

NC DEPARTMENT OF TRANSPORTATION ATTENTION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

REPORT FOR NEW AND REBUILT STRUCTURES

COUNTY WATAUGA BRIDGE NUMBER 940278 INSPECTION CYCLE 0 YRS
ROUTE SR1540 ACROSS MIDDLE FORK S.FORK NEW RV M.P. 0

LOCATION 25 FT.W.JCT.US221,321

SUPERSTRUCTURE TIMBER FLOOR ON I-BEAMS

SUBSTRUCTURE E.BTS:TIM.CAPS/TIMBER POST&CONC.SILLS @ VAR.CENTERS

SPANS 1 @ 45'-6

Run Date: 04/03/2017

IDENTIFICATION					
(1) STATE NAME -NORTH CAROLINA	BRIDGE	940278	SUFFICIENCY RATING =		43.67
(8) STRUCTURE NUMBER(FEDERAL)	000000001890278		STATUS =		Structurally Deficient
(5) INVENTORY ROUTE (ON/UNDER) - ON	31015400				
(2) STATE HIGHWAY DEPARTMENT DISTRICT	2				
(3) COUNTY CODE	189	(4) PLACE CODE	0		
(6) FEATURE INTERSECTED - MIDDLE FORK S.FORK NEW RV					
(7) FACILITY CARRIED SR1540					
(9) LOCATION	25 FT.W.JCT.US221,321				
(11)MILEPOINT	0				
(16)LAT	36° 10' 9.10"	(17)LONG	81° 38' 47.88"		
(98)BORDER BRIDGE STATE CODE	PCT SHARE				
(99)BORDER BRIDGE STRUCTURE NO					
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					
(46) NUMBER OF APPROACH SPANS					
(107)DECK STRUCTURE TYPE -	8	CODE			
(108)WEARING SURFACE / PROTECTIVE SYSTEM :					
(A) TYPE OF WEARING SURFACE -		CODE			
(B) TYPE OF MEMBRANE	-	CODE			
(C) TYPE OF DECK PROTECTION -		CODE			
AGE AND SERVICE					
(27) YEAR BUILT					
(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			80		
(30) YEAR OF ADT	1995	(109) TRUCK ADT PCT	%		
(19) BYPASS OR DETOUR LENGTH			99 MI		
GEOMETRIC DATA					
(48) LENGTH OF MAXIMUM SPAN					
(49) STRUCTURE LENGTH					
(50)CURB OR SIDEWALK: LEFT	.3 FT RIGHT		.3 FT		
(51) BRIDGE ROADWAY WIDTH CURB TO CURB					
(52) DECK WIDTH OUT TO OUT					
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)					
(33) BRIDGE MEDIAN -	No Median	CODE	0		
(34) SKEW	0°	(35) STRUCTURE FLARED	0		
(10) INVENTORY ROUTE MIN VERT CLEAR					
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR					
(53) MIN VERT CLEAR OVER BRIDGE RDWY					
(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 -					
NAVIGATION DATA					
(38) NAVIGATION CONTROL - No Navigational Control					
(111)PIER PROTECTION -		CODE			
(39) NAVIGATION VERTICAL CLEARANCE					
(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR			FT		
(40) NAVIGATION HORIZONTAL CLEARANCE					
CLASSIFICATION					
(112)NBIS BRIDGE SYSTEM -					
(104)HIGHWAY SYSTEM Is not on NHS					
(26) FUNCTIONAL CLASS - Local					
(100)STRAHNET HIGHWAY - Not a STRAHNET Route					
(101)PARALLEL STRUCTURE - No Parallel Structure					
(102)DIRECTION OF TRAFFIC - 2-way Traffic					
(103)TEMPORARY STRUCTURE -					
(110)DESIGNATED NATIONAL NETWORK - Not on the National Network					
(20) TOLL On Free Road					
(31) MAINTAIN - State Highway Agency					
(22) OWNER - State Highway Agency					
(37) HISTORICAL SIGNIFICANCE - Not Eligible					
CONDITION					
(58) DECK					
(59) SUPERSTRUCTURE					
(60) SUBSTRUCTURE					
(61) CHANNEL & CHANNEL PROTECTION					
(62) CULVERTS					
LOAD RATING AND POSTING					
(31) DESIGN LOAD Unknown					
(63) OPERATING RATING METHOD - Load Factor					
(64) OPERATING RATING - HS-34					
(65) INVENTORY RATING METHOD - Load Factor					
(66) INVENTORY RATING - HS-24					
(70) BRIDGE POSTING - No Posting Required					
(41) STRUCTURE OPEN, POSTED ,OR CLOSED					
DESCRIPTION - Open, No Restriction					
APPRAISAL					
(67) STRUCTURAL EVALUATION					
(68) DECK GEOMETRY					
(69) UNDERCLEARANCES,VERTI & HORIZ					
(71) WATERWAY ADEQUACY					
(72) APPROACH ROADWAY ALIGNMENT					
(36) TRAFFIC SAFETY FEATURES					
(113)SCOUR CRITICAL BRIDGES					
PROPOSED IMPROVEMENTS					
(75) TYPE OF WORK -					
(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	160	(115) YEAR FUTURE ADT		2025	
INSPECTIONS					
(90) INSPECTION DATE					
(92) CRITICAL FEATURE INSPECTION :					
(93) CFI DATE					
A) FRACTURE CRIT DETAIL - NO					
B) UNDERWATER INSP - NO					
C) OTHER SPECIAL INSP NO					
SCOUR					

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 04/03/2017

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
WATAUGA	11	2	940278	46	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1540	MIDDLE FORK S.FORK NEW RV

LOCATED :	BRIDGE NAME :	CITY :
25 FT.W.JCT.US221,321		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	80 1995	LT 227 RT 227

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1961	BMU			Unknown

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

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

SUPERSTRUCTURE :	TIMBER FLOOR ON I-BEAMS
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SUBSTRUCTURE :	E.BTS:TIM.CAPS/TIMBER POST&CONC.SILLS @ VAR.CENTERS,INT BT: CRUTCH BENT TIM CAP/TIM POST & SILLS @ VAR. CTS.
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SPANS :	2 @ 22'-9"
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BEAMS OR GIRDERS :	12 LINES 18 I-BEAMS @ 2'-7.125 CENTERS
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FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
4X8 TIM/2.5 AWS		30.5 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
29.5 FT	30.167 FT	LT .3 FT RT .3 FT

VERT.CL.OVER :	
999.9 FT	

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :		DATE
HS-24	HS-34	int crutchB	SV	TTST	04/03/2017

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

UNDER ROUTES AND CLEARANCES

REMARKS :

Structure Number: **940278**

Work Completed Date:

Structure Information			
Structure Type		Structure Length ft.	
Number of Spans, Barrels, or Pipes:		NBIS Bridge Length: ☐	
		Skew	
Deck			
Deck Type		Description	
Wearing Surface		in. Description	
Deck Width (Out to Out)		ft	Clear Roadway ft
Roadway Between Rails		ft	
Sidewalks: Left Width		ft.	Right Width ft
Guardrails: Left - Type		Width	ft. Right - Type Width ft
Superstructure			
Type		Description	
Stringer Details			
Substructure			
Abutments - Type		Cap	Piles or Support
Interior Bents - Type		Cap	Piles or Support
Culvert/Pipe			
Type		Description	
Length of Culvert/Pipe		ft	Clear Roadway ft
Shoulders: Left Width		ft.	Right Width ft
Sidewalks: Left Width		ft.	Right Width ft
Distance Between Lines		ft	
Clearance			
Top of Floor to Streambed		ft	
Minimum Vertical Clearance		ft	
Minimum Lateral Clearance		ft	
Total Horizontal Clearance		ft	
Approach			
Clear Roadway		ft	
Shoulders: Left Width		ft.	Right Width ft

Submitted by: D. A. WAYNESubmitted Date: 01/01/1900

Description of Work

Put a bent at mid-span to improve the weight limit until new bridge is built. Bent is 30' long 12"X12" new timber cap and seal. Post are 12"X12" and 10"X12" good salvage timber, bracing is 4"X8" good salvage timber. The cap is lag bolted to steel beams in 4 places, post are fastened with 4-10" screws in each end to cap and seal, bracing bolted with 5/8"X22" bolts. Attaching a detailed diagram of bent and photos.



Looking Nouth



Looking Nouth



Looking at AB 2

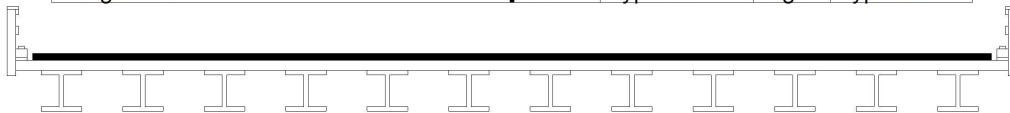


Looking up stream

Bridge Inspection Field Sketch

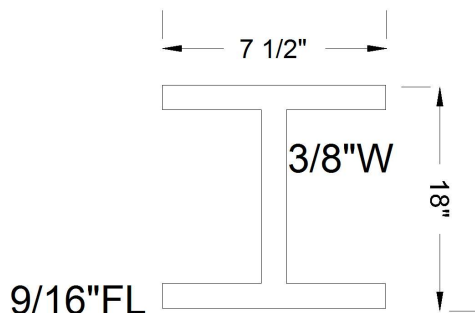
VERIFIED 8/26/2016 A. GLASCO, M. FORD

Deck Width/Out to Out	30.5ft	Between Rails	30.167ft
Clear Roadway	29.5ft	Wearing Surface	0.209ft
Median Width		Median Height	
Curb Height		Left	0.667ft
Sidewalk Width		Right	0.667ft
Clear Roadway (Rail to Median)		Left	
Guardrail Width		Right	
Top of Rail to Deck/Wearing Surface		Left	0.5ft
Bridge Rail		Right	0.5ft
		Left	2.667ft
		Right	2.667ft
		Left	Type 22
		Right	Type 22



Measurements for Span #	1		
Deck Thickness	0.312	Left Overhang	0.917
Top of Rail to Bottom of Beam	4.917	Right Overhang	1.0

Beam Number	Beam Type	Spacing	Comments
1	Steel I Beam	2.593ft	
2	Steel I Beam	2.593ft	
3	Steel I Beam	2.593ft	
4	Steel I Beam	2.593ft	
5	Steel I Beam	2.593ft	
6	Steel I Beam	2.593ft	
7	Steel I Beam	2.593ft	
8	Steel I Beam	2.593ft	
9	Steel I Beam	2.593ft	
10	Steel I Beam	2.593ft	
11	Steel I Beam	2.593ft	
12	Steel I Beam		



2 5/8" X 10" DIAPH. AT 1/3 PTS.

Title

SUPER

Description

SUPER

Bridge No: 940278

Drawn By: DCW

Date: 08/30/2007

File Name: S0126000249

Bridge Inspection Field Sketch

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Roadway	28ft Wide	2 Paved Lanes	Looking East
Left Shoulder	2ft Wide		2ft Unpaved
Right Shoulder	2ft Wide		2ft Unpaved
Left Guardrail			
Right Guardrail			

Title

APPR. ROADWAY

Description

APPROACH ROADWAY

Bridge No: 940278

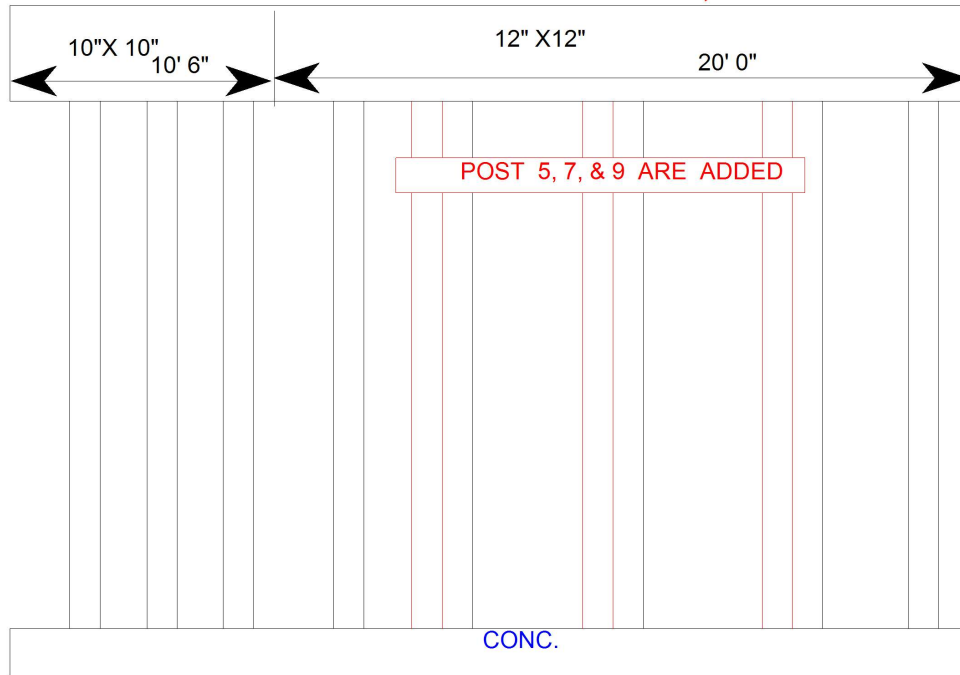
Drawn By: G.R.R.

Date: 08/30/2007

File Name: S0130000257

Bridge Inspection Field Sketch

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Abutment #	1		
Cap - Beam Type (Wood or Steel)			
Cap Size	30.500ft Long	0.959ft Wide	0.959ft High
Left Overhang	1.750ft	Lt Cap/Beam Overhang	1.000ft
Right Overhang	1.333ft	Rt Cap/Beam Overhang	.917ft
Sill - Sill			
Sill Size			

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Post and Sills	3' 8"		10"	10"	Vertical
2	Wood or Timber	Post and Sills	3' 10"		10"	10"	Vertical
3	Wood or Timber	Post and Sills	2' 10"		10"	10"	Vertical
4	Wood or Timber	Post and Sills	3' 6"		10"	10"	Vertical
5	Wood or Timber	Post and Sills	12"		10"	10"	Vertical
6	Wood or Timber	Post and Sills	3' 6"		10"	10"	Vertical
7	Wood or Timber	Post and Sills	12"		10"	10"	Vertical
8	Wood or Timber	Post and Sills	3' 6"		10"	10"	Vertical
9	Wood or Timber	Post and Sills	12"		10"	10"	Vertical
10	Wood or Timber	Post and Sills	4' 3"		10"	10"	Vertical
11	Wood or Timber	Post and Sills			10"	10"	Vertical

Title

ABUT. (A)

Description

SUBSTRUCTURE AB 1

Bridge No: 940278

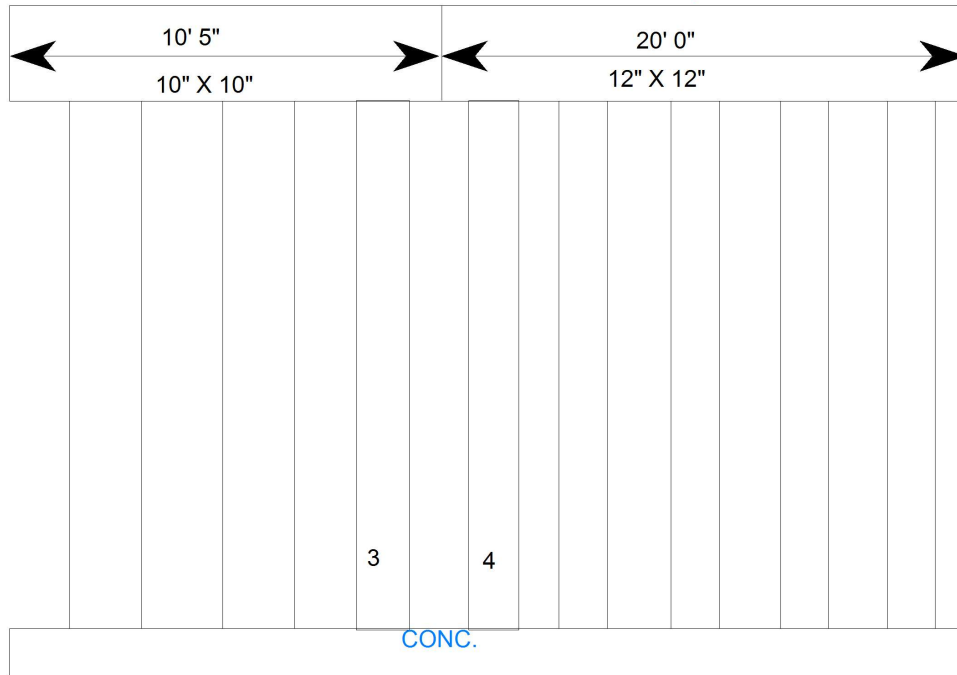
Drawn By: G.R.R.

Date: 08/30/2007

File Name: S0130000258

Bridge Inspection Field Sketch

VERIFIED 8/26/2016 A. GLASCO, M. FORD



Abutment #	2		
Cap - Beam Type (Wood or Steel)			
Cap Size	30.417ft Long	0.959ft Wide	0.959ft High
Left Overhang	1.5ft	Lt Cap/Beam Overhang	1.083 ft
Right Overhang	1.583ft	Rt Cap/Beam Overhang	1.00ft
Sill - Sill			
Sill Size			

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Post and Sills	3' 10'		10"	10"	Vertical
2	Wood or Timber	Post and Sills	3' 10'		10"	10"	Vertical
3	Wood or Timber	Post and Sills	2' 11"		10"	10"	Vertical
4	Wood or Timber	Post and Sills	4' 3"		10"	10"	Vertical
5	Wood or Timber	Post and Sills	4' 3"		10"	10"	Vertical
6	Wood or Timber	Post and Sills	3' 5"		10"	10"	Vertical
7	Wood or Timber	Post and Sills	5' 3"		10"	10"	Vertical
8	Wood or Timber	Post and Sills			10"	10"	Vertical

Title

ABUT. (B)

Description

SUB AB 2

Bridge No: 940278

Drawn By: G.R.R.

Date: 08/30/2007

File Name: S0130000259