



NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BRIDGE MANAGEMENT UNIT

ATTENTION

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY ALEXANDER BRIDGE NUMBER 010079 INSPECTION CYCLE 2 YRS
ROUTE SR1328 ACROSS GRASSY CREEK M.P. 0

LOCATION 0.4 MI. N. JCT. SR1313

SUPERSTRUCTURE STEEL PLANK DECK ON I-BEAMS

SUBSTRUCTURE END & INTERIOR BENTS:TIMBER CAPS & PILES,TIMBER BULKHEADS

SPANS 1@40'5, 1@40'0, 1@40'5

LONGITUDE 81° 13' 37.46"

LATITUDE 35° 57' 13.84"

PRESENT CONDITION FAIR

INVENTORY RATING

INSPECTION DATE 10/02/2012

OPERATING RATING

PRESENT POSTING SV 30 TTST 30 30 TONS

PROPOSED POSTING

COMPUTER UPDATE

ANALYSIS DATE

POSTING LETTER DATE

SUFFICIENCY RATING

OTHER SIGNS PRESENT 4 DELINEATORS



SOUTH TO NORTH

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: 10/24/2012

IDENTIFICATION					
(1) STATE NAME -NORTH CAROLINA	BRIDGE	010079		SUFFICIENCY RATING =	48.75
(8) STRUCTURE NUMBER(FEDERAL)		00000000030079		STATUS =	Not Deficient
(5) INVENTORY ROUTE (ON/UNDER) - ON		31013280			
(2) STATE HIGHWAY DEPARTMENT DISTRICT		2		CLASSIFICATION	CODE
(3) COUNTY CODE	3	(4) PLACE CODE	0	(112)NBIS BRIDGE SYSTEM -	YES
(6) FEATURE INTERSECTED - GRASSY CREEK				(104)HIGHWAY SYSTEM	Is not on NHS 0
(7) FACILITY CARRIED SR1328				(26) FUNCTIONAL CLASS -	Minor Collector 08
(9) LOCATION 0.4 MI. N. JCT. SR1313				(100)STRAHNET HIGHWAY -	Not a STRAHNET Route 0
(11)MILEPOINT		0		(101)PARALLEL STRUCTURE -	No Parallel Structure N
(16)LAT 35° 57' 13.84"	(17)LONG	81° 13' 37.46"		(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
STRUCTURE TYPE AND MATERIAL				(20) TOLL	On Free Road 3
(43) STRUCTURE TYPE MAIN: Steel				(31) MAINTAIN -	State Highway Agency 01
TYPE - Stringer Mutlibeam or Girder	CODE	302		(22) OWNER -	State Highway Agency 01
(44) STRUCTURE TYPE APPR :				(37) HISTORICAL SIGNIFICANCE -	Not Eligible 5
TYPE -	CODE	000		CONDITION	CODE
(45) NUMBER OF SPANS IN MAIN UNIT		3		(58) DECK	7
(46) NUMBER OF APPROACH SPANS				(59) SUPERSTRUCTURE	5
(107)DECK STRUCTURE TYPE - 8	CODE			(60) SUBSTRUCTURE	5
(108)WEARING SURFACE / PROTECTIVE SYSTEM :				(61) CHANNEL & CHANNEL PROTECTION	7
(A) TYPE OF WEARING SURFACE -	CODE			(62) CULVERTS	N
(B) TYPE OF MEMBRANE -	CODE			LOAD RATING AND POSTING	CODE
(C) TYPE OF DECK PROTECTION -	CODE			(31) DESIGN LOAD	Unknown 0
AGE AND SERVICE				(63) OPERATING RATING METHOD -	Allowable Stress
(27) YEAR BUILT		1963		(64) OPERATING RATING -	HS-18 233
(106)YEAR RECONSTRUCTED		1985		(65) INVENTORY RATING METHOD -	Allowable Stress
(42) TYPE OF SERVICE : ON - Highway				(66) INVENTORY RATING -	HS-8 214
UNDER - Waterway	CODE	15		(70) BRIDGE POSTING -	Posting Required 3
(28) LANES: ON STRUCTURE 2 UNDER STRUCTURE		0		(41) STRUCTURE OPEN, POSTED ,OR CLOSED	P
(29) AVERAGE DAILY TRAFFIC		170		DESCRIPTION -	Posted for Load
(30) YEAR OF ADT 2010	(109) TRUCK ADT PCT	6%		APPRAISAL	CODE
(19) BYPASS OR DETOUR LENGTH		3 MI		(67) STRUCTURAL EVALUATION	4
GEOMETRIC DATA				(68) DECK GEOMETRY	4
(48) LENGTH OF MAXIMUM SPAN		40 FT		(69) UNDERCLEARANCES,VERTI & HORIZ	N
(49) STRUCTURE LENGTH		121 FT		(71) WATERWAY ADEQUACY	7
(50)CURB OR SIDEWALK: LEFT 0 FT RIGHT 0 FT				(72) APPROACH ROADWAY ALIGNMENT	7
(51) BRIDGE ROADWAY WIDTH CURB TO CURB		23.75 FT		(36) TRAFFIC SAFETY FEATURES	0000
(52) DECK WIDTH OUT TO OUT		24.583 FT		(113)SCOUR CRITICAL BRIDGES	U
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)		18 FT		PROPOSED IMPROVEMENTS	
(33) BRIDGE MEDIAN - No Median	CODE	0		(75) TYPE OF WORK -	CODE
(34) SKEW 0°	(35) STRUCTURE FLARED	0		(76) LENGTH OF STRUCTURE IMPROVEMENT	
(10) INVENTORY ROUTE MIN VERT CLEAR		999.9 FT		(94) BRIDGE IMPROVEMENT COST	
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR		23.75 FT		(95) ROADWAY IMPROVEMENT COST	
(53) MIN VERT CLEAR OVER BRIDGE RDWY		999.9 FT		(96) TOTAL PROJECT COST	
(54) MIN VERT UNDERCLEAR REF Not a Highway or Railroad		0 FT		(97) YEAR OF IMPROVEMENT COST ESTIMATE	
(55) MIN LAT UNDERCLEAR RT REF Not a Highway or Railroad		000 FT		(114)FUTURE ADT 560	(115) YEAR FUTURE ADT 2025
(56) MIN LAT UNDERCLEAR LT REF -		000 FT		INSPECTIONS	
NAVIGATION DATA				(90) INSPECTION DATE	10/02/2012
(38) NAVIGATION CONTROL - No Navigational Control	CODE	0		(92) CRITICAL FEATURE INSPECTION :	(93) CFI DATE
(111)PIER PROTECTION -	CODE			A) FRACTURE CRIT DETAIL -	NO A)
(39) NAVIGATION VERTICAL CLEARANCE		0		B) UNDERWATER INSP -	NO B)
(116)VERT - LIFT BRIDGE NAV MIN VERT CLEAR		FT		C) OTHER SPECIAL INSP	NO C)
(40) NAVIGATION HORIZONTAL CLEARANCE		0 FT		SCOUR	

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 10/24/2012

COUNTY :	DIVISION :	DISTRICT :	STRUCTURE NUMBER :	LENGTH :
ALEXANDER	12	2	010079	121 FEET

ROUTE CARRIED :	FEATURE INTERSECTED :
SR1328	GRASSY CREEK

LOCATED :	BRIDGE NAME :	CITY :
0.4 MI. N. JCT. SR1313		

FUNC. CLASS :	SYST.ON :	SYST.UNDER :	ADT & YR :	RAIL TYPE :
08	NFA	NFA	170 2010	LT 253 RT 253

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

REHAB :	BY :	PROJ :	ALIGNMENT :	SKEW :	LANES :
1985	BMU		TAN	90	ON 2 UNDER 0

NAVIGATION :	HT. CRN. TO BED :	WATER DEPTH :
VC 0 FT HC 0 FT 17 FT		2 FT

SUPERSTRUCTURE :	STEEL PLANK DECK ON I-BEAMS
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SUBSTRUCTURE :	END & INTERIOR BENTS:TIMBER CAPS & PILES,TIMBER BULKHEADS
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SPANS :	1@40'5, 1@40'0, 1@40'5
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BEAMS OR GIRDERS :	11 LINES OF W24X68 I-BEAMS @ 2'3 CENTERS
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FLOOR :	ENCROACHMENT :	DECK (OUT TO OUT) :
7GA.STL,1.5 AWS		24.583 FT

CLEAR ROADWAY :	BETWEEN RAILS :	SIDEWALK OR CURB :
23.75 FT	23.75 FT	LT 0 FT RT 0 FT

VERT.CL.OVER :
999.9 FT

INV.RTG. :	OPE.RTG. :	CONTR.MEMBER :	POSTED :	TTST	DATE
HS-8	HS-18	intpile 2	SV 30	30	03/28/2007

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. 010079 COUNTY ALEXANDER ROUTE SR1328 OVER GRASSY CREEK
 STRUCTURE TYPE STEEL PLANK DECK ON I-BEAMS
 ROUTE ORIENTATION S - N SPANS 1@40'5, 1@40'0, 1@40'5

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	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	0	NA	51. APPROACH SLABS			
	c. STEEL PLANK	3	G	52. PAINT SYSTEM CODE F			F
	d. OPEN GRID			53. UTILITIES			
3. RAILING	a. CONCRETE			54. RESPONSE TO LIVE LOAD			G
	b. TIMBER			55. ESTIMATED REMAINING LIFE			40
	c. ALUMINUM						
	d. STEEL		G				
4. CURBS, WHEELGUARDS, PARAPETS, MEDIANS							
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)			9
	d. STANDARD JOINTS	2	P	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			G	b. SUPERSTRUCTURE	ITEM 59	5	
11. LONGITUDINAL JOIST OR STRINGERS				c. SUBSTRUCTURE	ITEM 60	5	
12. INT. DIAP'S, X-FRAMES, BRACING & CONN'S			G	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			O
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)			G				
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 MAX FORD			
Assisted By RAP			
Item No.	Grade		
1	F	PAVEMENT IS BROKEN WITH POT HOLES ALONG JOINTS AT BOTH PIERS...	
2c	G	GOOD	
3d	G	GOOD	
6d	P	A.W.S.CRACKED AND RAISED OVER JOINTS. JOINTS ARE LEAKING...	
7	G	DECK SURFACE IS CLEAR AT THIS TIME...	
10	G	GOOD	
10A	NO	NO CURVED GIRDERS...	
15	F	SURFACE RUST AND SCALE AT PIERS... SEE PAINT	
52	F	PAINT IS FAIR WITH SURFACE RUST BEGINNING TO FORM ALONG BOTTOM FLANGE AT PIERS...	
35a	F	LT. END OF ABUT. (B) CAP DECAYED (6" HIGH X 8" LONG X 6 INCHES DEEP) TOP RT. END OF ABUT. (B) CAP IS DECAYED (8" HIGH X F/W X 12" DEEP)	
35b	F	PILES ARE WEATHERED AND CHECKING...	
35c	F	BULKHEADS ARE WEATHERED AND CHECKING...	
39	G	RIP RAP PLACED AT ABUT. (A)... GOOD AT THIS TIME...	

Bridge I&A Form 1(82)H		FIELD INSPECTION REPORT <u>Bridge Inspeccion & Analysis</u>	
State of North Carolina			
Dept. of Transportation			
Division of Highways			
Team Leader MAX FORD			
Assisted By RAP			
Item No.	Grade		
50	F	SOUTH APPROACH PAVEMENT IS CRACKED AND SETTLED (+/- 2")...	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 010079

County ALEXANDER

Date: 10/02/2012

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	16	PAVEMENT IS BROKEN WITH POT HOLES ALONG JOINTS AT BOTH PIERS...	
2816	Asphalt Surface Repair or Replacement	SY	17	SOUTH APPROACH PAVEMENT IS CRACKED AND SETTLED (+/- 2")...	
3310	Maintenance/Repair/Replacement of Standard Bridge Expansion Joints	LF	50	STANDARD JOINTS ARE DETERIORATED AND LEAKING...	
3342	Clean and Paint Structural Steel	SF	75	PAINT IS FAIR WITH SURFACE RUST BEGINNING TO FORM ALONG BOTTOM FLANGE AT PIERS...	
3344	Repair / Replace Timber Substructure Components	LF	1	LT. END OF ABUT. (B) CAP DECAYED (6" HIGH X 8" LONG X 6 INCHES DEEP)	
3344	Repair / Replace Timber Substructure Components	LF	1	TOP RT. END OF ABUT. (B) CAP IS DECAYED (8" HIGH X F/W X 12" DEEP)	

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined



SOUTH APPROACH PAVEMENT IS CRACKED AND SETTLED (+/- 2")...



PAVEMENT IS BROKEN WITH POT HOLES ALONG JOINTS AT BOTH PIERS...



LT. END OF ABUT. (B) CAP DECAYED (6" HIGH X 8" LONG X 6 INCHES DEEP)



TOP RT. END OF ABUT. (B) CAP IS DECAYED (8" HIGH X F/W X 12" DEEP)



SURFACE RUST BEGINNING TO FORM ALONG BOTTOM FLANGES AT PIERS...

Structure Data Worksheet

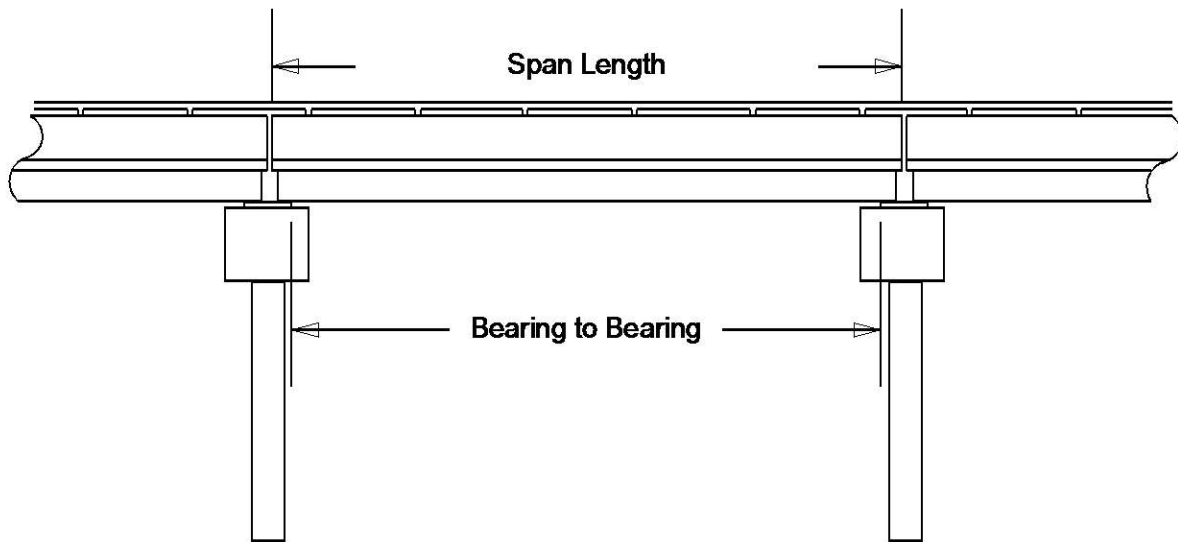
Spans

County: ALEXANDER

Structure No: 010079

Date: 10/02/2012

Inspected By: MF



Span No	Span Length	Bearing to Bearing	Comments
1	40.417	39.25	
2	40.0	39.5	
3	40.417	39.25	FACE OF ABUT. CAP TO FACE OF ABUT. CAP = 118.375

Stream Bed Soundings

(See next sheet for profile sketch)

Bridge No: 010079 County: ALEXANDER Date: 10/02/2012 By: MF

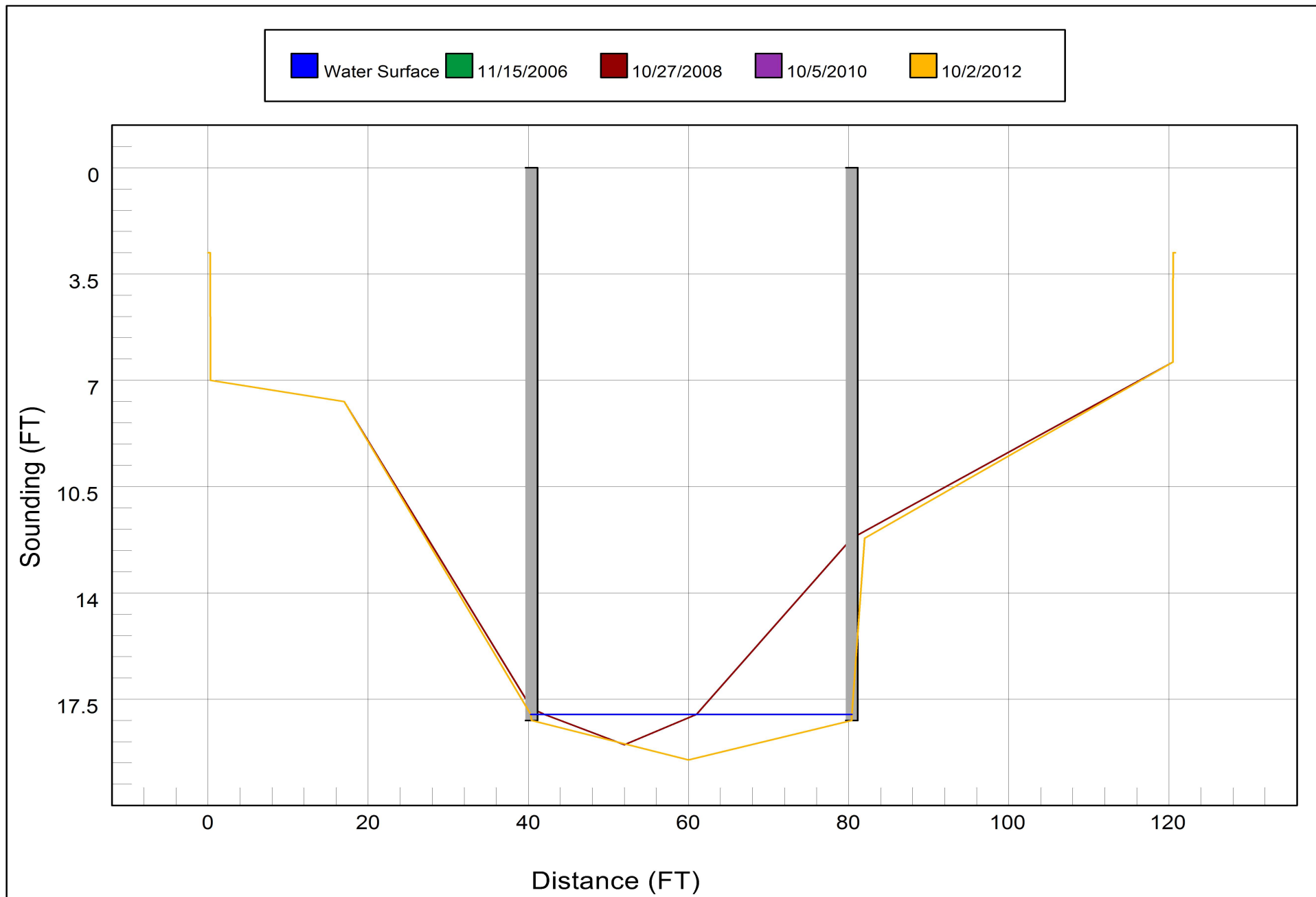
Record sounding from top of rail. Other location if needed: _____

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	2.8	TOP OF FILLFACE			
0.28	2.8	TOP OF FILLFACE			
0.29	4.9	TOP OF CAP			
0.3	7	FACE OF ABUT	0.3	7	FACE OF ABUT
17	7.7	SLOPE			
40.3	18	WSWE			
40.4	18.2	PIER 1	40.4	14	PIER 1
60	19.5	BED FLOW WEST			
80.4	18.2	PIER 2	80.4	14.3	PIER 2
80.41	18	WSWE			
82	12.2	SLOPE			
120.5	6.4	FACE OF ABUT	120.5	6.4	FACE OF ABUT
120.51	4.9	TOP OF CAP			
120.52	2.8	TOP OF FILLFACE			
120.8	2.8	TOP OF FILLFACE			

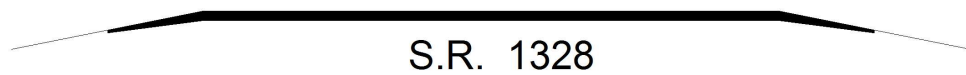
STREAMBED PROFILE (Downstream)

Top of Rail = 0 FT (Sounding)



Bridge Inspection Field Sketch

VERIFIED 10/2/12 R.A. PIERCE, M. FORD



LOOKING NORTH

Roadway	18ft Wide		Looking North
Left Shoulder	8ft Wide		8ft Unpaved
Right Shoulder	8ft Wide		8ft Unpaved
Left Guardrail			
Right Guardrail			

Title
APPR. RDWY.

Description
APPR. RDWY.

Bridge No: 010079

Drawn By: RAP

Date: 10/27/08

File Name: S0000001111

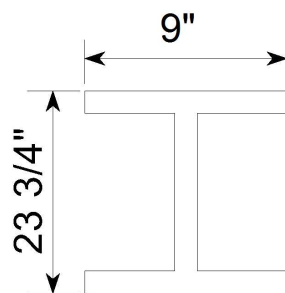
Bridge Inspection Field Sketch

VERIFIED 10/2/12 R.A. PIERCE, M. FORD

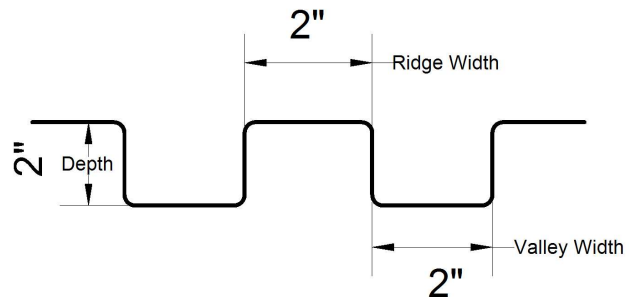
Deck Width/Out to Out	24.583ft	Wearing Surface	.125ft
Between Rails	23.75ft	Median Width	
Curb Height		Median Height	
Top Rail to Deck/Wearing Surface	2.667ft	Left Guardrail Width	
Clear Roadway	23.75ft	Right Guardrail Width	
Left Bridge Rail	Type 25	Right Bridge Rail	Type 25

Measurements for Span #	1		
Deck Thickness	.167	Left Overhang	1
Top of Rail to Bottom of Beam	4.9167	Right Overhang	1.083

Beam No	Beam Type	Spacing	Comments
1	Steel I Beam	2.25ft	ALL SPANS SIMILAR
2	Steel I Beam	2.25ft	
3	Steel I Beam	2.25ft	
4	Steel I Beam	2.25ft	
5	Steel I Beam	2.25ft	
6	Steel I Beam	2.25ft	
7	Steel I Beam	2.25ft	
8	Steel I Beam	2.25ft	
9	Steel I Beam	2.25ft	
10	Steel I Beam	2.25ft	
11	Steel I Beam		



FLANGE THICKNESS: 9/16"
WEB THICKNESS: 7/16"



Title
SUPER.

Description
DECK SECTION

Bridge No: 010079

Drawn By: RAP

Date: 10/27/08

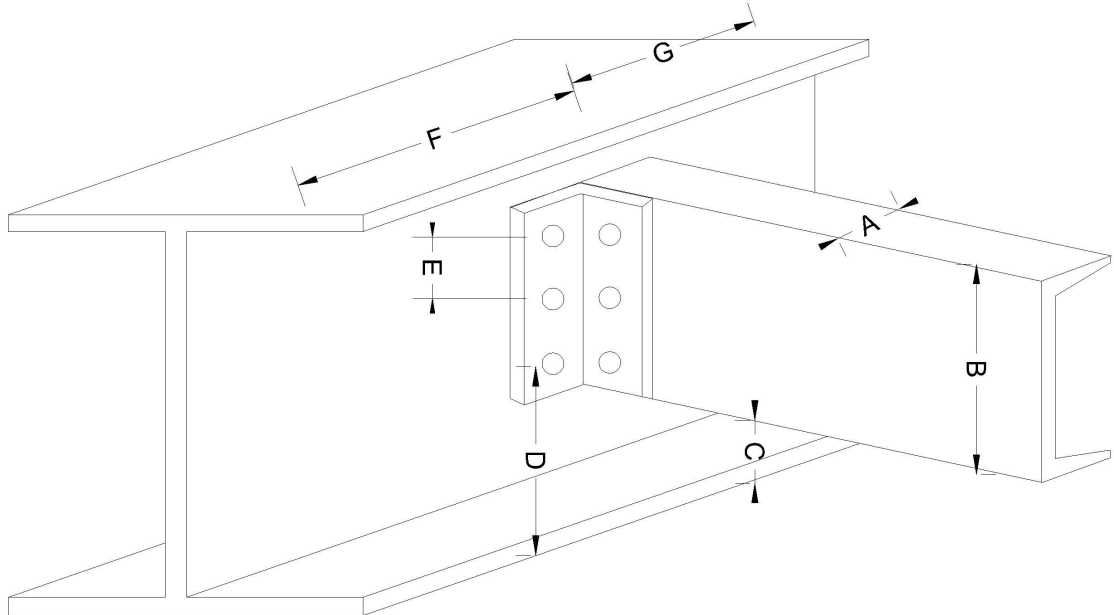
File Name: S0000001112

Bridge Inspection Field Sketch

VERIFIED 10/2/12 R.A. PIERCE, M. FORD

SPAN: ALL

LOCATION: MID - SPAN



3 BOLTS

SPAN	DIM. A	DIM. B	DIM. C	DIM. D	DIM. E	DIM. F	DIM. G	BOLT SIZE
ALL	2 5/8"	10"	7"	9 1/2"	2 1/2"	20'	20'	3/4"

Title
DIAPH.

Description
DIAPH.

Bridge No: 010079

Drawn By: RAP

Date: 10/27/08

File Name: S0000001113

Bridge Inspection Field Sketch

VERIFIED 10/2/12 R.A. PIERCE, M. FORD



Abutment #	1	Abutment 2 similar	
Cap - Beam Type (Wood or Steel)			
Cap Size	25.833ft Long	0.979ft Wide	0.979ft High
Left Overhang	1.417ft	Lt Cap/Beam Overhang	1.75ft
Right Overhang	1.417ft	Rt Cap/Beam Overhang	1.75ft

Pile #	Material	Pile Type	Spacing	Length	Width/Diam.	Height	Orientation
1	Wood or Timber	Pile Bent	5.75		1		Vertical
2	Wood or Timber	Pile Bent	5.75		1		Vertical
3	Wood or Timber	Pile Bent	5.75		1		Vertical
4	Wood or Timber	Pile Bent	5.75		1		Vertical
5	Wood or Timber	Pile Bent			1		Vertical

ABUT. # 2 BM. OUT SAME AS ABUT. # 1

PIER # 1 BM. OUT: LT. & RT.; 23"

PIER # 2 BM. OUT: LT. & RT.; 20"

Title
SUBST.

Description
ABUTS AND PIERS

Bridge No: 010079

Drawn By: RAP

Date: 10/27/08

File Name: S0000001114



SOUTH TO NORTH



POSTING SIGN



UPSTREAM



DOWNSTREAM



LOOKING SOUTH



ABUT. (B)



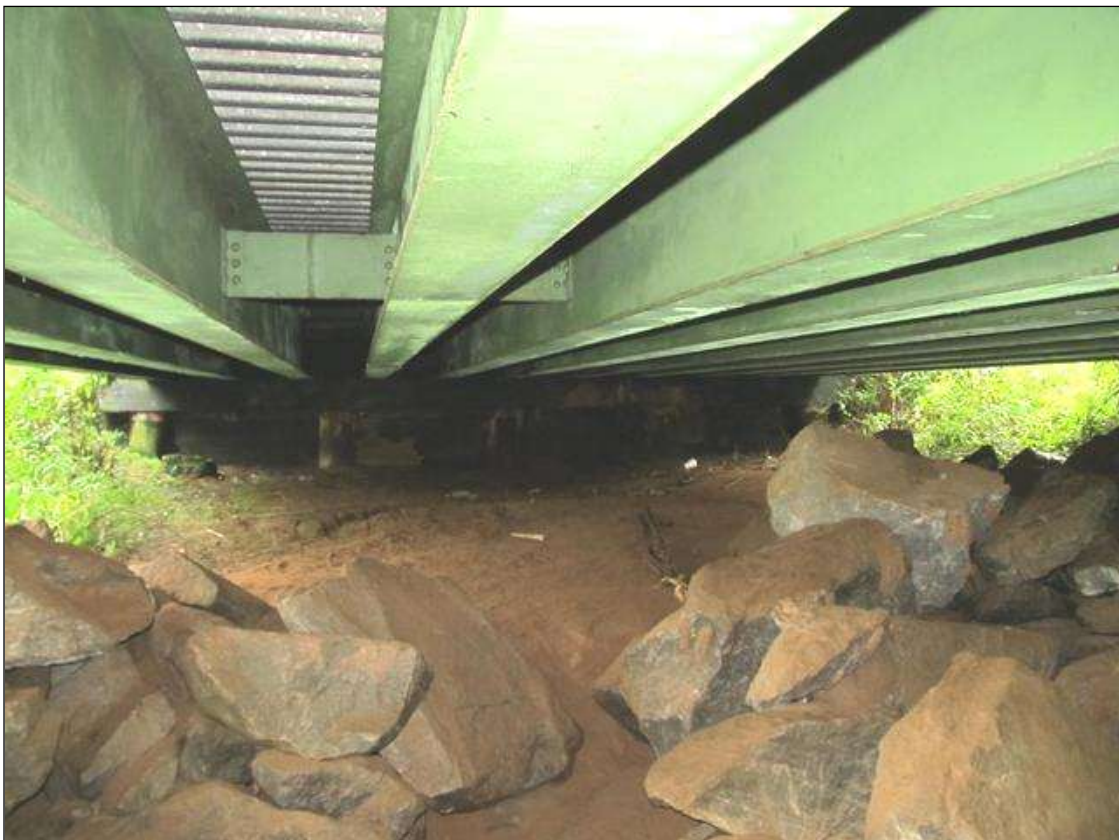
NORTH FACE PIER (1) AND ABUT. (A)



EAST PROFILE



WEST PROFILE



ABUT. (A)