 1 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	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	
313	Corrosion	SURFACE CORROSION	2	1		Each
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS	3	1	1	Square Feet
General Comments						

Span 1 Far Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	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	
313	Corrosion	SURFACE CORROSION	2	1		Each
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS	3	1	1	Square Feet
General Comments						

Span 1 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	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	
313	Corrosion	SURFACE CORROSION	2	1		Each
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS	3	1	1	Square Feet
General Comments						

Span 1 Far Bearing**Fixed Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	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		
313	Corrosion	SURFACE CORROSION	2	1			Each
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS	3	1	1		Square Feet
General Comments							

Span 1 Near Bearing**Fixed Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	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		
313	Corrosion	SURFACE CORROSION	2	1			Each
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS	3	1	1		Square Feet
General Comments							

Span 1 Far Bearing**Fixed Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	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		
313	Corrosion	SURFACE CORROSION	2	1			Each
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS	3	1	1		Square Feet
General Comments							

Span 1 Near Bearing**Fixed Bearing**

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	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		
313	Corrosion	SURFACE CORROSION	2	1			Each
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS	3	1	1		Square Feet

General Comments

Span 1 Far Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	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	
313	Corrosion	SURFACE CORROSION	2	1		Each
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS	3	1	1	Square Feet

 General Comments

Span 1 Near Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	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	
313	Corrosion	SURFACE CORROSION	2	1		Each
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING HAS LIMITED EFFECTIVENESS	3	1	1	Square Feet

 General Comments

Span 1 Far Bearing

Fixed Bearing

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
313	Fixed Bearing	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	
313	Corrosion	SURFACE CORROSION	2	1		Each
515	Effectiveness (Steel Protective Coatings)	PROTECTIVE COATING IS SUBSTANTIALLY EFFECTIVE, WITH RANDOM SPOTS OF SURFACE RUST ALONG EDGES OF TOP FLANGE	3	1	1	Square Feet

 General Comments

End Bent 1 Reinforced Concrete Abutment 1

Reinforced Concrete Abutment

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty	
215	Reinforced Concrete Abutment	18	15	3	0	0	Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty	
215	Delamination/Spall	4" LONG X 18" HIGH X 2" DEEP SPALL IN UPSTREAM END OF FOOTING (OVERLAP WITH SCOUR QUANTITY)	2		1	Feet

Structure Number: 100088

Inspection Date: 11/03/2016

215	Scour	SCOUR UP TO 6" DEEP BELOW BOTTOM OF FOOTING WITH UNDERMINING 9" BACK AT UPSTREAM END OF FOOTING	2	3	3 Feet
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General Comments

TOP OF ABUTMENT IS 4 TIMBER BOARDS. DECAY 3 FT LONG AT SOUTHWEST CORNER.

End Bent 2

Reinforced Concrete Abutment 1

Reinforced Concrete Abutment

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
215	Reinforced Concrete Abutment	17	17	0	0	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
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General Comments

TOP OF ABUTMENT IS 4 TIMBER BOARDS, DECAY 3 FT LONG IN 2ND TIMBER FROM BOTTOM AT NORTHEAST CORNER

Elements Verified

Location	Name	Component	Element Name	Amount
Span 1	Deck	Timber Deck	Timber Deck	686
Span 1	Beam 1	Plate Girder	Steel Open Girder/Beam	46
Span 1	Beam 2	Plate Girder	Steel Open Girder/Beam	46
Span 1	Beam 3	Plate Girder	Steel Open Girder/Beam	46
Span 1	Beam 4	Plate Girder	Steel Open Girder/Beam	46
Span 1	Beam 5	Plate Girder	Steel Open Girder/Beam	46
Span 1	Beam 6	Plate Girder	Steel Open Girder/Beam	46
Span 1	Left Bridge Rail	Timber Rail	Timber Bridge Railing	46
Span 1	Right Bridge Rail	Timber Rail	Timber Bridge Railing	46
Span 1	Wearing Surface	Asphalt Wearing Surface	Wearing Surface	641
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Near Bearing	Fixed Bearing	Fixed Bearing	1
Span 1	Far Bearing	Fixed Bearing	Fixed Bearing	1
End Bent 1		Reinforced Concrete Abutment	Reinforced Concrete Abutment	18
End Bent 2		Reinforced Concrete Abutment	Reinforced Concrete Abutment	17

National Bridge and NC Inspection Items

Structure Number: 100088

Inspection Date: 11/03/2016

National Bridge Inventory Items

Item	Grade Scale	Grade
Item 58: Deck	0 - 9 , N	7
Item 59: Superstructure	0 - 9 , N	6
Item 60: Substructure	0 - 9 , N	6
Item 61: Channel and Channel Protection	0 - 9 , N	7
Item 62: Culvert	0 - 9 , N	N
Item 71: Waterway Adequacy	0 - 9 , N	7
Item 72: Approach Roadway Alignment	0 - 9 , N	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	686	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	F		
Wingwall	G, F, P, or C	F	80	3350
Field Scour Evaluation		B		
Drift	G, F, P, or C	G	0	3366
Fender System	G, F, P, or C		0	3364
Movable Span Machinery	G, F, P, or C			
Response to Live Load	G, F, P, or C	G		
Estimated Remaining Life	0 - 100 Years	6		
Superstructure Paint Code		U		

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	Y
Inspection Time	Hours	6
Traffic Control Time	Hours	
Snooper Time	Hours	
Ladder Used	YES/NO	Y
Bucket Truck Used	YES/NO	N
Boat Used	YES/NO	N
Other Equipment Used	YES/NO	Y

National Bridge and NC SMU Inspection Item Details

Structure Number: 100088

Inspection Date: 11/03/2016

Item	Approach Roadway Alignment - Item 72	Grade	6	Maint Code		Qty.	0
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Details SOUTH APPROACH ROADWAY HAS SETTLED UP TO 2" AT THE SOUTHEAST CORNER

Item	Other Equipment Used	Grade	Y	Maint Code		Qty.	0
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Details WADERS

Item	Deck Debris	Grade	F	Maint Code	3376	Qty.	686
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Details SAND AND LEAVES ALONG BOTH CURBS FULL LENGTH

Item	Scour	Grade	F	Maint Code		Qty.	0
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Details SCOUR UP TO 6" DEEP BELOW BOTTOM OF FOOTING WITH UNDERMINING 9" BACK AT UPSTREAM END OF FOOTING

Item	Wingwalls	Grade	F	Maint Code	3350	Qty.	80
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Details DOWNSTREAM WINGWALLS AT BOTH END BENTS (NORTHWEST AND SOUTHWEST) HAVE BEEN REPAIRED SINCE LAST CYCLE.
UPSTREAM WINGWALL AT END BENT 2 (NORTHEAST CORNER) HAS BEEN REPAIRED SINCE LAST CYCLE.
2 FT X 1 FT AREA OF DECAY AT SOUTHEAST WINGWALL NEAR ABUTMENT 1 AT 8 FT ABOVE GROUND LINE.
RANDOM AREAS OF DECAY OVER ENTIRE SURFACE OF SOUTHEAST WINGWALL WITH SEPARATION OF
TIMBER BOARDS AND FILL SPILLAGE (PM).



Span 1 Wearing Surface: LOSS OF ASPHALT WEARING SURFACE AT SOUTHEAST CORNER



Span 1 Wearing Surface: LOSS OF ASPHALT WEARING SURFACE AT SOUTHWEST CORNER



Span 1 Wearing Surface: TRANSVERSE REFLECTIVE CRACKING UP TO 1/2" WIDE WITH RANDOM AREAS OF BROKEN PAVEMENT OVER ENTIRE SURFACE



Span 1 Right Bridge Rail: IMPACT DAMAGE TO END POST AT NORTHEAST CORNER



Span 1 Right Bridge Rail: SPLIT IN TOP RAIL AT RAIL POST #4



APPROACH ROADWAY: SOUTH APPROACH ROADWAY HAS SETTLED UP TO 2" AT THE SOUTHEAST CORNER



WINGWALLS: RANDOM AREAS OF DECAY OVER ENTIRE SURFACE OF SOUTHEAST WINGWALL WITH SEPARATION OF TIMBER BOARDS AND FILL SPILLAGE (PM)



Span 1 Beam 1: SURFACE CORROSION ON BOTTOM FLANGE AT BEAM ENDS



END BENT 1 BACKWALL: DECAY 3 FT LONG AT TOP BOARD OF TIMBER BACKWALL AT END BENT 1 SOUTHWEST CORNER.



End Bent 1 Abutment/Backwall : SCOUR UP TO 6" DEEP BELOW BOTTOM OF FOOTING WITH UNDERMINING 9" BACK AT UPSTREAM END OF FOOTING



Span 1 Left Bridge Rail: POST #2 AND #3 HAVE DECAYED RAIL POST TO BEAM CONNECTION BLOCK



END BENT 2 BACKWALL: DECAY 3 FT LONG IN 2ND TIMBER FROM BOTTOM AT NORTHEAST CORNER



Span 1 Beam 6: PROTECTIVE COATING IS SUBSTANTIALLY EFFECTIVE, WITH RANDOM SPOTS OF SURFACE RUST ALONG EDGES OF TOP FLANGE



LOOKING NORTH



TYPICAL RAIL (RIGHT RAIL SHOWN)



LOOKING UPSTREAM (EAST)



LOOKING DOWNSTREAM (WEST)



LOOKING SOUTH



ONE LANE BRIDGE SIGN AT NORTH APPROACH



UPSTREAM (EAST) PROFILE



DOWNSTREAM (WEST) PROFILE



END BENT 2 PROFILE



TYPICAL UNDERDECK



TYPICAL BEARING (GIRDER 3 AT END BENT 1 SHOWN)



END BENT 1 PROFILE



WELDED PLATE REPAIR AT BEAM 6 AT END BENT 2

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

Run Date: 08/30/2017

IDENTIFICATION				CLASSIFICATION			
(1) STATE NAME -NORTH CAROLINA	BRIDGE	100088		SUFFICIENCY RATING =		21.79	
(8) STRUCTURE NUMBER(FEDERAL)		00000000210088		STATUS =	Structurally Deficient		
(5) INVENTORY ROUTE (ON/UNDER) - ON		31031370					
(2) STATE HIGHWAY DEPARTMENT DISTRICT		2					
(3) COUNTY CODE 21	(4) PLACE CODE	0		(112)NBIS BRIDGE SYSTEM -		YES	
(6) FEATURE INTERSECTED - CANE CREEK				(104)HIGHWAY SYSTEM	Is not on NHS	0	
(7) FACILITY CARRIED SR3137				(26) FUNCTIONAL CLASS -	Local	09	
(9) LOCATION .01 MI.S.JCT.SR3136				(100)STRAHNET HIGHWAY -	Not a STRAHNET Route	0	
(11)MILEPOINT		0		(101)PARALLEL STRUCTURE -	No Parallel Structure	N	
(16)LAT 35° 30' 25.66"	(17)LONG 82° 24' 50.65"			(102)DIRECTION OF TRAFFIC -	One Lane Bridge, 2-way Traffic	3	
(98)BORDER BRIDGE STATE CODE	PCT SHARE			(103)TEMPORARY STRUCTURE -	Temporary Structure/Conditions	T	
(99)BORDER BRIDGE STRUCTURE NO				(110)DESIGNATED NATIONAL NETWORK -	Not on the National Network	0	
				(20) TOLL	On Free Road	3	
				(31) MAINTAIN -	State Highway Agency	01	
				(22) OWNER -	State Highway Agency	01	
				(37) HISTORICAL SIGNIFICANCE -	Not Eligible	5	
STRUCTURE TYPE AND MATERIAL				CONDITION			
(43) STRUCTURE TYPE MAIN: Steel				(58) DECK		7	
TYPE - Stringer Multibeam or Girder	CODE	302		(59) SUPERSTRUCTURE		6	
(44) STRUCTURE TYPE APPR :				(60) SUBSTRUCTURE		3	
TYPE -	CODE	000		(61) CHANNEL & CHANNEL PROTECTION		7	
(45) NUMBER OF SPANS IN MAIN UNIT		1		(62) CULVERTS		N	
(46) NUMBER OF APPROACH SPANS							
(107)DECK STRUCTURE TYPE - 8	CODE			LOAD RATING AND POSTING			
(108)WEARING SURFACE / PROTECTIVE SYSTEM :				(31) DESIGN LOAD	Unknown	0	
(A) TYPE OF WEARING SURFACE -	CODE			(63) OPERATING RATING METHOD -	Load Factor	1	
(B) TYPE OF MEMBRANE -	CODE			(64) OPERATING RATING -	HS-1	1	
(C) TYPE OF DECK PROTECTION -	CODE			(65) INVENTORY RATING METHOD -	Load Factor	1	
				(66) INVENTORY RATING -	HS-1	1	
				(70) BRIDGE POSTING -	No Posting Required	5	
				(41) STRUCTURE OPEN, POSTED ,OR CLOSED		D	
				DESCRIPTION -	Open Temporary Shoring		
AGE AND SERVICE				APPRAISAL			
(27) YEAR BUILT		1959		(67) STRUCTURAL EVALUATION		3	
(106)YEAR RECONSTRUCTED				(68) DECK GEOMETRY		3	
(42) TYPE OF SERVICE : ON - Highway				(69) UNDERCLEARANCES,VERTI & HORIZ		N	
UNDER - Waterway	CODE	15		(71) WATERWAY ADEQUACY		7	
(28) LANES: ON STRUCTURE 1 UNDER STRUCTURE		0		(72) APPROACH ROADWAY ALIGNMENT		6	
(29) AVERAGE DAILY TRAFFIC		200		(36) TRAFFIC SAFETY FEATURES		0000	
(30) YEAR OF ADT 2000	(109) TRUCK ADT PCT	6%		(113)SCOUR CRITICAL BRIDGES		U	
(19) BYPASS OR DETOUR LENGTH		3 MI					
GEOMETRIC DATA							
(48) LENGTH OF MAXIMUM SPAN		44 FT					
(49) STRUCTURE LENGTH		46 FT					
(50)CURB OR SIDEWALK: LEFT .3 FT RIGHT .3 FT							
(51) BRIDGE ROADWAY WIDTH CURB TO CURB		14.083 FT					
(52) DECK WIDTH OUT TO OUT		15.083 FT					
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)		15 FT					
(33) BRIDGE MEDIAN - No Median	CODE	0					
(34) SKEW 0°	(35) STRUCTURE FLARED	0					
(10) INVENTORY ROUTE MIN VERT CLEAR		999.9 FT					
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR		14.083 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					
NAVIGATION DATA				PROPOSED IMPROVEMENTS			
(38) NAVIGATION CONTROL - No Navigational Control	CODE	0		(75) TYPE OF WORK -		CODE	
(111)PIER PROTECTION -	CODE			(76) LENGTH OF STRUCTURE IMPROVEMENT			
(39) NAVIGATION VERTICAL CLEARANCE		0		(94) BRIDGE IMPROVEMENT COST			
(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR		FT		(95) ROADWAY IMPROVEMENT COST			
(40) NAVIGATION HORIZONTAL CLEARANCE		0 FT		(96) TOTAL PROJECT COST			
				(97) YEAR OF IMPROVEMENT COST ESTIMATE			
				(114)FUTURE ADT 400	(115) YEAR FUTURE ADT	2025	
				INSPECTIONS			
				(90) INSPECTION DATE		11/03/2016	
				(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			

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 08/30/2017

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
BUNCOMBE	13	2	100088	46	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR3137	CANE CREEK

LOCATED :	BRIDGE NAME :	CITY :
.01 MI.S.JCT.SR3136		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	200 2000	LT 227 RT 227

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1959	BMU			Unknown

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :		
	BMU	5.8451	TAN	90	ON 1	UNDER	0

NAVIGATION :			HT. CRN. TO BED :		WATER DEPTH :		
VC 0 FT	HC 0 FT		13 FT		3		FT

SUPERSTRUCTURE :	TIMBER FLOOR ON I-BEAMS
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SUBSTRUCTURE :	ABUTS:EXISTING REINFORCED CONCRETE
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SPANS :	1 @ 45'-5.5
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BEAMS OR GIRDERS :	6 LINES 24 I-BEAMS @ 2'-5 CENTERS
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FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
3X4 TIM/1 AWS		15.083 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
14.083 FT	14.75 FT	LT .3 FT RT .3 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :		DATE
HS-1	HS-1	intbm#3	SV	TTST	02/23/1995

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

UNDER ROUTES AND CLEARANCES

REMARKS :

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 100088

County BUNCOMBE

Date: 11/03/2016

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	15	RANDOM AREAS OF DECAY OVER ENTIRE SURFACE OF SOUTHEAST WINGWALL WITH SEPARATION OF TIMBER BOARDS AND FILL SPILLAGE (PM)	

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 100088

County BUNCOMBE

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	15 LF
Location:		
Abutment Substructure	Bent/Span No. 1	SOUTHEAST WINGWALL
Priority Level	Status	
Priority Maintenance	Division Maintenance Work Completed	
Submitted Date:	Submitted By:	Assisted By:
11/09/2016	BYRON ATKINSON, PE	ALLYSON ORR, PE
Details		
RANDOM AREAS OF DECAY OVER ENTIRE SURFACE OF SOUTHEAST WINGWALL WITH SEPARATION OF TIMBER BOARDS AND FILL SPILLAGE (PM)		

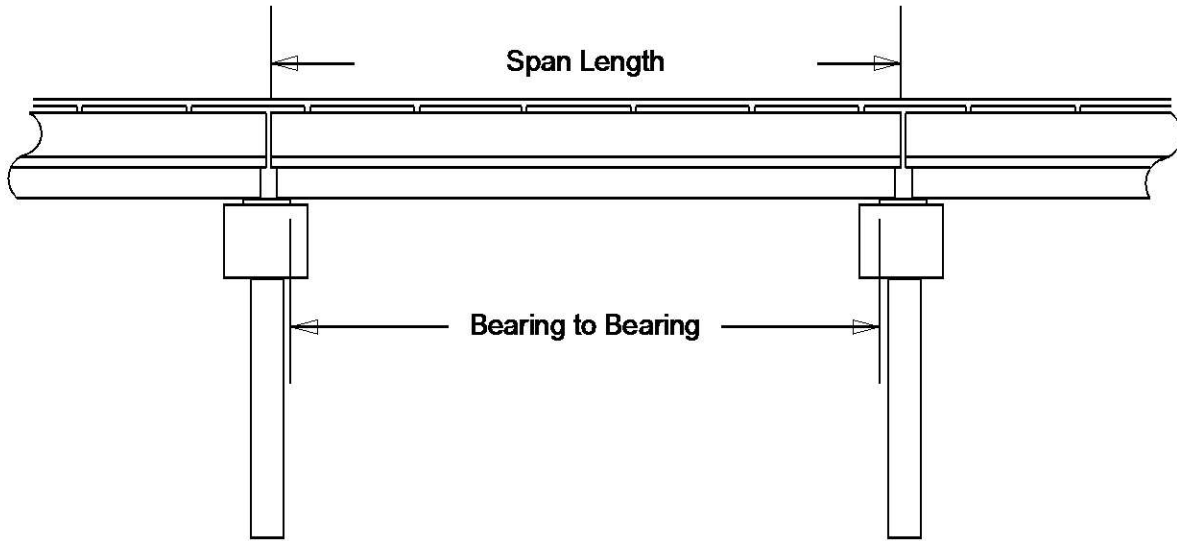


WINGWALLS: RANDOM AREAS OF DECAY OVER ENTIRE SURFACE OF SOUTHEAST WINGWALL WITH SEPARATION OF TIMBER BOARDS AND FILL SPILLAGE (PM)

Structure Data Worksheet

Spans

County: BUNCOMBE Structure No: 100088 Date: 11/03/2016 Inspected By: BEA



Span No	Span Length	Bearing to Bearing	Comments
1	45.54	44.167	NBIS LENGTH = 42.5

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 100088 County: BUNCOMBE Date: 11/03/2016 By: BEA

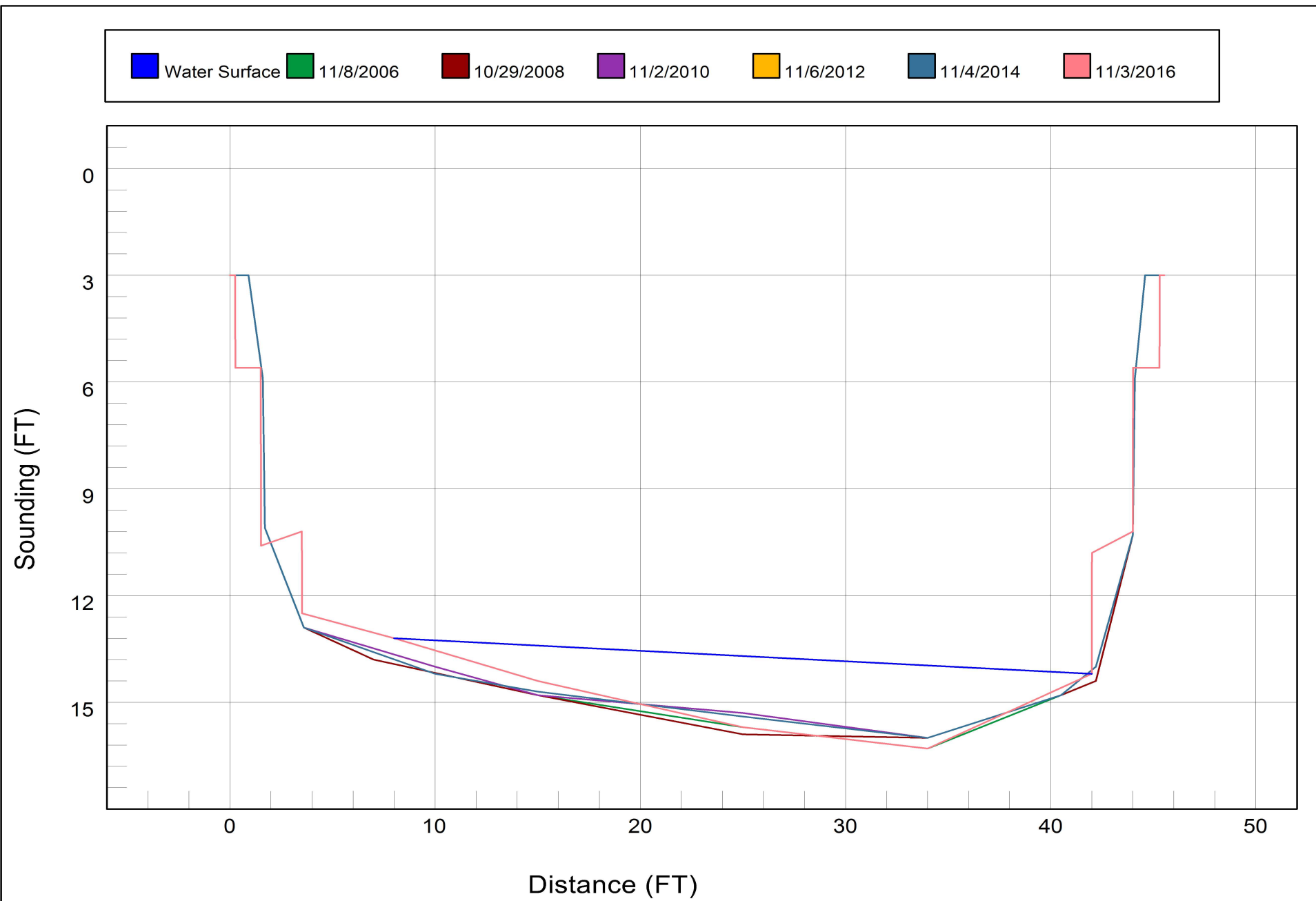
Record sounding from top of rail. Other location if needed: _____

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

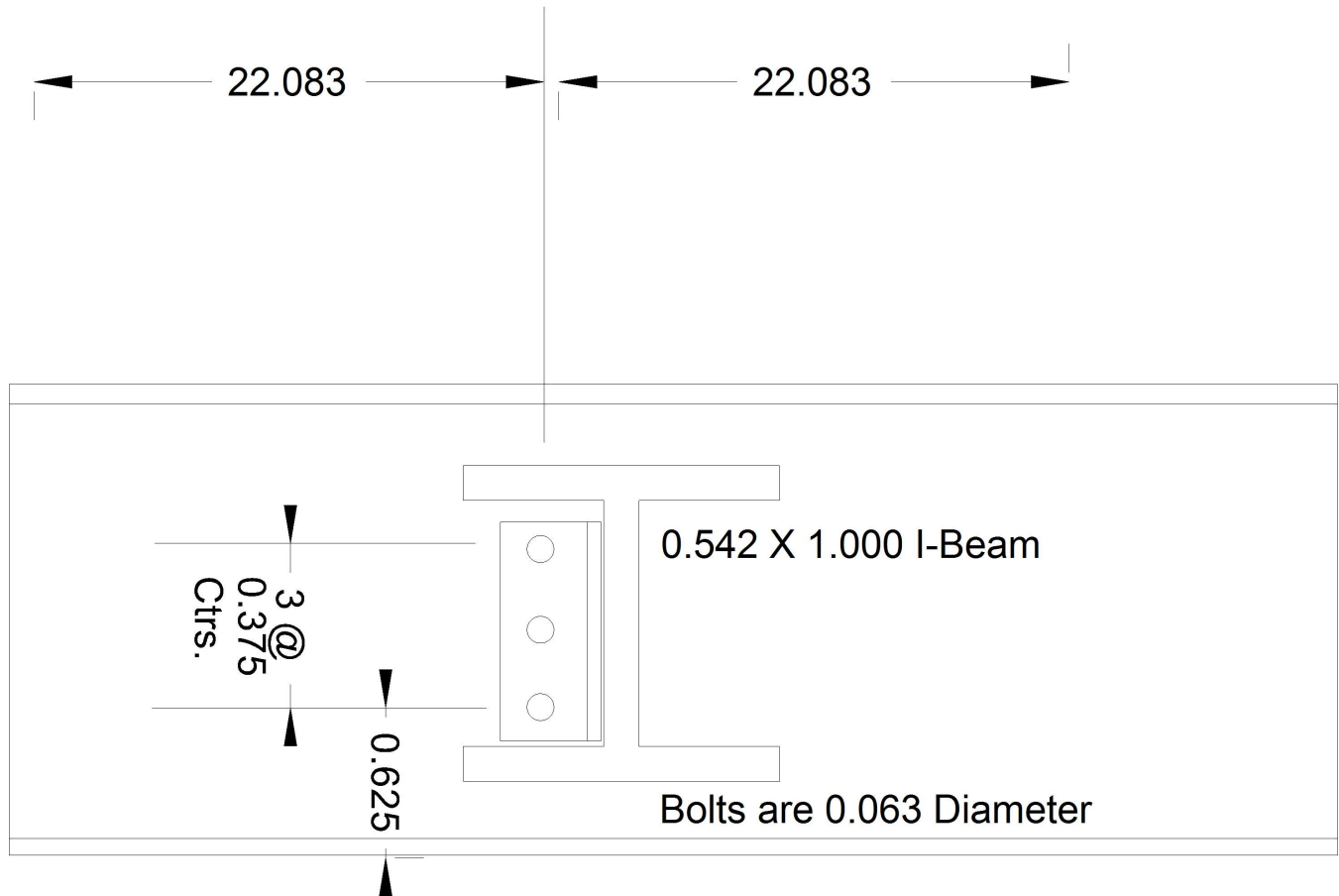
DOWNSTREAM			UPSTREAM		
Distance (Station) (ft)	Sounding (ft)	Description	Distance (Station) (ft)	Sounding (ft)	Description
0	3	FILL FACE			
0.25	3				
0.26	5.6	Top of Cap			
1.5	5.6				
1.51	10.6	TOP OF FOOTING	1.51	10.9	TOP OF FOOTING
3.5	10.2				
3.51	12.5	FACE OF FOOTING	3.51	14.6	FACE OF FOOTING
8	13.2	Water Surface/Water Edge (WSWE)			
15	14.4				
25	15.7				
34	16.3				
42	14.2	Water Surface/Water Edge (WSWE)			
42.01	10.8	TOP OF FOOTING	42.01	12.4	FACE OF FOOTING
44	10.2		44	9.2	TOP OF FOOTING
44.01	5.6	Top of Cap			
45.3	5.6				
45.31	3				
45.54	3	FILL FACE			

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch



ONE (1) LINE OF DIAPHRAGM IN ALL BAYS AT MIDSPAN

VERIFIED BY BEA / AKO 11/3/16

Title

DIAPHRAGMS

Description

DIAPHRAGMS

Bridge No: 100088

Drawn By: T.J.G.

Date: 10/23/08

File Name: S0110001279

Bridge Inspection Field Sketch



Roadway	15.000ft Wide	2 Unpaved Lanes	Looking North
Left Shoulder	2ft Wide		2.000ft Unpaved
Right Shoulder	2ft Wide		2.000ft Unpaved
Left Guardrail			
Right Guardrail			

THE NORTH APPROACH IS PAVED.

VERIFIED BY BEA / AKO 11/3/16

Title

APPROACH ROADWAY

Description

APPR. RDWAY DATA

Bridge No: 100088

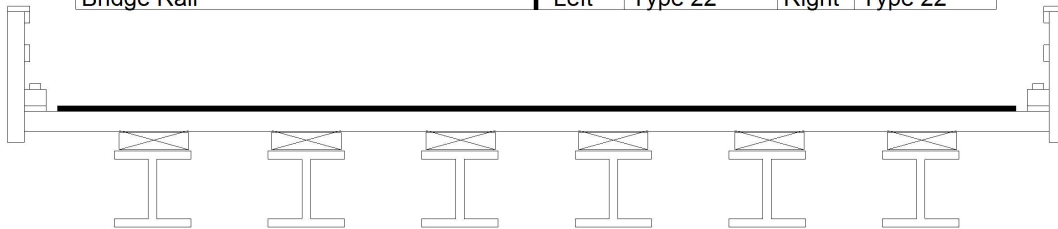
Drawn By: MER

Date: 10/24/08

File Name: S0114000766

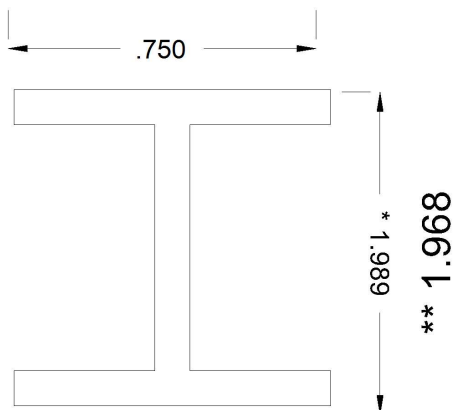
Bridge Inspection Field Sketch

Deck Width/Out to Out	15.083ft	Between Rails			14.75ft
Clear Roadway	14.083ft	Wearing Surface			0.083ft
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		Right	
Top of Rail to Deck/Wearing Surface		Left	2.875ft	Right	2.875ft
Bridge Rail		Left	Type 22	Right	Type 22



Measurements for Span #	1		
Deck Thickness	0.292	Left Overhang	1.5
Top of Rail to Bottom of Beam	5.6	Right Overhang	1.5

Beam Number	Beam Type	Spacing	Comments
1	Steel I Beam	2.417ft	
2	Steel I Beam	2.417ft	
3	Steel I Beam	2.417ft	
4	Steel I Beam	2.417ft	
5	Steel I Beam	2.417ft	
6	Steel I Beam	ft	



FLANGE THICKNESS = * .036 / ** .031

WEB THICKNESS = * .026 / ** .047

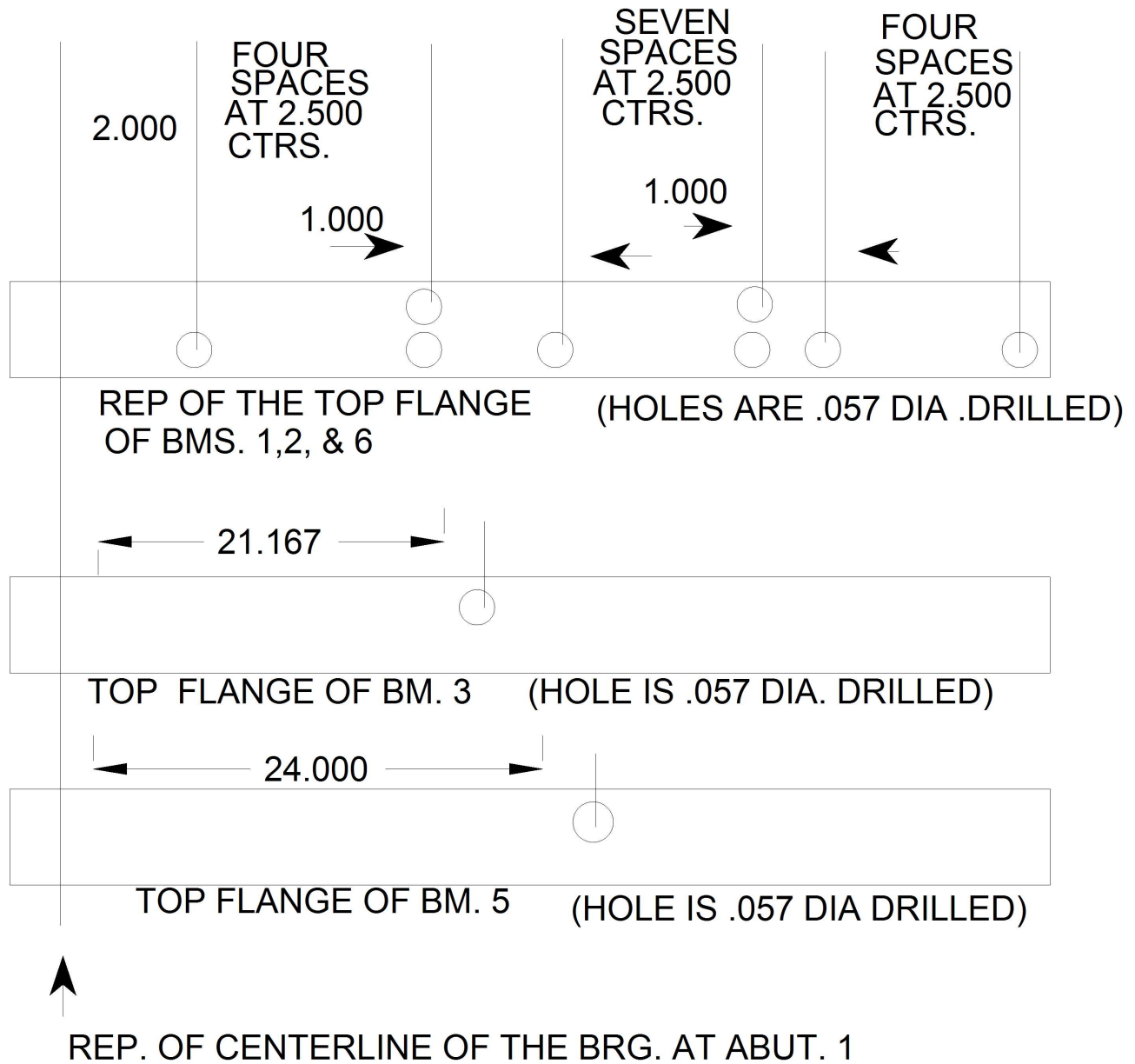
* = BMS. 1,2, & 6 (NON TAPERED)

** = BMS. 3,4, & 5 (NON TAPERED)

UPDATED BY BEA / AKO 11/3/16 - ADDED NAILERS, CORRECTED DECK THICKNESS

Title		Description	
TYPICAL SECTION		TYPICAL SECTION DATA	
Bridge No:	100088	Drawn By:	MER
Date:	10/24/08	File Name:	S0114000767

Bridge Inspection Field Sketch



VERIFIED BY BEA / AKO 11/3/16

Title

HOLES

Description

HOLES IN TOP FLANGE

Bridge No: 100088

Drawn By: MER

Date: 10/24/08

File Name: S0114000768