



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY ROWAN BRIDGE NUMBER 790188 INSPECTION CYCLE 2 YRS
SR2564 SHIVIS RD.
ROUTE SR2564 ACROSS CREEK M.P. 0

LOCATION 0.4 MI.W.JCT.SR1006

SUPERSTRUCTURE TIMBER DECK ON I-BEAMS

SUBSTRUCTURE END BENTS: TIMBER CAPS, POSTS & SILLS, TIMBER BULKHEADS

SPANS 1@35'6

LONGITUDE 80° 27' 23.39"

LATITUDE 35° 31' 54.59"

PRESENT CONDITION FAIR

INVENTORY RATING

INSPECTION DATE 09/13/2012

OPERATING RATING

PRESENT POSTING SV 14 TTST 18 SV 14 TTST 18

PROPOSED POSTING

COMPUTER UPDATE

ANALYSIS DATE

POSTING LETTER DATE

SUFFICIENCY RATING

OTHER SIGNS PRESENT 4 DELINEATORS



LOOKING EAST

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>

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

Run Date: 11/01/2012

IDENTIFICATION					
(1) STATE NAME -NORTH CAROLINA	BRIDGE	790188		SUFFICIENCY RATING =	48.06
(8) STRUCTURE NUMBER(FEDERAL)		000000001590188		STATUS =	Not Deficient
(5) INVENTORY ROUTE (ON/UNDER) - ON		31025640			
(2) STATE HIGHWAY DEPARTMENT DISTRICT		1		CLASSIFICATION	
(3) COUNTY CODE	159	(4) PLACE CODE	0	(112)NBIS BRIDGE SYSTEM -	YES
(6) FEATURE INTERSECTED -	SECOND CREEK			(104)HIGHWAY SYSTEM	Is not on NHS 0
(7) FACILITY CARRIED	SR2564			(26) FUNCTIONAL CLASS -	Local 09
(9) LOCATION	0.4 MI.W.JCT.SR1006			(100)STRAHNET HIGHWAY -	Not a STRAHNET Route 0
(11)MILEPOINT		0		(101)PARALLEL STRUCTURE -	No Parallel Structure N
(16)LAT	35° 31' 54.59"	(17)LONG	80° 27' 23.39"	(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					
(43) STRUCTURE TYPE MAIN:	Steel				
TYPE -	Stringer Mutlibeam or Girder	CODE	302		
(44) STRUCTURE TYPE APPR :				CONDITION	
TYPE -		CODE	000	(58) DECK	7
(45) NUMBER OF SPANS IN MAIN UNIT			1	(59) SUPERSTRUCTURE	5
(46) NUMBER OF APPROACH SPANS				(60) SUBSTRUCTURE	5
(107)DECK STRUCTURE TYPE -	8	CODE		(61) CHANNEL & CHANNEL PROTECTION	7
(108)WEARING SURFACE / PROTECTIVE SYSTEM :				(62) CULVERTS	N
(A) TYPE OF WEARING SURFACE -		CODE			
(B) TYPE OF MEMBRANE -		CODE		LOAD RATING AND POSTING	
(C) TYPE OF DECK PROTECTION -		CODE		(31) DESIGN LOAD	Unknown 0
				(63) OPERATING RATING METHOD -	Load Factor
				(64) OPERATING RATING -	HS-12 121
				(65) INVENTORY RATING METHOD -	Load Factor
				(66) INVENTORY RATING -	HS-7 113
				(70) BRIDGE POSTING -	Posting Required 0
				(41) STRUCTURE OPEN, POSTED ,OR CLOSED	P
				DESCRIPTION -	Posted for Load
AGE AND SERVICE				APPRAISAL	
(27) YEAR BUILT			1960	(67) STRUCTURAL EVALUATION	4
(106)YEAR RECONSTRUCTED				(68) DECK GEOMETRY	5
(42) TYPE OF SERVICE : ON -	Highway			(69) UNDERCLEARANCES,VERTI & HORIZ	N
UNDER -	Waterway	CODE	15	(71) WATERWAY ADEQUACY	7
(28) LANES: ON STRUCTURE	2	UNDER STRUCTURE	0	(72) APPROACH ROADWAY ALIGNMENT	7
(29) AVERAGE DAILY TRAFFIC			270	(36) TRAFFIC SAFETY FEATURES	0000
(30) YEAR OF ADT	2010	(109) TRUCK ADT PCT	6%	(113)SCOUR CRITICAL BRIDGES	U
(19) BYPASS OR DETOUR LENGTH			1 MI		
GEOMETRIC DATA				PROPOSED IMPROVEMENTS	
(48) LENGTH OF MAXIMUM SPAN			35 FT	(75) TYPE OF WORK -	CODE
(49) STRUCTURE LENGTH			36 FT	(76) LENGTH OF STRUCTURE IMPROVEMENT	
(50)CURB OR SIDEWALK: LEFT	.2915 FT	RIGHT	.2915 FT	(94) BRIDGE IMPROVEMENT COST	
(51) BRIDGE ROADWAY WIDTH CURB TO CURB			24.667 FT	(95) ROADWAY IMPROVEMENT COST	
(52) DECK WIDTH OUT TO OUT			25.5 FT	(96) TOTAL PROJECT COST	
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)			18 FT	(97) YEAR OF IMPROVEMENT COST ESTIMATE	
(33) BRIDGE MEDIAN -	No Median	CODE	0	(114)FUTURE ADT	460
(34) SKEW	30°	(35) STRUCTURE FLARED	0	(115) YEAR FUTURE ADT	2025
(10) INVENTORY ROUTE MIN VERT CLEAR			999.9 FT		
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR			24.667 FT	INSPECTIONS	
(53) MIN VERT CLEAR OVER BRIDGE RDWY			999.9 FT	(90) INSPECTION DATE	09/13/2012
(54) MIN VERT UNDERCLEAR REF	Not a Highway or Railroad		0 FT	(92) CRITICAL FEATURE INSPECTION :	(93) CFI DATE
(55) MIN LAT UNDERCLEAR RT REF	Not a Highway or Railroad		000 FT	A) FRACTURE CRIT DETAIL -	NO A)
(56) MIN LAT UNDERCLEAR LT REF -			000 FT	B) UNDERWATER INSP -	NO B)
				C) OTHER SPECIAL INSP	NO C)
				SCOUR	
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		

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 11/01/2012

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :		
ROWAN	9	1	790188	36	FEET	
ROUTE CARRIED :		FEATURE INTERSECTED :				
SR2564		SECOND CREEK				
LOCATED :		BRIDGE NAME :			CITY :	
0.4 MI.W.JCT.SR1006						
FUNC. CLASS :		SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :	
09		NFA	NFA	270 2010	LT 227 RT 227	
BUILT :		BY :	PROJ :	FED.AID PROJ :	DESIGN LOAD :	
1960		BMU			Unknown	
REHAB :		BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :
				TAN	120	ON 2 UNDER 0
NAVIGATION :		HT. CRN. TO BED :		WATER DEPTH :		
VC 0 FT HC 0 FT		10 FT		1 FT		
SUPERSTRUCTURE : TIMBER DECK ON I-BEAMS						
SUBSTRUCTURE : END BENTS: TIMBER CAPS, POSTS & SILLS, TIMBER BULKHEADS						
SPANS : 1@35'6"						
BEAMS OR GIRDERS : 10 LINES OF W16X37 I-BEAMS @ 2'7" CENTERS						
FLOOR :		ENCROACHMENT :		DECK (OUT TO OUT) :		
4X8 TIM,1.5 AWS				25.5 FT		
CLEAR ROADWAY :		BETWEEN RAILS :		SIDEWALK OR CURB :		
24.667 FT		25.25 FT		LT .2915 FT RT .2915 FT		
VERT.CL.OVER : 999.9 FT						
INV.RTG. :		OPE.RTG. :	CONTR.MEMBER :	POSTED :	TTST	DATE
HS-7		HS-12	InBm (Sec.Loss)	SV 14	18	10/26/2010
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. 790188 COUNTY ROWAN ROUTE SR2564 OVER CREEK
 STRUCTURE TYPE TIMBER DECK ON I-BEAMS
 ROUTE ORIENTATION W - E SPANS 1@35'6

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

INSPECTION ITEM				ITEM 61			
DECK ITEMS			GRADES				
1. WEARING SURFACE			G	45. CHANNEL & CHANNEL PROT.	a. WATERWAY	G	
					b. ALIGNMENT	G	
					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			F
	b. TIMBER	1	G	51. APPROACH SLABS			
	c. STEEL PLANK			52. PAINT SYSTEM			CODE A F
	d. OPEN GRID			53. UTILITIES			
3. RAILING	a. CONCRETE			54. RESPONSE TO LIVE LOAD			G
	b. TIMBER		G	55. ESTIMATED REMAINING LIFE			13
	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)			4
	d. STANDARD JOINTS			64. TOTAL SNOOPER INSP. TIME (HRS)			
	e. OPEN JOINTS			65. TOTAL TRAFFIC CONTROL TIME (MAN HRS)			
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			F	b. SUPERSTRUCTURE	ITEM 59	5	
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	7	
13. END DIAP'S, CURTAIN WALLS, & CONN'S							
14. FLOOR BEAMS AND CONNECTIONS				71. SI&A FIELD APPRAISAL RATINGS			
15. BEARING ASSEMBLIES (INCLUDING MISALIGN)			F	a. WATERWAY ADAQUACY		7	
16. DRAINAGE SYSTEM (ON STRUCTURE)			G	b. APPR. RDWY. ALIGNMENT		7	
17. MOVABLE SPAN MACHINERY							
				72. FIELD SCOUR EVALUATION			U
SUB STR. ITEMS. ITEM 60 (INCLUDE SCOUR)							
35. TIM SUB STR.	a. ABUT. & INT. BENT CAPS & RISERS		F	USE OF INSP. ACCESSIBILITY EQUIPMENT			
	b. PILES, POST, SILLS, & BRACING		F	SNOOPER (CODE S, 4, OR N)	HRS	NO	
	c. BULKHEADS, WING'S, & TIE BACKS		F	LADDER		NO	
36. CONC SUB STR.	a. ABUT. & INT. BENT CAPS			BUCKET TRUCK			NO
	b. ABUT. & BENT COL'S BREASTWALLS			BOAT			NO
	c. ABUT. & INT. BENT PILES			OTHER			NO
	d. BACKWALLS, WING'S, RETAIN. WALLS						
	e. ABUT. & BENT FOOTINGS & SILLS						
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:			
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 TERRY MELTON			
Assisted By D.HACKNEY			
Item No.	Grade		
1	G	AWS HAS TRANSVERSE CRACKING	
3b	G	TIMBERS WEATHERED AND CHECKED.	
4	G	TIMBERS WEATHERED AND CHECKED.	
10	F	BEAMS SHOWING RUST SCALE ALONG TOP AND BOTTOM FLANGES. FLANGE EDGES REDUCED TO 3/16" IN SPOTS ALONG BEAM ENDS. SURFACE RUST SCALE SCATTERED THROUGH OUT BEAM LENGTHS.	
10A	NO	NO CURVED GIRDERS	
15	F	BEARING PLATES ON CAPS SHOWING RUST SCALE.	
52	F	SURFACE RUST SCALE THROUGH OUT BEAMS.	
35a	F	TIMBER CAPS SHOWING DECAY AREAS ALONG ENDS, DECAY AREAS, END DECAY NOT EXTENDING UNDER EXTERIOR BEAMS AT THIS TIME. END BENT 1 CAP ON RIGHT END HAS DECAY 4"WIDE X 8"HIGH X 12"DEEP AND 8"HIGH X 4"WIDE X 5"DEEP ALONG TOP AND BACK EDGES. AREA OF SPOT DECAY ON TOP FACE UNDER BEARING PLATE AT BEAM 10, AREA IS 3"WIDE X 8"LONG X 1"DEEP. END BENT 2 CAP ON LEFT END HAS DECAY AREA FULL HEIGHT ON BACK SIDE X 3"WIDE X 10"DEEP. CAP HAS A 3"DIAMETER DECAY SPOT AT SPLICE, 6"DEEP.	
35b	F	TIMBERS WEATHERED AND CHECKED WITH DELAM AROUND CHECK CRACKS, TIMBERS SOFT ALONG BASE AT GROUND LINE UP 1' ONTO PILES.	
35c	F	BOTH BULKHEADS HAVE DECAY AREAS SCATTERED THROUGH OUT LENGTH, SOME AREAS THROUGH TO FILL.	
50	F	BOTH APPROACHES CRACKED AND SETTLED, 1/4" TO 1/2" ALONG FILL FACE.	
62	YES	SV- 14; TTST- 18	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 790188

County ROWAN

Date: 09/13/2012

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	10	CAP ENDS SHOWING DECAY	
3346	Repair / Maintain Timber Wings & Blkhds	SF	40	BULKHEADS HAVE AREAS OF DECAY	
5603	Partial Cleaning and Painting of Structural Steel	SF	300	TOP AND BOTTOM FLANGES SHOWING RUST SCALE.	

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined



CRACKING ON WEST END APPROACH



SETTLEMENT ON WEST END APPROACH



WEAR SURFACE CRACKING ON DECK AT TIMBER DECKING BOARD JOINTS



SETTLEMENT AT EAST END APPROACH



CRACKING ON EAST END APPROACH



DECAY ON SOUTH END OF CAP AT END BENT 1



DECAY ON CAP AT END BENT 1 UNDER BEAM 10 BEARING PLATE



RUST SCALE ON TOP FLANGE OF BEAM 10 REDUCED DOWN TO 3/16 OF AN INCH



DECAY ON CAP AT END BENT 2 AT SPLICE



DECAY ON CAP AT END BENT 2 NORTH END

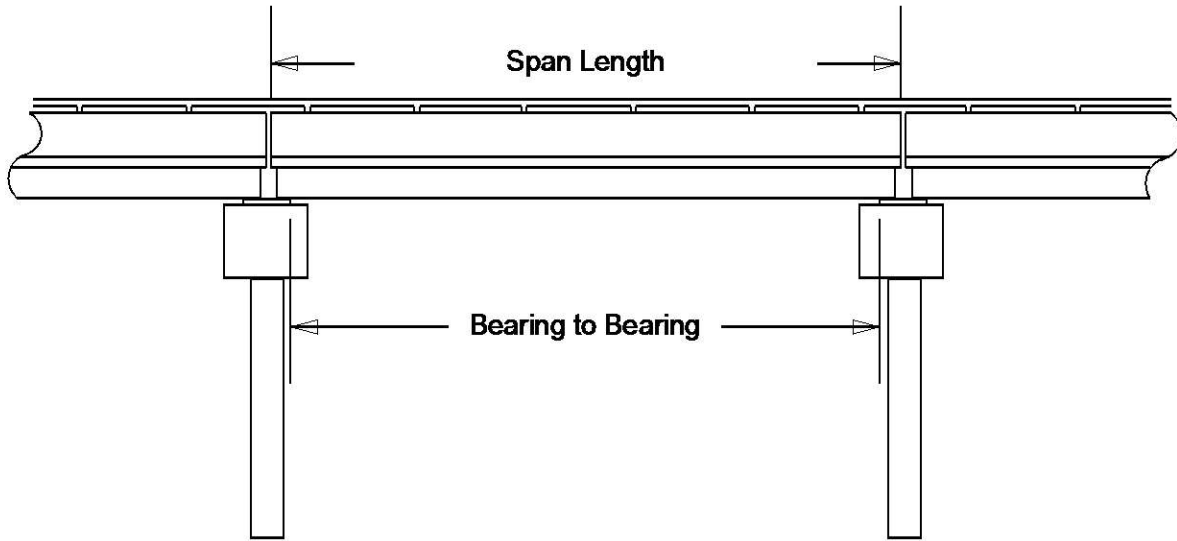


SURFACE RUST ON BOTTOM FLANGE OF BEAM 2

Structure Data Worksheet

Spans

County: ROWAN Structure No: 790188 Date: 09/13/2012 Inspected By: TFM



Span No	Span Length	Bearing to Bearing	Comments
1	35.5	34.5	NBIS BL 33.5

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 790188 County: ROWAN Date: 09/13/2012 By: TFM

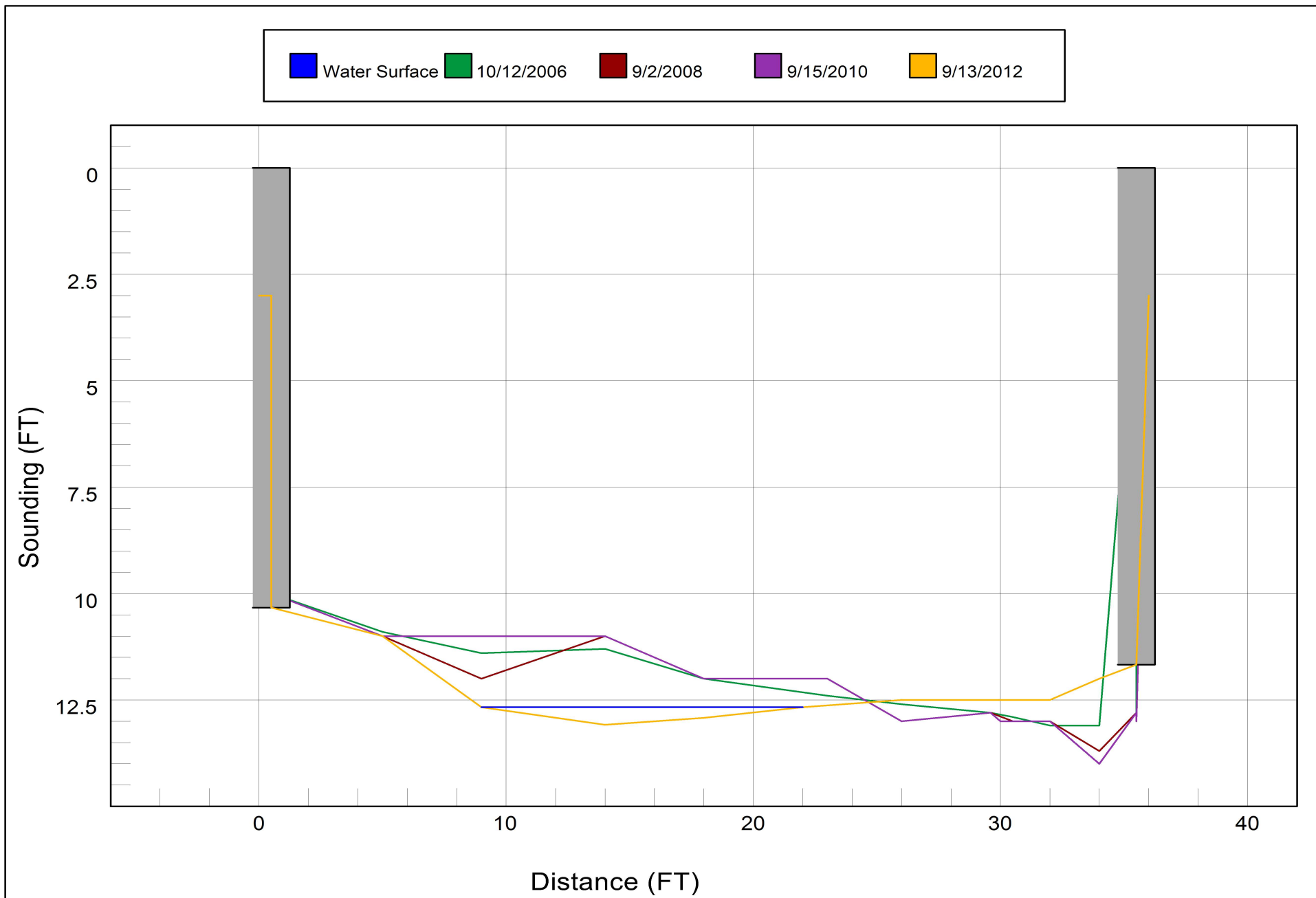
Record sounding from top of rail. Other location if needed: _____

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				
0.5	3		0.5	11	END BENT 1
0.5	10.33	END BENT 1			
5	11				
9	12.67	Water Surface/Water Edge (WSWE)			
14	13.083				
18	12.92				
22	12.67	Water Surface/Water Edge (WSWE)			
26	12.5				
30	12.5				
32	12.5				
34	12				
35.5	11.67	END BENT 2	35.5	13	END BENT 2
36	3				

STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch



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

MEASUREMENTS VERIFIED BY DH 9/13/2012

Title

APPRAOCH ROADWAY SKETCH

Description

APPRAOCH ROADWAY SKETCH

Bridge No: 790188

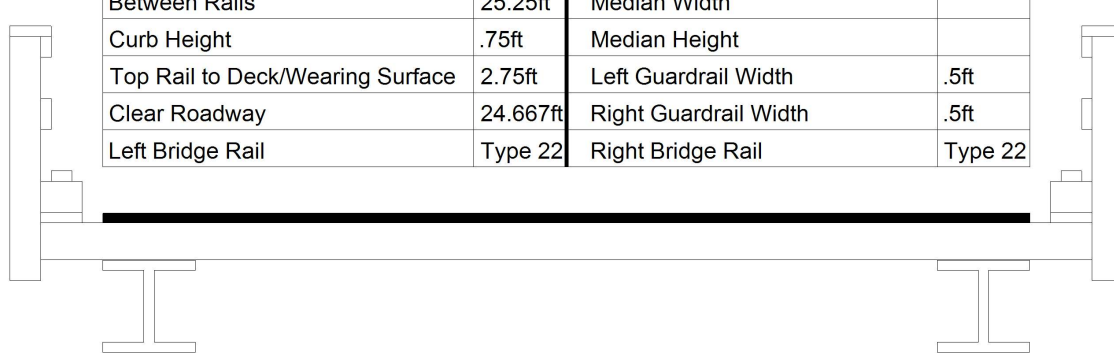
Drawn By: GDP

Date: 09/02/08

File Name: S0066001634

Bridge Inspection Field Sketch

Deck Width/Out to Out	25.5ft	Wearing Surface	.123ft
Between Rails	25.25ft	Median Width	
Curb Height	.75ft	Median Height	
Top Rail to Deck/Wearing Surface	2.75ft	Left Guardrail Width	.5ft
Clear Roadway	24.667ft	Right Guardrail Width	.5ft
Left Bridge Rail	Type 22	Right Bridge Rail	Type 22



Measurements for Span #	1		
Deck Thickness	.313	Left Overhang	1.083
Top of Rail to Bottom of Beam	4.833	Right Overhang	1.083

Beam No	Beam Type	Spacing	Comments
1	Steel I Beam	2.583ft	
2	Steel I Beam	2.583ft	
3	Steel I Beam	2.583ft	
4	Steel I Beam	2.583ft	
5	Steel I Beam	2.583ft	
6	Steel I Beam	2.583ft	
7	Steel I Beam	2.583ft	
8	Steel I Beam	2.583ft	
9	Steel I Beam	2.583ft	
10	Steel I Beam		

BEAM SIZE: 1.333ft HIGH X .603ft WIDE X .031ft FLANGE X .026ft WEB

MEASUREMENTS VERIFIED BY DH 9/13/2012

Title

STRUCTURE DATA SKETCH

Description

STRUCTURE DATA SKETCH

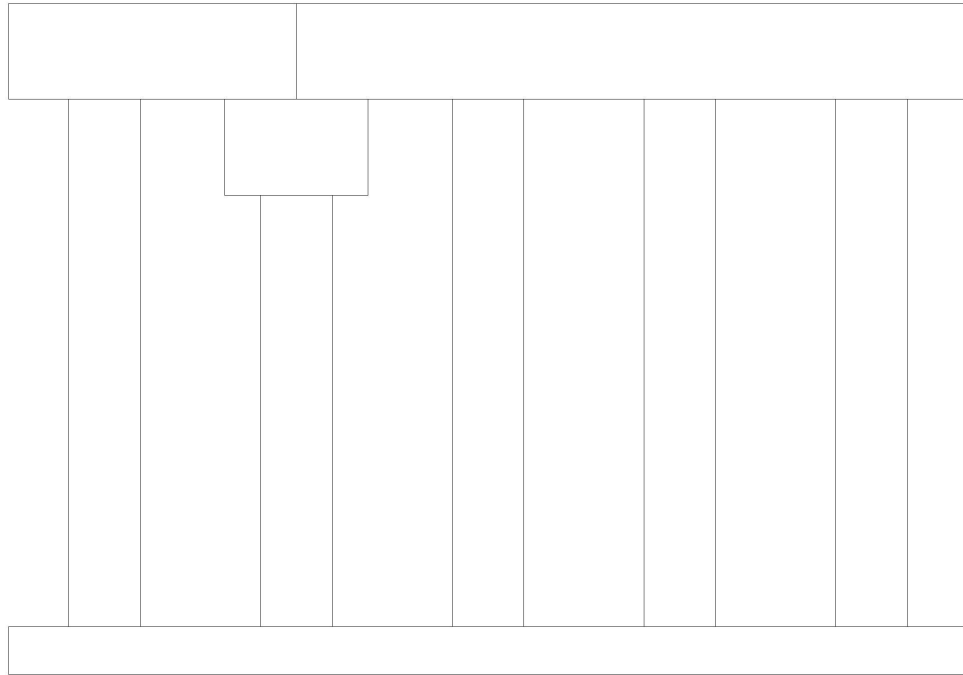
Bridge No: 790188

Drawn By: GDP

Date: 09/02/08

File Name: S0066001635

Bridge Inspection Field Sketch



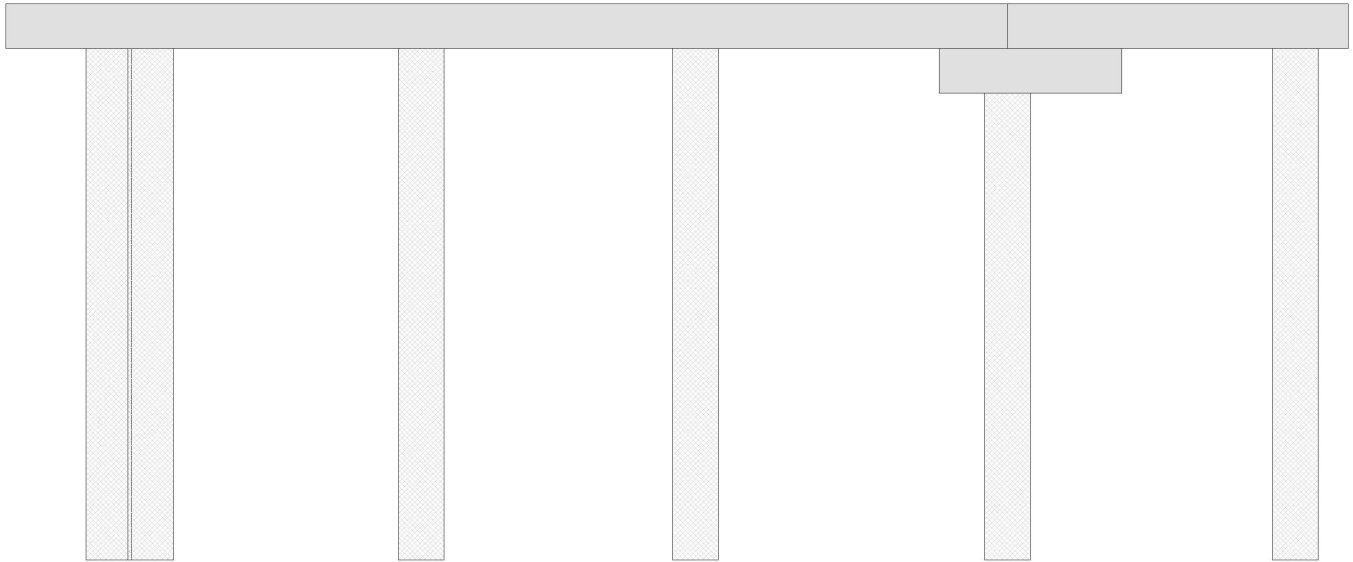
Abutment #	1		
Cap - Beam Type (Wood or Steel)			
Cap Size	29.375ft Long	.833ft Wide	.98ft High
Left Overhang	1.25ft	Lt Cap/Beam Overhang	2.167ft
Right Overhang	.792ft	Rt Cap/Beam Overhang	1.5ft
Timber Sub Cap			
Size	4ft Long	.833ft Wide	.98ft High
Left pile to splice	0ft		
Left Overhang	1.5ft		
Right Overhang	1.5ft		
Sill - Sill			
Sill Size			

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Pile Bent	6.833		.792 X .833	POST	Vertical
2	Wood or Timber	Pile Bent	6.833		.792 X .833	POST	Vertical
3	Wood or Timber	Pile Bent	6.833		.792 X .833	POST	Vertical
4	Wood or Timber	Pile Bent	6.833		.792 X .833	POST	Vertical
5	Wood or Timber	Pile Bent			.792 X .833	POST	Vertical

MEASUREMENTS VERIFIED BY DH 9/13/2012

Title		Description	
PILE DIAGRAM END BENT 1		PILE DIAGRAM END BENT 1	
Bridge No: 790188	Drawn By: GDP	Date: 09/02/08	File Name: S0066001636

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.			
29.375 ft.	.830 ft.	.980 ft.	2.250 ft.	1.500 ft.	2.167 ft.		2.167 ft.			
Subcap Information			Material Timber							
Length	Width	Height	Left Overhang	Right Overhang	Left Pile to Splice.					
4.000 ft.	.830 ft.	.980 ft.	1.500 ft.	1.500 ft.	0 ft.					
Sill Information			Material							
Length	Width	Height								
Pile #	Material	Spacing	Width/Dia.	Height	Length	Orientation	Driven?	Replacement?	Removed?	Collar?
1	Timber	0.92 ft.					No	No	No	No
2	Timber	5.92 ft.					No	No	No	No
3	Timber	6 ft.					No	No	No	No
4	Timber	6.83 ft.					No	No	No	No
5	Timber	6.3 ft.					No	No	No	No
6							No	No	No	No
Bent/Abutment #: 2			Similar Bents:							

Title			Description		
PILE DIAGRAM END BENT 2			PILE DIAGRAM END BENT 2		
Bridge No: 790188	Drawn By: DH	Date: 09/13/2012	File Name: S0066001637		



LOOKING EAST



WEIGHT LIMIT SIGN



WEST END APPROACH



WEAR SURFACE AT END BENT 1



WEAR SURFACE ON DECK



WEAR SURFACE ON DECK



WEAR SURFACE AT END BENT 2



EAST END APPROACH



LOOKING WEST



LOOKING UPSTREAM



LOOKING DOWNSTREAM



LOOKING AT NORTH SIDE



LOOKING DOWNSTREAM



LOOKING UPSTREAM



END BENT 1



UNDERSIDE OF DECK



LOOKING AT SOUTH SIDE