



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

PRIORITY MAINTENANCE ISSUED
TEMPORARY REPAIRS

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection - Contract

COUNTY WATAUGA BRIDGE NUMBER 940046 INSPECTION CYCLE 0 YRS

SR1351 (CASTLE FORD RD)

ROUTE SR1351 ACROSS CREEK M.P. 0

.3 MILES NORTHEAST OF JUNCTION WITH SR1354 (MILTON MORETZ RD)

LOCATION .3 MI.NE.JCT.SR1354

SUPERSTRUCTURE TIMBER FLOOR ON I-BEAMS

SUBSTRUCTURE E.BT1:TIM.CAP/TIM.POST&SILL;E.BT2:TIM.CAP/TIM.P&CONC.SILL

1 @ 25'-6"

SPANS 1 @ 25'-6"

LONGITUDE 81° 35' 58.32"

LATITUDE 36° 15' 53.80"

INSPECTION DATE 10/15/2013

PRESENT CONDITION FAIR

PRESENT POSTING SV 17 TTST 23

SV 12 TTST 18

PROPOSED POSTING

OTHER SIGNS PRESENT (4) DELINEATORS, (2) NARROW BRIDGE



WEST APPROACH LOOKING EAST

Fracture Critical	<u>No</u>
Temporary Shoring	<u>No</u>
Scour Critical	<u>No</u>
Scour POA	<u>No</u>

SIGN NOTICE
ISSUED FOR

NUMBERED
REQUIRED

<u>No</u>	WEIGHT LIMIT	<u></u>
<u>No</u>	DELINEATORS	<u></u>
<u>No</u>	NARROW BRIDGE	<u></u>
<u>No</u>	ONE LANE BRIDGE	<u></u>
<u>No</u>	LOW CLEARANCE	<u></u>

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

BRIDGE: **940046** COUNTY: **WATAUGA** DATE: **2/26/2008**

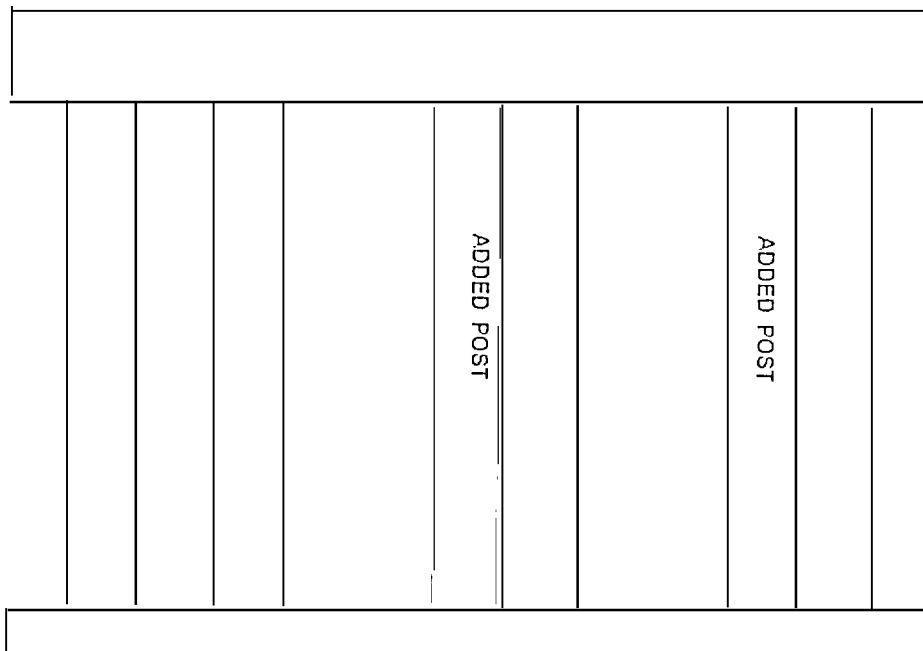
THE FOLLOWING S. I. & A ITEMS ARE TO BE CODED TO REFLECT THE FACT
THAT THE STRUCTURE IS SHORED OR HAS HAD TEMPORARY REPAIRS MADE
TO KEEP THE BRIDGE OPEN :

	<u>CODE</u>	<u>BY</u>
S I & A ITEM 103 - TEMPORARY STRUCTURE DESIGNATION	T	TSE
S I & A ITEM 59 - SUPERSTRUCTURE		
S I & A ITEM 60 - SUBSTRUCTURE	4	TSE 5/19/08
S I & A ITEM 64 OPERATING RATING		
HS 0	BY:	FK
S I & A ITEM 66 - INVENTORY RATING		
HS 0	BY:	FK

COMMENTS

POSTS #3 & #4 ARE SUPPLIMENTED AT ABUTMENT # 2.

Bridge Inspection Field Sketch



Abutment #	2		
Cap - Beam Type (Wood or Steel)			
Cap Size	20.75ft Long	0.833ft Wide	0.833ft High
Left Overhang	1.5ft	Lt Cap/Beam Overhang	.750ft
Right Overhang	1.5ft	Rt Cap/Beam Overhang	.750ft
Sill - Sill			
Sill Size			

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Post and Sills	5' 11"		11 /34"	10"	Vertical
2	Wood or Timber	Post and Sills	4' 11"		11 /34"	10"	Vertical
3	Wood or Timber	Post and Sills	12"		11 /34"	11 /34"	Vertical
4	Wood or Timber	Post and Sills	4' 11"		11 /34"	10"	Vertical
5	Wood or Timber	Post and Sills	12"		11 /34"	11 /34"	Vertical
6	Wood or Timber	Post and Sills			11 /34"	10"	Vertical

Title		Description	
SUB 2		SUB AB 2	
Bridge No: 940046	Drawn By: G.R.R.	Date: 10/08/2007	File Name: S0130000347

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

Run Date: 11/06/2013

IDENTIFICATION							
(1) STATE NAME -NORTH CAROLINA	BRIDGE	940046		SUFFICIENCY RATING =	21.34		
(8) STRUCTURE NUMBER(FEDERAL)		000000001890046		STATUS =	Structurally Deficient		
(5) INVENTORY ROUTE (ON/UNDER) - ON		31013510					
(2) STATE HIGHWAY DEPARTMENT DISTRICT		2					
(3) COUNTY CODE	189	(4) PLACE CODE	0				
(6) FEATURE INTERSECTED - GRASSY CREEK							
(7) FACILITY CARRIED SR1351							
(9) LOCATION .3 MI.NE.JCT.SR1354							
(11)MILEPOINT		0					
(16)LAT 36° 15' 53.80"	(17)LONG	81° 35' 58.32"					
(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			1				
(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			1963				
(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			120				
(30) YEAR OF ADT 2000	(109) TRUCK ADT PCT		6%				
(19) BYPASS OR DETOUR LENGTH			6 MI				
GEOMETRIC DATA							
(48) LENGTH OF MAXIMUM SPAN			24 FT				
(49) STRUCTURE LENGTH			26 FT				
(50)CURB OR SIDEWALK: LEFT .3 FT RIGHT .3 FT							
(51) BRIDGE ROADWAY WIDTH CURB TO CURB			19.14 FT				
(52) DECK WIDTH OUT TO OUT			20.79 FT				
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)			18 FT				
(33) BRIDGE MEDIAN - No Median		CODE	0				
(34) SKEW 10°	(35) STRUCTURE FLARED		0				
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9 FT				
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			19.14 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							
(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				
				CLASSIFICATION			
				(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 - Temporary Structure/Conditions	T		
				(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		
				CONDITION			
				(58) DECK	7		
				(59) SUPERSTRUCTURE	4		
				(60) SUBSTRUCTURE	4		
				(61) CHANNEL & CHANNEL PROTECTION	5		
				(62) CULVERTS	N		
				LOAD RATING AND POSTING			
				(31) DESIGN LOAD Unknown	0		
				(63) OPERATING RATING METHOD - Load Factor	1		
				(64) OPERATING RATING - HS-1	1		
				(65) INVENTORY RATING METHOD - Load Factor	1		
				(66) INVENTORY RATING - HS-1	1		
				(70) BRIDGE POSTING - Posting Required	0		
				(41) STRUCTURE OPEN, POSTED ,OR CLOSED DESCRIPTION - Posted for Load	P		
				APPRAISAL			
				(67) STRUCTURAL EVALUATION	3		
				(68) DECK GEOMETRY	3		
				(69) UNDERCLEARANCES,VERTI & HORIZ	N		
				(71) WATERWAY ADEQUACY	7		
				(72) APPROACH ROADWAY ALIGNMENT	6		
				(36) TRAFFIC SAFETY FEATURES	0000		
				(113)SCOUR CRITICAL BRIDGES	U		
				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 240	(115) YEAR FUTURE ADT	2025	
				INSPECTIONS			
				(90) INSPECTION DATE	10/15/2013		
				(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: 11/06/2013

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
WATAUGA	11	2	940046	26	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1351	GRASSY CREEK

LOCATED :	BRIDGE NAME :	CITY :
.3 MI.NE.JCT.SR1354		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	120 2000	LT 227 RT 227

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1963	BMU			Unknown

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :		
			TAN	80	ON 2	UNDER	0

NAVIGATION :			HT. CRN. TO BED :		WATER DEPTH :		
VC 0 FT	HC 0 FT		8 FT		2		FT

SUPERSTRUCTURE :	TIMBER FLOOR ON I-BEAMS
------------------	-------------------------

SUBSTRUCTURE :	E.BT1:TIM.CAP/TIM.POST&SILL;E.BT2:TIM.CAP/TIM.P&CONC.SILL
----------------	---

SPANS :	1 @ 25'-6
---------	-----------

BEAMS OR GIRDERS :	9 LINES 12 I-BEAMS @ 2'-3.625 CENTERS
--------------------	---------------------------------------

FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
4X8 TIM/2.5AWS		20.79 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
19.14 FT	19.78 FT	LT .3 FT RT .3 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :				
HS-1	HS-1	Int.Beams	SV 10	TTST 14	DATE	11/05/2013	

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

UNDER ROUTES AND CLEARANCES

REMARKS :

BRIDGE INSPECTION RECORD AND SUMMARY

INSPECTION TYPE Routine Inspection - Contract
 BRIDGE NO. 940046 COUNTY WATAUGA
 STRUCTURE TYPE TIMBER FLOOR ON I-BEAMS
 ROUTE ORIENTATION W - E

ROUTE SR1351

OVER CREEK

SPANS 1 @ 25'-6

EVALUATION CODES: CRITICAL (C, 0 - 3); POOR (P, 4); FAIR (F, 5, 6); GOOD (G, 7 - 9)

INSPECTION ITEM				ITEM 61			
DECK ITEMS			GRADES	45. CHANNEL & CHANNEL PROT.			
1. WEARING SURFACE			F	a. WATERWAY			G
				b. ALIGNMENT			F
2. DECK NO. OF EA TYPE SPN GRADE RATES SI & A ITEM 58				c. SCOUR			F
a. CONCRETE				d. SLOPE PROT., RIP-RAP, DIKES, ETC.			
b. TIMBER			1				
c. STEEL PLANK				50. APPROACH ROADWAY CONDITION			F
d. OPEN GRID				51. APPROACH SLABS			
3. RAILING				52. PAINT SYSTEM CODE A			F
a. CONCRETE				53. UTILITIES			
b. TIMBER			G	54. RESPONSE TO LIVE LOAD			G
c. ALUMINUM				55. ESTIMATED REMAINING LIFE			13
d. STEEL							
4. CURBS, WHEELGUARDS, PARAPETS, MEDIANS			G				
5. WALKWAYS (ON OR ATTACHED TO STRUCTURE)				60. REGULATORY SIGN NOTICE ISSUED			NO
6. DECK EXP JTS. OR DEVICES. NO. OF EACH				61. PROMPT-ACTION NOTICE ISSUED			YES
a. STEEL PL OR FINGER				62. PRESENTLY POSTED			YES
b. MISC PREFAB				63. TOT. FIELD INSP TIME (INCLUDE WRITE UP)(MAN HR)			5
c. COMPRESSION SEAL				64. TOTAL SNOOPER INSP. TIME (HRS)			0
d. STANDARD JOINTS				65. TOTAL TRAFFIC CONTROL TIME (MAN HRS)			0
e. OPEN JOINTS							
7. DECK DEBRIS (INCLUDES EXCESS SAND/GRAVEL)			F				
				70. SI&A GENERAL CONDITION RATINGS			
SUPER STR. (FM. 1 (90)B TRUSS) ITEM 59				a. DECK ITEM 58			7
10. LONGITUDINAL BEAMS OR GIRDERS			P	b. SUPERSTRUCTURE ITEM 59			4
11. LONGITUDINAL JOIST OR STRINGERS				c. SUBSTRUCTURE ITEM 60			5
12. INT. DIAP'S, X-FRAMES, BRACING & CONN'S				d. CHANNEL & CHANNEL PROT. ITEM 61			5
13. END DIAP'S, CURTAIN WALLS, & CONN'S							
14. FLOOR BEAMS AND CONNECTIONS				71. SI&A FIELD APPRAISAL RATINGS			
15. BEARING ASSEMBLIES (INCLUDING MISALIGN)				a. WATERWAY ADAQUACY			7
16. DRAINAGE SYSTEM (ON STRUCTURE)			F	b. APPR. RDWY. ALIGNMENT			6
17. MOVABLE SPAN MACHINERY							
				72. FIELD SCOUR EVALUATION			B
SUB STR. ITEMS. ITEM 60 (INCLUDE SCOUR)							
35. TIM SUB STR.				USE OF INSP. ACCESSIBILITY EQUIPMENT			
a. ABUT. & INT. BENT CAPS & RISERS			F	SNOOPER (CODE S, 4, OR N)			0 HRS NO
b. PILES, POST, SILLS, & BRACING			F	LADDER			NO
c. BULKHEADS, WING'S, & TIE BACKS			F	BUCKET TRUCK			NO
36. CONC SUB STR.				BOAT			NO
a. ABUT. & INT. BENT CAPS				OTHER			NO
b. ABUT. & BENT COL'S BREASTWALLS							
c. ABUT. & INT. BENT PILES							
d. BACKWALLS, WING'S, RETAIN. WALLS							
e. ABUT. & BENT FOOTINGS & SILLS			F				
37. STEEL SUB STR.				SPECIAL INSPECTION REQUESTED FOR			
a. ABUT. & INT. BENT CAPS & RISERS							
b. PILES, BRACING, AND BULKHEADS							
38. FOUNDATION PILES TYPE MATERIAL				NOTE			
39. SLOPE PROT., RIP-RAP (INCLUDE DRAINAGE)							
40. FENDER SYSTEMS				80. INSPECTED BY:			
41. DRIFT			G	81. REVIEWED BY:			

Bridge I&A Form 1(82)H State of North Carolina Dept. of Transportation Division of Highways		FIELD INSPECTION REPORT <u>Bridge Inspection & Analysis</u>	
Team Leader THOMAS D GRAHAM			
Assisted By WCM			
Item No.	Grade		
1	F	(WEARING SURFACE) ASPHALT WEARING SURFACE OVER STRUCTURE, PARTIAL WIDTH TRANSVERSE CRACKS (UP TO 1/8IN WIDE) NORTH SHOULDER OVER STRUCTURE, LOOSE GRAVEL WITH VEGETATION GROWTH AND DEBRIS	
7	F	(DECK DEBRIS) NORTH SHOULDER OVER STRUCTURE, LOOSE GRAVEL WITH VEGETATION GROWTH AND DEBRIS	
10	P	(LONGITUDINAL BEAMS) BEAM 2 AT END BENT 1, SECTION LOSS AT WEB (UP TO 10%) (PM) BEAM 3 AT END BENT 2, SECTION LOSS AT WEB (35%) AND BOTTOM FLANGE (50%) AT EDGE OF CAP (PM) BEAM 4 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (50%) AND TOP FLANGE (20%) (PM) BEAM 5 AT END BENT 1, SECTION LOSS AT WEB (80%) WITH CORROSION HOLE (1IN X 3/4IN), TOP FLANGE AND BOTTOM FLANGE (UP TO 10%) (PM) BEAM 5 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (TO KNIFE EDGING) WITH TWO (2) PINHOLES AND TOP FLANGE (25%) (PM) BEAM 5 AT END BENT 2, SECTION LOSS AT WEB (50%) AND BOTTOM FLANGE (40%) AT EDGE OF CAP (PM) BEAM 6 AT END BENT 1, SECTION LOSS AT WEB (60%), TOP FLANGE AND BOTTOM FLANGE (30%) (PM) BEAM 6 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (40%) AND TOP FLANGE (20%) (PM) BEAM 7 AT END BENT 1, SECTION LOSS AT WEB (UP TO 30%) (PM) BEAM 7 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (25%) AND TOP FLANGE (20%) (PM) BEAM 7 AT END BENT 2, SECTION LOSS AT WEB (25%) AND BOTTOM FLANGE (50%) AT EDGE OF CAP BEAM 8 AT END BENT 1, SECTION LOSS AT WEB (UP TO 30%)	
10A	NO	(CURVED GIRDERS) NO CURVED GIRDERS	
16	F	(DRAINAGE SYSTEM) NORTH SHOULDER OVER STRUCTURE, LOOSE GRAVEL WITH VEGETATION GROWTH AND DEBRIS BLOCKING SCUPPERS	
52	F	(PAINT SYSTEM) FLAKING PAINT WITH SURFACE RUST ON ALL BEAMS	
35b	F	(TIMBER POSTS, PILES, SILLS) PILE 2 AT END BENT 1, DECAY (LOWER 1FT), SOFT AND WET	

Bridge I&A Form 1(82)H State of North Carolina Dept. of Transportation Division of Highways		FIELD INSPECTION REPORT <u>Bridge Inspeccion & Analysis</u>	
Team Leader THOMAS D GRAHAM			
Assisted By WCM			
Item No.	Grade		
35c	F	(TIMBER BULKHEADS) END BENT 2 AT SOUTH END, FOOTING EXPOSED WITH SCOUR UNDERMINING BULKHEAD (2FT X 12IN) SOUTHEAST WINGWALL, ROTATED OUTWARD AT THE TOP (8IN) WITH DECAYED BOARDS NORTHEAST WINGWALL, DECAYED TOP BOARD WITH SECTION LOSS EROSION (2FT X 2FT X 4FT DEEP)	
45c	F	(SCOUR) END BENT 2 AT SOUTH END, FOOTING EXPOSED WITH SCOUR UNDERMINING BULKHEAD (2FT X 12IN)	
50	F	(APPROACH ROADWAY) EAST APPROACH EASTBOUND LANE, LONGITUDINAL CRACK (3FT X 1/8IN WIDE) WITH RUTTING IN WHEELPATHS WEST APPROACH EASTBOUND LANE, SETTLEMENT (UP TO 1-1/2IN) WITH ADJACENT CRACK ASPHALT WEARING SURFACE AT EAST APPROACH EASTBOUND LANE/END BENT 1, TRANSVERSE CRACK	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 940046

County WATAUGA

Date: 10/15/2013

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
 3314	Maintain Steel Superstructure Components	LF	10	BEAM 5 AT ABUTMENT 1, SECTION LOSS AT WEB (80%) WITH CORROSION HOLE (1IN X 3/4IN), TOP FLANGE AND BOTTOM FLANGE (UP TO 10%) BEAM 5 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (TO KNIFE EDGING) WITH TWO (2) PINHOLES AND TOP FLANGE (25%) BEAM 5 AT ABUTMENT 2, SECTION LOSS AT WEB (50%) AND BOTTOM FLANGE (40%) AT EDGE OF CAP	
 3314	Maintain Steel Superstructure Components	LF	6	BEAM 7 AT ABUTMENT 1, SECTION LOSS AT WEB (UP TO 30%) BEAM 7 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (25%) AND TOP FLANGE (20%) BEAM 7 AT ABUTMENT 2, SECTION LOSS AT WEB (25%) AND BOTTOM FLANGE (50%) AT EDGE OF CAP	
 3314	Maintain Steel Superstructure Components	LF	5	BEAM 6 AT ABUTMENT 1, SECTION LOSS AT WEB (60%), TOP FLANGE AND BOTTOM FLANGE (30%) BEAM 6 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (40%) AND TOP FLANGE (20%)	
 3314	Maintain Steel Superstructure Components	LF	3	BEAM 3 AT ABUTMENT 2, SECTION LOSS AT WEB (35%) AND BOTTOM FLANGE (50%) AT EDGE OF CAP	
 3314	Maintain Steel Superstructure Components	LF	8	BEAM 4 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (50%) AND TOP FLANGE (20%)	
 3314	Maintain Steel Superstructure Components	LF	3	BEAM 8 AT ABUTMENT 1, SECTION LOSS AT WEB (UP TO 30%)	
3314	Maintain Steel Superstructure Components	LF	1	POSTING SIGN	
3342	Clean and Paint Structural Steel	SF	800	PAINT FAILURE AND SURFACE RUST ON BEAMS	

Key

 Priority Maintenance Item

 Critical Finding Item

 Priority Maintenance Level Not Determined

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 940046

County WATAUGA

Date: 10/15/2013

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	4	END BENT 2 BULKHEAD UNDERMINING	
3346	Repair / Maintain Timber Wings & Blkhds	SF	25	NORTHEAST AND SOUTHEAST WINGWALL DECAYED AND ROTATED	
3376	Clean/Wash Bridge Decks	SF	500	DEBRIS/VEGETATION BLOCKING STRUCTURES	

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 940046

County WATAUGA

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

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	10 LF
Location:		
Beams and Girders	Bent/Span No. 1	BEAM
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification	
Submitted Date:	Submitted By:	Assisted By:
10/15/2013	THOMAS D GRAHAM	WILLIAM MITCHELL
Details		
BEAM 5 AT ABUTMENT 1, SECTION LOSS AT WEB (80%) WITH CORROSION HOLE (1IN X 3/4IN), TOP FLANGE AND BOTTOM FLANGE (UP TO 10%)		
BEAM 5 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (TO KNIFE EDGING) WITH TWO (2) PINHOLES AND TOP FLANGE (25%)		
BEAM 5 AT ABUTMENT 2, SECTION LOSS AT WEB (50%) AND BOTTOM FLANGE (40%) AT EDGE OF CAP		

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 940046

County WATAUGA

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

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	6 LF
Location:		
Beams and Girders	Bent/Span No. 1	BEAM
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification	
Submitted Date:	Submitted By:	Assisted By:
10/15/2013	THOMAS D GRAHAM	WILLIAM MITCHELL
Details		
BEAM 7 AT ABUTMENT 1, SECTION LOSS AT WEB (UP TO 30%)		
BEAM 7 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (25%) AND TOP FLANGE (20%)		
BEAM 7 AT ABUTMENT 2, SECTION LOSS AT WEB (25%) AND BOTTOM FLANGE (50%) AT EDGE OF CAP		

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	5 LF
Location:		
Beams and Girders	Bent/Span No. 1	BEAM
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification	
Submitted Date:	Submitted By:	Assisted By:
10/15/2013	THOMAS D GRAHAM	WILLIAM MITCHELL
Details		
BEAM 6 AT ABUTMENT 1, SECTION LOSS AT WEB (60%), TOP FLANGE AND BOTTOM FLANGE (30%)		
BEAM 6 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (40%) AND TOP FLANGE (20%)		

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 940046

County WATAUGA

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

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	3 LF
Location:		
Beams and Girders	Bent/Span No. 1	BEAM
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification	
Submitted Date:	Submitted By:	Assisted By:
10/15/2013	THOMAS D GRAHAM	WILLIAM MITCHELL
Details		
BEAM 3 AT ABUTMENT 2, SECTION LOSS AT WEB (35%) AND BOTTOM FLANGE (50%) AT EDGE OF CAP		

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	8 LF
Location:		
Beams and Girders	Bent/Span No. 1	BEAM
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification	
Submitted Date:	Submitted By:	Assisted By:
10/15/2013	THOMAS D GRAHAM	WILLIAM MITCHELL
Details		
BEAM 4 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (50%) AND TOP FLANGE (20%)		

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 940046 County WATAUGA

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

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	3 LF
Location:		
Beams and Girders	Bent/Span No. 1 BEAM	
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification	
Submitted Date:	Submitted By:	Assisted By:
10/15/2013	THOMAS D GRAHAM	WILLIAM MITCHELL
Details		
BEAM 8 AT ABUTMENT 1, SECTION LOSS AT WEB (UP TO 30%)		

MMS Code	MMS Description	Quantity
3314	Maintain Steel Superstructure Components	1 LF
Location:		
Beams and Girders	Bent/Span No. 1 BEAMS	
Priority Level	Status	
Recommended	Routine Maintenance	
Submitted Date:	Submitted By:	Assisted By:
10/15/2013	THOMAS D GRAHAM	WILLIAM MITCHELL
Details		
POSTING SIGN		



EAST APPROACH EASTBOUND LANE, LONGITUDINAL CRACK (3FT X 1/8IN WIDE) WITH RUTTING IN WHEELPATHS



WEST APPROACH EASTBOUND LANE, SETTLEMENT (UP TO 1-1/2IN) WITH ADJACENT CRACK



ASPHALT WEARING SURFACE OVER STRUCTURE, PARTIAL WIDTH TRANSVERSE CRACKS (UP TO 1/8IN WIDE)



NORTH SHOULDER OVER STRUCTURE, LOOSE GRAVEL WITH VEGETATION GROWTH AND DEBRIS
BLOCKING SCUPPERS



ASPHALT WEARING SURFACE AT EAST APPROACH EASTBOUND LANE/ABUTMENT 1, TRANSVERSE CRACK



BEAM 2 AT ABUTMENT 1, SECTION LOSS AT WEB (UP TO 10%)



PILE 2 AT ABUTMENT 1, DECAY (LOWER 1FT), SOFT AND WET



(PM) BEAM 5 AT ABUTMENT 1, SECTION LOSS AT WEB (80%) WITH CORROSION HOLE (1IN X 3/4IN), TOP FLANGE AND BOTTOM FLANGE (UP TO 10%)



(PM) BEAM 6 AT ABUTMENT 1, SECTION LOSS AT WEB (60%), TOP FLANGE AND BOTTOM FLANGE (30%)



(PM) BEAM 7 AT ABUTMENT 1, SECTION LOSS AT WEB (UP TO 30%)



(PM) BEAM 8 AT ABUTMENT 1, SECTION LOSS AT WEB (UP TO 30%)



DOWNSTREAM WEST BANK, BANK EROSION (20FT LONG X 2FT HIGH)



(PM) BEAM 7 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (25%) AND TOP FLANGE (20%)



(PM) BEAM 6 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (40%) AND TOP FLANGE (20%)



(PM) BEAM 5 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (TO KNIFE EDGING) WITH TWO (2) PINHOLES AND TOP FLANGE (25%)



(PM) BEAM 4 AT MIDSPAN, SECTION LOSS AT BOTTOM FLANGE (50%) AND TOP FLANGE (20%)



(PM) BEAM 3 AT ABUTMENT 2, SECTION LOSS AT WEB (35%) AND BOTTOM FLANGE (50%) AT EDGE OF CAP



(PM) BEAM 7 AT ABUTMENT 2, SECTION LOSS AT WEB (25%) AND BOTTOM FLANGE (50%) AT EDGE OF CAP



(PM) BEAM 5 AT ABUTMENT 2, SECTION LOSS AT WEB (50%) AND BOTTOM FLANGE (40%) AT EDGE OF CAP



ABUTMENT 2 AT SOUTH END, FOOTING EXPOSED WITH SCOUR UNDERMINING BULKHEAD (2FT X 12IN)



SOUTHEAST WINGWALL, ROTATED OUTWARD AT THE TOP (8IN) WITH DECAYED BOARDS

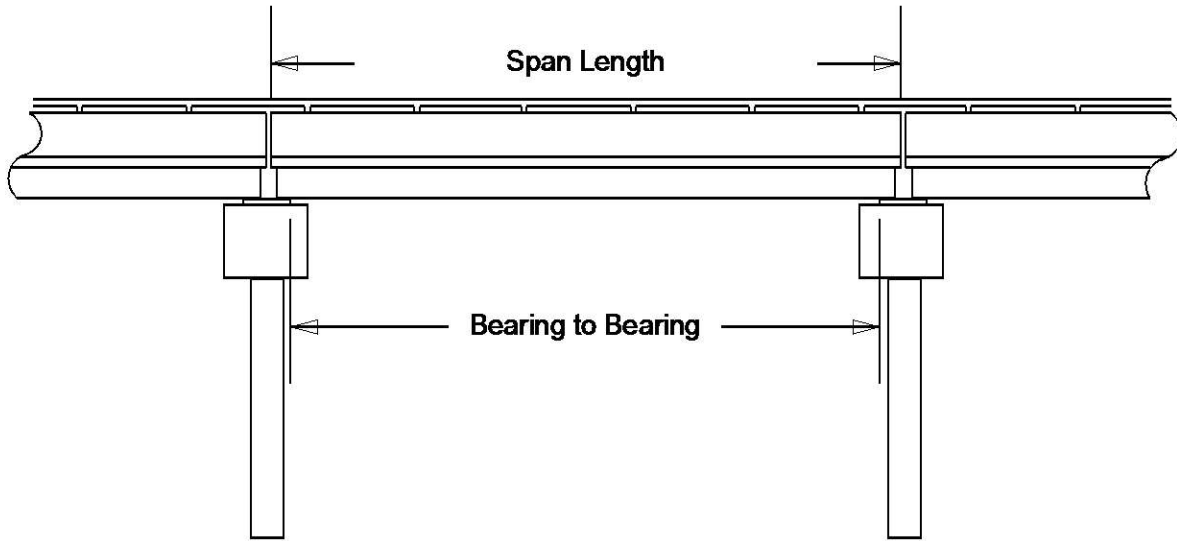


NORTHEAST WINGWALL, DECAYED TOP BOARD WITH SECTION LOSS EROSION (2FT X 2FT X 4FT DEEP)

Structure Data Worksheet

Spans

County: WATAUGA Structure No: 940046 Date: 10/15/2013 Inspected By: TDG



Span No	Span Length	Bearing to Bearing	Comments
1	25' 6"	24' 2"	NBIS LENGTH: 23' 4"

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 940046 County: WATAUGA Date: 10/15/2013 By: TDG

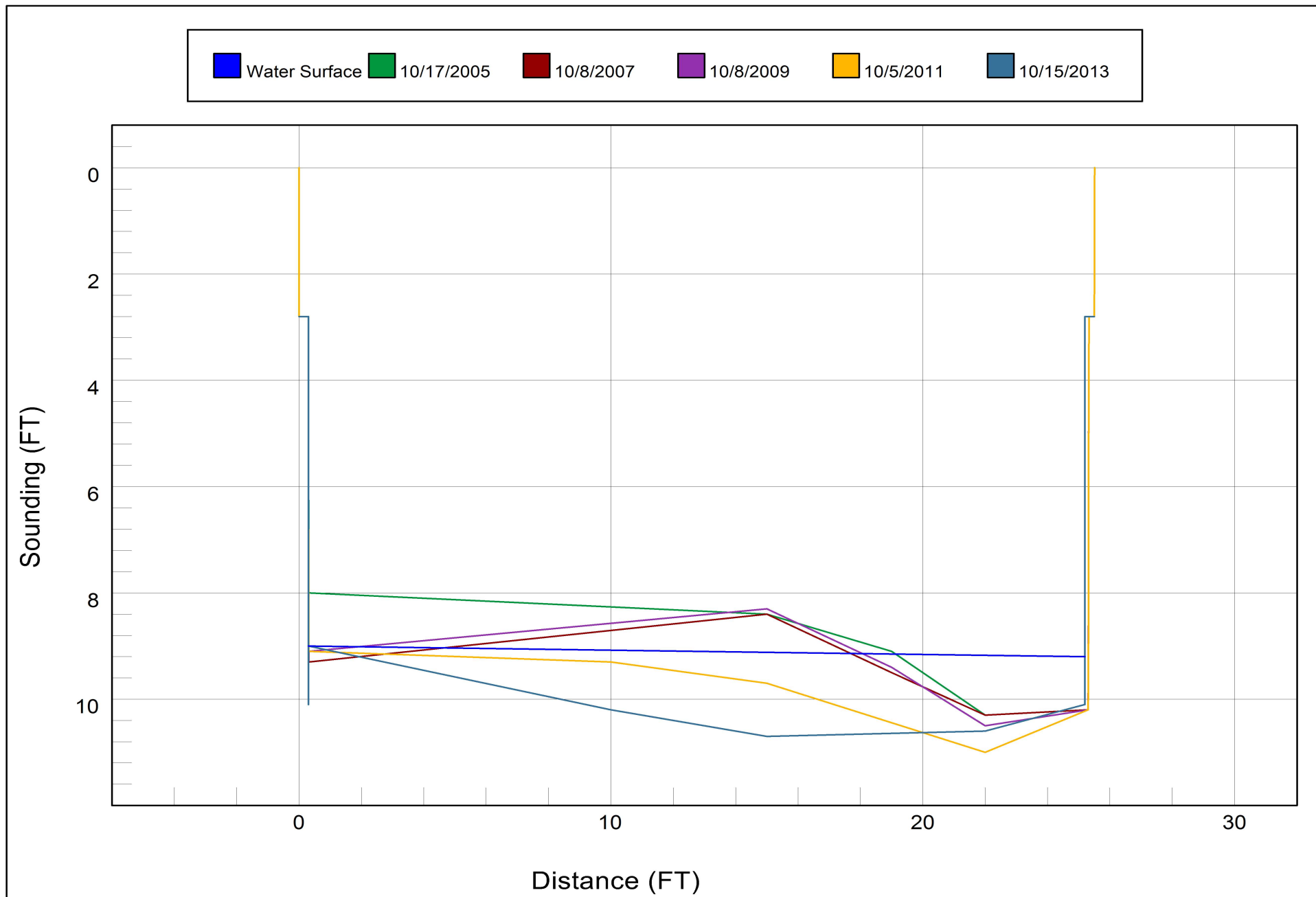
Record sounding from top of rail. Other location if needed: _____

Distance from Highwater Mark to top of rail: 5.5 Location of Highwater Mark: DEBRIS ON BANK

DOWNSTREAM			UPSTREAM		
Distance (Station) (ft)	Sounding (ft)	Description	Distance (Station) (ft)	Sounding (ft)	Description
0	2.8	TOP OF FILL FACE			
0.3	2.8	TOP OF BULKHEAD			
0.301	4.5	Top of Cap			
0.302	10.1	FACE OF BULKHEAD	0.302	7.4	FACE OF BULKHEAD
0.303	9	Water Surface/Water Edge (WSWE)			
10	10.2	STREAMBED			
15	10.7	STREAMBED	15	10.6	STREAMBED
22	10.6	STREAMBED			
25.197	10.1	FACE OF BULKHEAD	25.197	8.7	FACE OF BULKHEAD
25.198	9.2	Water Surface/Water Edge (WSWE)			
25.199	4.5	Top of Cap			
25.2	2.8	TOP OF BULKHEAD			
25.5	2.8	TOP OF FILL FACE			

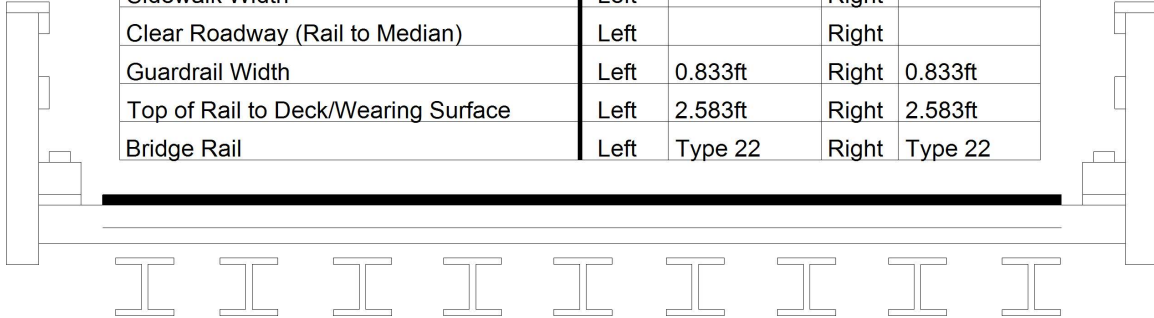
STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



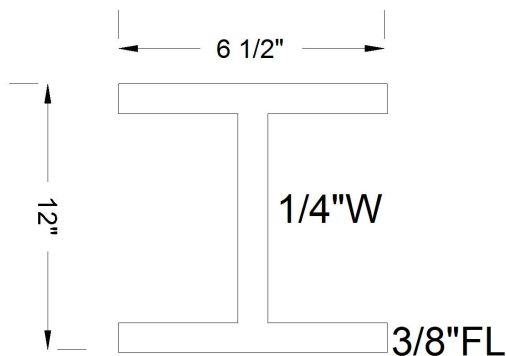
Bridge Inspection Field Sketch

Deck Width/Out to Out	20.79ft	Between Rails	19.78ft
Clear Roadway	19.14ft	Wearing Surface	0.209ft
Median Width		Median Height	
Curb Height		Left 0.65ft	Right 0.65ft
Sidewalk Width		Left	Right
Clear Roadway (Rail to Median)		Left	Right
Guardrail Width		Left 0.833ft	Right 0.833ft
Top of Rail to Deck/Wearing Surface		Left 2.583ft	Right 2.583ft
Bridge Rail		Left Type 22	Right Type 22



Measurements for Span #	1		
Deck Thickness	0.312	Left Overhang	0.75
Top of Rail to Bottom of Beam	4.5	Right Overhang	0.833

Beam Number	Beam Type	Spacing	Comments
1	Steel I Beam	2.14ft	
2	Steel I Beam	2.34ft	
3	Steel I Beam	2.26ft	
4	Steel I Beam	2.27ft	
5	Steel I Beam	2.31ft	
6	Steel I Beam	2.29ft	
7	Steel I Beam	2.28ft	
8	Steel I Beam	2.34ft	
9	Steel I Beam		



Title

SUPERSTRUCTURE

Description

DATA WORKSHEET

Bridge No: 940046

Drawn By: W. MITCHELL

Date: 10/15/2013

File Name: S0126000329

Bridge Inspection Field Sketch										
Cap Information			Material Timber							
Length	Width	Height	Left Overhang	Right Overhang	Left Beam to End of Cap.			Right Beam to End of Cap.		
20.750 ft.	.833 ft.	.833 ft.	1.580 ft.	1.500 ft.	.830 ft.			.750 ft.		
Subcap Information			Material							
Length	Width	Height	Left Overhang	Right Overhang	Left Pile to Splice.					
Sill Information			Material							
Length	Width	Height								
19.750 ft.	.833 ft.	.833 ft.								
Pile #	Material	Spacing	Width/Dia.	Height	Length	Orientation	Driven?	Replacement?	Removed?	Collar?
1	Timber	5.87 ft.	0.979 ft.	.833 ft.		Vertical	No	No	No	No
2	Timber	6.02 ft.	0.979 ft.	.833 ft.		Vertical	No	No	No	No
3	Timber	5.85 ft.	0.979 ft.	.833 ft.		Vertical	No	No	No	No
4	Timber		0.979 ft.	0.833 ft.		Vertical	No	No	No	No
Bent/Abutment #: 1 Similar Bents:										
Title						Description				
SUBSTRUCTURE						DATA WORKSHEET				
Bridge No: 940046			Drawn By: W. MITCHELL			Date: 10/15/2013		File Name: S0130000346		

Bridge Inspection Field Sketch

The diagram illustrates a bridge deck cross-section divided into eight vertical lanes. The top and bottom edges are represented by thick gray horizontal bars. Vertical lines separate the lanes. The fourth lane from the left contains the text "TEMPORARY REPAIR" in red. The seventh lane from the left also contains the text "TEMPORARY REPAIR" in red. The remaining lanes are empty.

Cap Information			Material Timber							
Length	Width	Height	Left Overhang	Right Overhang	Left Beam to End of Cap.		Right Beam to End of Cap.			
20.750 ft.	.833 ft.	.833 ft.	1.670 ft.	1.500 ft.	.833 ft.		.750 ft.			
Subcap Information			Material							
Length	Width	Height	Left Overhang	Right Overhang	Left Pile to Splice.					
Sill Information			Material							
Length	Width	Height								
19.760 ft.	.833 ft.	.833 ft.								
Pile #	Material	Spacing	Width/Dia.	Height	Length	Orientation	Driven?	Replacement?	Removed?	Collar?
1	Timber	5.98 ft.	0.979 ft.	0.833 ft.		Vertical	No	No	No	No
2	Timber	4.95 ft.	.979 ft.	0.833 ft.		Vertical	No	No	No	No
3	Timber	1 ft.	.979 ft.	0.979 ft.		Vertical	No	No	No	No
4	Timber	4.87 ft.	.979 ft.	0.833 ft.		Vertical	No	No	No	No
5	Timber	1 ft.	.979 ft.	0.979 ft.		Vertical	No	No	No	No
6	Timber		0.979 ft.	0.833 ft.		Vertical	No	No	No	No
Bent/Abutment #: 2 Similar Bents:										

Title		Description	
SUBSTRUCTURE		DATA WORKSHEET	
Bridge No: 940046	Drawn By: W. MITCHELL	Date: 10/15/2013	File Name: S0130000347

Bridge Inspection Field Sketch



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

VERIFIED BY: T. GRAHAM 10/15/2013

Title APRW		Description APPROACH ROADWAY	
Bridge No: 940046	Drawn By: G.R.R.	Date: 10/08/2007	File Name: S0130000348



NARROW BRIDGE



EAST APPROACH LOOKING WEST



WEST APPROACH LOOKING EAST



WEST APPROACH LOOKING EAST



POSTING SIGN



SOUTH BARRIER RAIL AND BRIDGE PLAQUE



LOOKING DOWNSTREAM



SOUTHWEST WINGWALL



SOUTHWEST BANK



SOUTHEAST WINGWALL



SOUTHEAST BANK



LOOKING UPSTREAM



NORTHEAST WINGWALL



NORTHEAST BANK



NORTHWEST WINGWALL



NORTHWEST BANK



ASPHALT WEARING SURFACE AT END BENT 1



ASPHALT WEARING SURFACE



ASPHALT WEARING SURFACE AT END BENT 2



SOUTH PROFILE LOOKING NORTH



END BENT 1 GENERAL VIEW



UNDERSIDE OF DECK



END BENT 2 GENERAL VIEW



STREAM AT SOUTHWEST WINGWALL



NORTH PROFILE LOOKING SOUTH



BEARING GENERAL VIEW