



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

CHANGE TO STRUCTURE DATA

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY DAVIDSON BRIDGE NUMBER 280471 INSPECTION CYCLE 2 YRS
ROUTE SR2416 ACROSS CREEK M.P. 0

LOCATION 0.2 MI. S. JCT. SR2322

SUPERSTRUCTURE TIMBER DECK ON I-BEAMS (CONTINUOUS)

SUBSTRUCTURE ABUTMENTS:MASS CONCRETE,INT.BENT:TIMBER CAP,POSTS & SILL

1@40'6"

SPANS 1@24'3, 1@16'3 (CONTINUOUS)

LONGITUDE 80° 6' 5.99"

LATITUDE 35° 41' 36.74"

INSPECTION DATE 02/27/2014

PRESENT CONDITION FAIR

PRESENT POSTING SV 16 TTST 19

SV 17 TTST 21

PROPOSED POSTING

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



LOOKING NORTH

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

SIGN NOTICE ISSUED FOR		NUMBERED REQUIRED
<u>No</u>	WEIGHT LIMIT	
<u>No</u>	DELINEATORS	
<u>No</u>	NARROW BRIDGE	
<u>No</u>	ONE LANE BRIDGE	
<u>No</u>	LOW CLEARANCE	

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

Run Date: 03/19/2014

IDENTIFICATION				CLASSIFICATION			
(1) STATE NAME -NORTH CAROLINA	BRIDGE	280471		SUFFICIENCY RATING =		42.14	
(8) STRUCTURE NUMBER(FEDERAL)		00000000570471		STATUS =	Functionally Obsolete		
(5) INVENTORY ROUTE (ON/UNDER) - ON		31024160					
(2) STATE HIGHWAY DEPARTMENT DISTRICT		1					
(3) COUNTY CODE	57	(4) PLACE CODE	0	(112)NBIS BRIDGE SYSTEM -		YES	
(6) FEATURE INTERSECTED - CREEK				(104)HIGHWAY SYSTEM	Is not on NHS	0	
(7) FACILITY CARRIED SR2416				(26) FUNCTIONAL CLASS -	Local	09	
(9) LOCATION 0.2 MI. S. JCT. SR2322				(100)STRAHNET HIGHWAY -	Not a STRAHNET Route	0	
(11)MILEPOINT		0		(101)PARALLEL STRUCTURE -	No Parallel Structure	N	
(16)LAT 35° 41' 36.74"	(17)LONG	80° 6' 5.99"		(102)DIRECTION OF TRAFFIC -	2-way Traffic	2	
(98)BORDER BRIDGE STATE CODE		PCT SHARE		(103)TEMPORARY STRUCTURE -			
(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		7	
(44) STRUCTURE TYPE APPR :				(60) SUBSTRUCTURE		5	
TYPE -		CODE 000		(61) CHANNEL & CHANNEL PROTECTION		5	
(45) NUMBER OF SPANS IN MAIN UNIT		1		(62) CULVERTS		N	
(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				LOAD RATING AND POSTING			
(27) YEAR BUILT		1961		(31) DESIGN LOAD	Unknown	0	
(106)YEAR RECONSTRUCTED				(63) OPERATING RATING METHOD -	Load Factor	1	
(42) TYPE OF SERVICE : ON - Highway				(64) OPERATING RATING -	HS-14	25	
UNDER - Waterway		CODE 15		(65) INVENTORY RATING METHOD -	Load Factor	1	
(28) LANES: ON STRUCTURE 2 UNDER STRUCTURE		0		(66) INVENTORY RATING -	HS-8	15	
(29) AVERAGE DAILY TRAFFIC		530		(70) BRIDGE POSTING -	Posting Required	0	
(30) YEAR OF ADT 2012	(109) TRUCK ADT PCT	6%		(41) STRUCTURE OPEN, POSTED ,OR CLOSED		P	
(19) BYPASS OR DETOUR LENGTH		1 MI		DESCRIPTION -	Posted for Load		
GEOMETRIC DATA				APPRAISAL			
(48) LENGTH OF MAXIMUM SPAN		39 FT		(67) STRUCTURAL EVALUATION		4	
(49) STRUCTURE LENGTH		41 FT		(68) DECK GEOMETRY		3	
(50)CURB OR SIDEWALK: LEFT .333 FT RIGHT .333 FT				(69) UNDERCLEARANCES,VERTI & HORIZ		N	
(51) BRIDGE ROADWAY WIDTH CURB TO CURB		20.667 FT		(71) WATERWAY ADEQUACY		7	
(52) DECK WIDTH OUT TO OUT		21.625 FT		(72) APPROACH ROADWAY ALIGNMENT		8	
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)		20 FT		(36) TRAFFIC SAFETY FEATURES		0000	
(33) BRIDGE MEDIAN - No Median		CODE 0		(113)SCOUR CRITICAL BRIDGES		U	
(34) SKEW 10°	(35) STRUCTURE FLARED	0					
(10) INVENTORY ROUTE MIN VERT CLEAR		999.9 FT					
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR		20.667 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 1060	(115) YEAR FUTURE ADT	2025	
				INSPECTIONS			
				(90) INSPECTION DATE		02/27/2014	
				(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: 03/19/2014

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :	
DAVIDSON	9	1	280471	41	FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR2416	CREEK

LOCATED :	BRIDGE NAME :	CITY :
0.2 MI. S. JCT. SR2322		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
09	NFA	NFA	530 2012	LT 227 RT 227

BUILT :	BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :
1961	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		9 FT		1		FT

SUPERSTRUCTURE :	TIMBER DECK ON I-BEAMS
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SUBSTRUCTURE :	ABUTMENTS:MASS CONCRETE
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SPANS :	1@40'6"
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BEAMS OR GIRDERS :	9 LINES OF W16X45 I-BEAMS @ 2'6 CENTERS
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FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
4X8 TIM,2.25 AWS		21.625 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
20.667 FT	21.333 FT	LT .333 FT RT .333 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :				
HS-8	HS-14	int.bm	SV 17	TTST 21	DATE	03/29/2012	

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

UNDER ROUTES AND CLEARANCES

REMARKS :

BRIDGE INSPECTION RECORD AND SUMMARY

INSPECTION TYPE Routine Inspection
 BRIDGE NO. 280471 COUNTY DAVIDSON ROUTE SR2416 OVER CREEK
 STRUCTURE TYPE TIMBER DECK ON I-BEAMS (CONTINUOUS)
 ROUTE ORIENTATION S - N SPANS 1@24'3, 1@16'3 (CONTINUOUS)

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

INSPECTION ITEM				ITEM 61			
DECK ITEMS			GRADES				
1. WEARING SURFACE			F	45. CHANNEL & CHANNEL PROT.	a. WATERWAY	G	
					b. ALIGNMENT	F	
					c. SCOUR	G	
					d. SLOPE PROT., RIP-RAP, DIKES, ETC.		
2. DECK NO. OF EA TYPE SPN GRADE RATES SI & A ITEM 58	a. CONCRETE			50. APPROACH ROADWAY CONDITION			G
	b. TIMBER	1	G	51. APPROACH SLABS			
	c. STEEL PLANK			52. PAINT SYSTEM			CODE A G
	d. OPEN GRID			53. UTILITIES			
3. RAILING	a. CONCRETE			54. RESPONSE TO LIVE LOAD			G
	b. TIMBER		G	55. ESTIMATED REMAINING LIFE			20
	c. ALUMINUM						
	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	a. STEEL PL OR FINGER			61. PROMPT-ACTION NOTICE ISSUED			NO
	b. MISC PREFAB			62. PRESENTLY POSTED			YES
	c. COMPRESSION SEAL			63. TOT. FIELD INSP TIME (INCLUDE WRITE UP)(MAN HR)			5
	d. STANDARD JOINTS			64. TOTAL SNOOPER INSP. TIME (HRS)			0
	e. OPEN JOINTS			65. TOTAL TRAFFIC CONTROL TIME (MAN HRS)			0
7. DECK DEBRIS (INCLUDES EXCESS SAND/GRAVEL)			G				
				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			G	b. SUPERSTRUCTURE	ITEM 59	7	
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)			G	a. WATERWAY ADAQUACY		7	
16. DRAINAGE SYSTEM (ON STRUCTURE)			G	b. APPR. RDWY. ALIGNMENT		8	
17. MOVABLE SPAN MACHINERY							
				72. FIELD SCOUR EVALUATION			O
SUB STR. ITEMS. ITEM 60 (INCLUDE SCOUR)							
35. TIM SUB STR.	a. ABUT. & INT. BENT CAPS & RISERS		G	USE OF INSP. ACCESSIBILITY EQUIPMENT			
	b. PILES, POST, SILLS, & BRACING			SNOOPER (CODE S, 4, OR N)	HRS	NO	
	c. BULKHEADS, WING'S, & TIE BACKS		G	LADDER		NO	
36. CONC SUB STR.	a. ABUT. & INT. BENT CAPS		G	BUCKET TRUCK			NO
	b. ABUT. & BENT COL'S BREASTWALLS		G	BOAT			NO
	c. ABUT. & INT. BENT PILES			OTHER			NO
	d. BACKWALLS, WING'S, RETAIN. WALLS						
	e. ABUT. & BENT FOOTINGS & SILLS		F				
37. STEEL SUB STR.	a. ABUT. & INT. BENT CAPS & RISERS			SPECIAL INSPECTION REQUESTED FOR			
	b. PILES, BRACING, AND BULKHEADS						
38. FOUNDATION PILES TYPE MATERIAL				NOTE			
39. SLOPE PROT., RIP-RAP (INCLUDE DRAINAGE)							
40. FENDER SYSTEMS				80. INSPECTED BY:	BT		
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 Inspeccion & Analysis</u>	
Team Leader BRIAN HEDRICK			
Assisted By J. ROLFSMEYER			
Item No.	Grade		
1	F	ASPHALT WEARING SURFACE HAS TRANSVERSE CRACKS UP TO 1/8 IN. THRU OUT.	
10A	NO	NO CURVED GIRDERS	
36e	F	BOTH ABUT FOOTINGS HAVE DETERIORATION.	
45b	F	STREAM ENTERS ON A SKEW.	
62	YES	SV 17 TTST 21	
72	O	SEE SCOUR ASSESSMENT 10/29/10.	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 280471

County DAVIDSON

Date: 02/27/2014

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
2816	Asphalt Surface Repair or Replacement	SY	2	ASPHALT WEARING SURFACE HAS TRANSVERSE CRACKS UP TO 1/8 IN. THRU OUT.	

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined



ASPHALT WEARING SURFACE TRANSVERSE CRACKS UP TO 1/8 IN. THRU OUT

Structure Data Worksheet

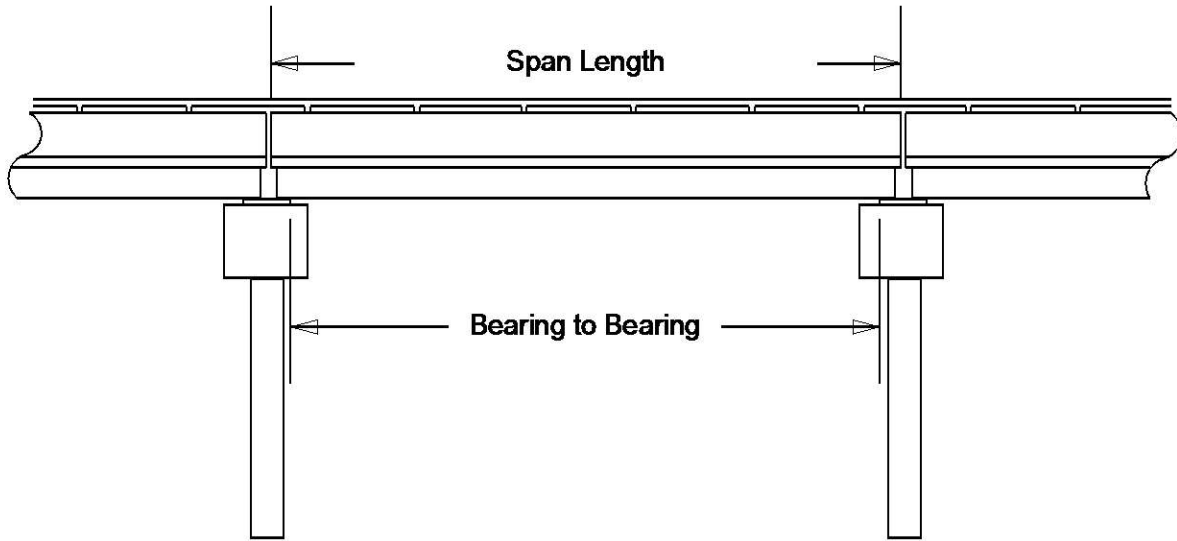
Spans

County: **DAVIDSON**

Structure No: **280471**

Date: **02/27/2014**

Inspected By: **BTH**



Span No	Span Length	Bearing to Bearing	Comments
1	40.5	38.833	NBIS BL: 37.667 FT.

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 280471 County: DAVIDSON Date: 02/27/2014 By: BTH

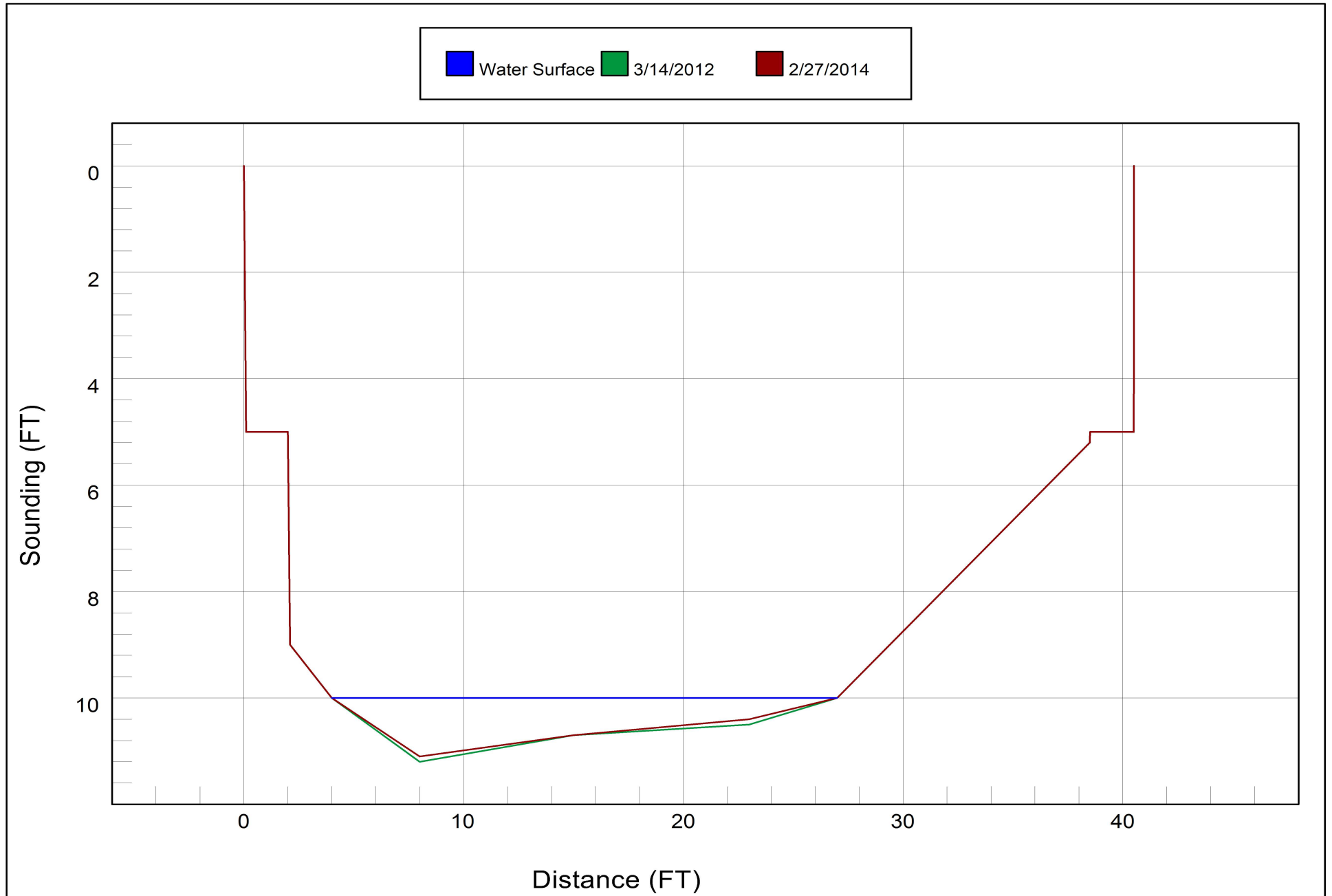
Record sounding from top of rail. Other location if needed: _____

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	0	ABUT 1	0	0	ABUT 1
0.1	5				
2	5				
2.1	9		2.1	7.4	
4	10	WS WE			
8	11.1				
15	10.7				
23	10.4				
27	10	WS WE			
38.5	5.2		38.5	8.5	
38.51	5				
40.5	5				
40.51	0	ABUT 2	40.51	0	ABUT 2

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch

SR 2416

Roadway	20ft Wide	2 Paved Lanes	Looking North
Left Shoulder	6ft Wide		6ft Unpaved
Right Shoulder	6ft Wide		6ft Unpaved
Left Guardrail			
Right Guardrail			

MEASUREMENTS VERIFIED 2-27-14 JER

Title
APPROACH ROADWAY

Description
SHEET 1

Bridge No: 280471

Drawn By: BTH

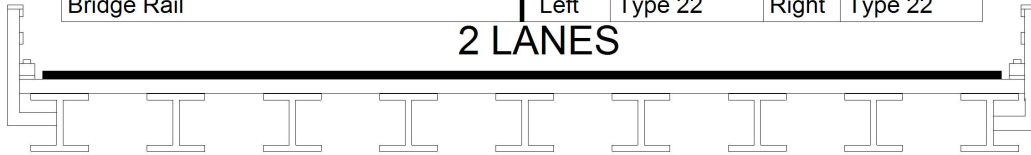
Date: 3/19/2012

File Name: S0090003328

Bridge Inspection Field Sketch

Deck Width/Out to Out	21.625ft	Between Rails			21.333ft
Clear Roadway	20.667 ft	Wearing Surface			0.187ft
Median Width		Median Height			
Curb Height		Left		Right	
Sidewalk Width		Left		Right	
Clear Roadway (Rail to Median)		Left		Right	
Guardrail Width		Left		Right	
Top of Rail to Deck/Wearing Surface		Left	2.375ft	Right	2.375ft
Bridge Rail		Left	Type 22	Right	Type 22

2 LANES



Measurements for Span #	1		
Deck Thickness	0.313	Left Overhang	0.875
Top of Rail to Bottom of Beam	5	Right Overhang	0.75

Beam Number	Beam Type	Spacing	Comments
1	Steel I Beam	2.5ft	
2	Steel I Beam	2.5ft	
3	Steel I Beam	2.5ft	
4	Steel I Beam	2.5ft	
5	Steel I Beam	2.5ft	
6	Steel I Beam	2.5ft	
7	Steel I Beam	2.5ft	
8	Steel I Beam	2.5ft	
9	Steel I Beam		

6 IN.HIGH x 12 IN. WIDE TIMBER CAP BENEATH BEAMS AT ABUTS
ABUTS: SHEAR MASS

BEAMS	WIDTH	FLANGES	WEB	HEIGHT
1-9	7 IN.	7/16 IN.	3/8 IN.	16 IN.

MEASUREMENTS REVISED 2-27-14 JER

Title
SUPERSTRUCTURE

Description
SHEET 2

Bridge No: 280471

Drawn By: BTH

Date: 3/19/2012

File Name: S0090003329



SOUTH NARROW BRIDGE



LOOKING NORTH



SOUTH POSTING



LOOKING EAST



DOWNSTREAM



UPSTREAM



LOOKING SOUTH



NORTH POSTING



LOOKING WEST



SUPERSTRUCTURE SPAN 1



UPSTREAM



ABUT 1



ABUT 2



DOWNSTREAM