



NC DEPARTMENT OF TRANSPORTATION ATTENTION
 DIVISION OF HIGHWAYS
 BRIDGE MANAGEMENT UNIT

BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY MECKLENBURG BRIDGE NUMBER 590820 INSPECTION CYCLE 2 YRS 30.1
 ROUTE I85 ACROSS I485 NBL RAMP M.P. 0

1.1 MI. N. JCT. SR1625

LOCATION 1.1 MI. E. JCT. SR1625

SUPERSTRUCTURE RC DECK ON PLATE GIRDERS, SIP FORMS, APPROACH SLABS

SUBSTRUCTURE EBTS:RC CAPS ON PPC PILES

SPANS 1@130'9 5/16 COMPOSITE

LONGITUDE 80° 58' 3.09" LATITUDE 35° 14' 54.67"

INSPECTION DATE 02/06/2014 PRESENT CONDITION GOOD

PRESENT POSTING Not Posted NOT POSTED. PROPOSED POSTING _____

OTHER SIGNS PRESENT NONE



LOOKING NORTH

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>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: 02/18/2014

IDENTIFICATION

(1) STATE NAME -NORTH CAROLINA BRIDGE 590820
 (8) STRUCTURE NUMBER(FEDERAL) 000000001190820
 (5) INVENTORY ROUTE (ON/UNDER) - ON 11000850
 (2) STATE HIGHWAY DEPARTMENT DISTRICT 2
 (3) COUNTY CODE 119 (4) PLACE CODE 12000
 (6) FEATURE INTERSECTED - I485 NBL RAMP
 (7) FACILITY CARRIED I85
 (9) LOCATION 1.1 MI. E. JCT. SR1625
 (11) MILEPOINT 30.1
 (16) LAT 35° 14' 54.67" (17) LONG 80° 58' 3.09"
 (98) BORDER BRIDGE STATE CODE PCT SHARE
 (99) BORDER BRIDGE STRUCTURE NO

SUFFICIENCY RATING = 94.47
 STATUS = Not Deficient

CLASSIFICATION CODE

(112) NBIS BRIDGE SYSTEM - YES
 (104) HIGHWAY SYSTEM Is on the NHS 1
 (26) FUNCTIONAL CLASS - Arterial - Interstate 11
 (100) STRAHNET HIGHWAY - Interstate STRAHNET Route 1
 (101) PARALLEL STRUCTURE - No Parallel Structure N
 (102) DIRECTION OF TRAFFIC - 2-way Traffic 2
 (103) TEMPORARY STRUCTURE -
 (110) DESIGNATED NATIONAL NETWORK - On the National Network 1
 (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 :
 TYPE - CODE 000
 (45) NUMBER OF SPANS IN MAIN UNIT 1
 (46) NUMBER OF APPROACH SPANS
 (107) DECK STRUCTURE TYPE - 1 CODE
 (108) WEARING SURFACE / PROTECTIVE SYSTEM :
 (A) TYPE OF WEARING SURFACE - CODE
 (B) TYPE OF MEMBRANE - CODE
 (C) TYPE OF DECK PROTECTION - CODE

CONDITION CODE

(58) DECK 7
 (59) SUPERSTRUCTURE 8
 (60) SUBSTRUCTURE 7
 (61) CHANNEL & CHANNEL PROTECTION N
 (62) CULVERTS N

LOAD RATING AND POSTING CODE

(31) DESIGN LOAD HS 20 + MOD 6
 (63) OPERATING RATING METHOD - Load Factor 1
 (64) OPERATING RATING - HS-55 99
 (65) INVENTORY RATING METHOD - Load Factor 1
 (66) INVENTORY RATING - HS-35 63
 (70) BRIDGE POSTING - No Posting Required 5
 (41) STRUCTURE OPEN, POSTED ,OR CLOSED A
 DESCRIPTION - Open, No Restriction

AGE AND SERVICE

(27) YEAR BUILT 2005
 (106) YEAR RECONSTRUCTED
 (42) TYPE OF SERVICE : ON - Overpass - Interchange
 UNDER - Highway CODE 61
 (28) LANES: ON STRUCTURE 9 UNDER STRUCTURE 2
 (29) AVERAGE DAILY TRAFFIC 112500
 (30) YEAR OF ADT 2012 (109) TRUCK ADT PCT 16%
 (19) BYPASS OR DETOUR LENGTH 0 MI

APPRAISAL CODE

(67) STRUCTURAL EVALUATION 7
 (68) DECK GEOMETRY 9
 (69) UNDERCLEARANCES, VERTI & HORIZ 4
 (71) WATERWAY ADEQUACY N
 (72) APPROACH ROADWAY ALIGNMENT 8
 (36) TRAFFIC SAFETY FEATURES 1111
 (113) SCOUR CRITICAL BRIDGES N

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN 128 FT
 (49) STRUCTURE LENGTH 131 FT
 (50) CURB OR SIDEWALK: LEFT 0 FT RIGHT 0 FT
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 143.083 FT
 (52) DECK WIDTH OUT TO OUT 148.646 FT
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 136 FT
 (33) BRIDGE MEDIAN - No Median CODE 3
 (34) SKEW 6° (35) STRUCTURE FLARED 0
 (10) INVENTORY ROUTE MIN VERT CLEAR 999.9 FT
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 71.542 FT
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 999.9 FT
 (54) MIN VERT UNDERCLEAR REF Highway 17.833 FT
 (55) MIN LAT UNDERCLEAR RT REF Highway 10 FT
 (56) MIN LAT UNDERCLEAR LT REF - 10 FT

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 225000 (115) YEAR FUTURE ADT 2025

INSPECTIONS

(90) INSPECTION DATE 02/06/2014

NAVIGATION DATA

(38) NAVIGATION CONTROL - Not Applicable CODE N
 (111) PIER PROTECTION - CODE
 (39) NAVIGATION VERTICAL CLEARANCE 0
 (116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR FT
 (40) NAVIGATION HORIZONTAL CLEARANCE 0 FT

(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

Structure No: 590820

County: MECKLENBUR
G

Run Date:

Span Number	Feature Intersected	Inventory Route	Minimum Maximum Vertical Clearance	Milepoint	Base Highway Network	LRS Inventory Route	Toll	Functional Classification	Numer of Lanes	Average Daily Traffic	Year of Average Daily Traffic	Total Horizontal Clearance	See Note 1							
													Reference Feature	Minimum Vertical Underclearance	Right Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade	STRAHNET Highway Designator	Direction of Traffic	Highway System of Route
	6	5	10	11	12	13	20	26	28	29	30	47	54A	54	55	56	69	100	102	104
1	I485N	17004850	18.17		0			11	2	17500	2012	44	H	17.83	10	10	9	1	1	1

Note 1: Items 54, 55, and 56 are not reported FHWA under route data points but are collected for each under route to determine the minimum value for Underclearance Appraisal Item 69. The under route that generates the lowest Underclearance Appraisal value will be reported on the Facility Carried record.

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 02/18/2014

COUNTY : MECKLENBURG DIVISION : 10 DISTRICT : 2 STRUCTURE NUMBER : 590820 LENGTH : 131 FEET

ROUTE CARRIED : I85 FEATURE INTERSECTED : I485 NBL RAMP

LOCATED : 1.1 MI. E. JCT. SR1625 BRIDGE NAME : CITY : *CHARLOTTE

FUNC. CLASS : 11 SYST.ON : FA SYST.UNDER : NFA ADT & YR : 112500 2012 RAIL TYPE : LT 41 RT 41

BUILT : 2005 BY : DOH PROJ : 8.U672209 FED.AID PROJ : STPNHF-117-1 DESIGN LOAD : HS 20 + MOD

REHAB : BY : PROJ : ALIGNMENT : TAN SKEW : 84 LANES : ON 9 UNDER 2

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

SUPERSTRUCTURE : RC DECK ON PLATE GIRDERS, SIP FORMS, APPROACH SLABS

SUBSTRUCTURE : EBTS:RC CAPS ON PPC PILES

SPANS : 1@130'9 5/16" COMPOSITE

BEAMS OR GIRDERS : 14 LINES OF 5/8"X 60"PLATE GIRDERS @ VARIOUS CENTERS

FLOOR : 9 1/4" RC SLAB ENCROACHMENT : 1 LN EL. CONDUIT DECK (OUT TO OUT) : 148.646 FT

CLEAR ROADWAY : 143.083 FT BETWEEN RAILS : 145.5 FT SIDEWALK OR CURB : LT 0 FT RT 0 FT

VERT.CL.OVER : 999.9 FT

INV.RTG. : HS-35 OPE.RTG. : HS-55 CONTR.MEMBER : Int.grds POSTED : SV TTST DATE

SYSTEM : Primary Interstate GREEN LINE ROUTE : Y

UNDER ROUTES AND CLEARANCES

Span	Route Description	Vertical Clearances		Horizontal Clearances		
		MMVC	MVC	Total	Left	Right
1	I485N	18.1670	17.8330	44	10	10

Note: All measurements are in feet.

REMARKS :

BRIDGE INSPECTION RECORD AND SUMMARY

INSPECTION TYPE Routine Inspection
 BRIDGE NO. 590820 COUNTY MECKLENBURG ROUTE I85 OVER I485 NBL RAMP
 STRUCTURE TYPE RC DECK ON PLATE GIRDERS, SIP FORMS, APPROACH SLABS
 ROUTE ORIENTATION N - S SPANS 1@130'9 5/16 COMPOSITE

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				45. CHANNEL & CHANNEL PROT.	a. WATERWAY			
					b. ALIGNMENT			
					c. SCOUR			
					d. SLOPE PROT., RIP-RAP, DIKES, ETC.			
2. DECK NO. OF EA TYPE SPN GRADE RATES SI & A ITEM 58					50. APPROACH ROADWAY CONDITION			
2. DECK NO. OF EA TYPE SPN GRADE RATES SI & A ITEM 58	a. CONCRETE		1	G	51. APPROACH SLABS			G
	b. TIMBER				52. PAINT SYSTEM			CODE T G
	c. STEEL PLANK				53. UTILITIES			G
	d. OPEN GRID				54. RESPONSE TO LIVE LOAD			G
3. RAILING	a. CONCRETE			G	55. ESTIMATED REMAINING LIFE			46
	b. TIMBER				60. REGULATORY SIGN NOTICE ISSUED			NO
	c. ALUMINUM				61. PROMPT-ACTION NOTICE ISSUED			NO
	d. STEEL				62. PRESENTLY POSTED			NO
4. CURBS, WHEELGUARDS, PARAPETS, MEDIANS								
5. WALKWAYS (ON OR ATTACHED TO STRUCTURE)								
6. DECK EXP JTS. OR DEVICES. NO. OF EACH	a. STEEL PL OR FINGER				63. TOT. FIELD INSP TIME (INCLUDE WRITE UP)(MAN HR)			6
	b. MISC PREFAB				64. TOTAL SNOOPER INSP. TIME (HRS)			0
	c. COMPRESSION SEAL		2	G	65. TOTAL TRAFFIC CONTROL TIME (MAN HRS)			0
	d. STANDARD JOINTS							
	e. OPEN JOINTS							
7. DECK DEBRIS (INCLUDES EXCESS SAND/GRAVEL)				G	70. SI&A GENERAL CONDITION RATINGS			
SUPER STR. (FM. 1 (90)B TRUSS) ITEM 59								
10. LONGITUDINAL BEAMS OR GIRDERS				G	a. DECK			ITEM 58 7
11. LONGITUDINAL JOIST OR STRINGERS					b. SUPERSTRUCTURE			ITEM 59 8
12. INT. DIAP'S, X-FRAMES, BRACING & CONN'S				G	c. SUBSTRUCTURE			ITEM 60 7
13. END DIAP'S, CURTAIN WALLS, & CONN'S				G	d. CHANNEL & CHANNEL PROT.			ITEM 61
14. FLOOR BEAMS AND CONNECTIONS								71. SI&A FIELD APPRAISAL RATINGS
15. BEARING ASSEMBLIES (INCLUDING MISALIGN)				G	a. WATERWAY ADAQUACY			
16. DRAINAGE SYSTEM (ON STRUCTURE)				G	b. APPR. RDWY. ALIGNMENT			8
17. MOVABLE SPAN MACHINERY								
SUB STR. ITEMS. ITEM 60 (INCLUDE SCOUR)								
35. TIM SUB STR.	a. ABUT. & INT. BENT CAPS & RISERS			USE OF INSP. ACCESSIBILITY EQUIPMENT				
	b. PILES, POST, SILLS, & BRACING			SNOOPER (CODE S, 4, OR N)		HRS	NO	
	c. BULKHEADS, WING'S, & TIE BACKS			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		G					
	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								
41. DRIFT								
				80. INSPECTED BY:		<i>Allen Kiker</i>		
				81. REVIEWED BY:				

Bridge I&A Form 1(82)H State of North Carolina Dept. of Transportation Division of Highways		<h2 style="text-align: center;">FIELD INSPECTION REPORT</h2> <p style="text-align: center;"><u>Bridge Inspeccion & Analysis</u></p>	
Team Leader GLEN KIKER			
Assisted By ROBBIE JAMES			
Item No.	Grade		
2a	G	HL CRACKS IN BOTH OVERHANGS HL. LONGT. CRACKS IN THE SPAN ENDS	
3a	G	VERTICAL HL. CRACKS IN BOTH RAILS	
10A	NO	NO CURVED GIRDERS	
36d	G	HL DIAGNOL CRACKS IN BOTH ABUTMENT BACKWALLS	

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 590820

County MECKLENBURG

Date: 02/06/2014

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
0	No Maintenance Required	NA	0		

Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined



CRACKS IN BOTH RAILS



CRACKS IN BOTH OVERHANGS



HL DIAGNOL CRACKS IN BOTH ABUTMENT BACKWALLS

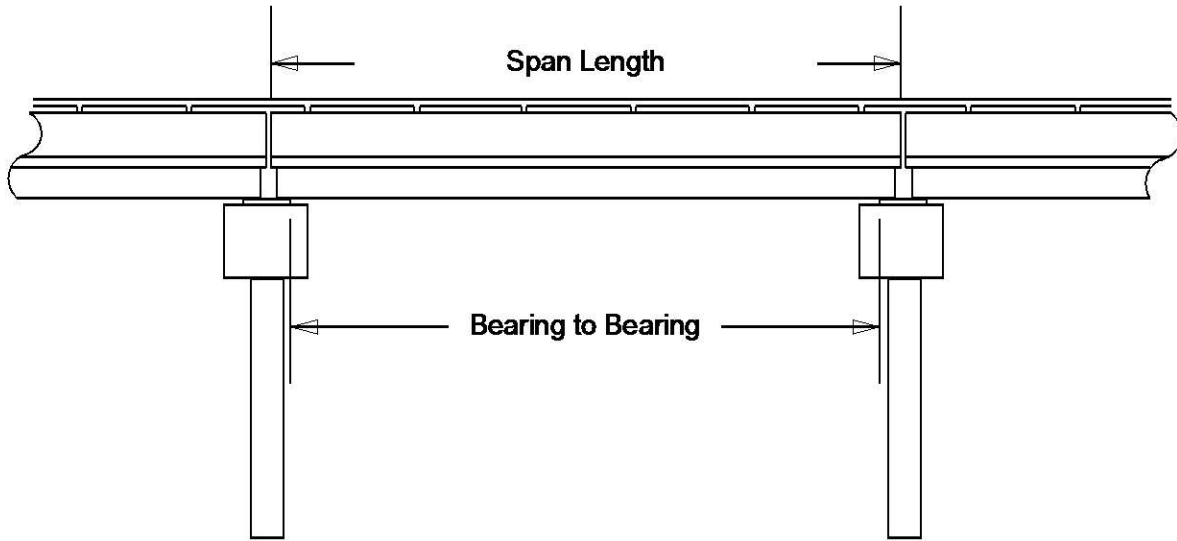


HL CRACKS IN SPAN ENDS

Structure Data Worksheet

Spans

County: MECKLENBURG Structure No: 590820 Date: 02/06/2014 Inspected By: RGK



Span No	Span Length	Bearing to Bearing	Comments
1	130.75	127.75	NBIS BL = 124.75
			MEASURMENTS VERIFIED 02/06/2014 ROBBIE JAMES

Bridge Inspection Field Sketch



Left Lanes			
Roadway	48ft Wide	4 Paved Lanes	South Bound
Right Shoulder	10ft Wide	10ft Paved	
Left Shoulder	10ft Wide	10ft Paved	
Right Guardrail			
Left Guardrail			
Median	2ft Wide	5ft High	
Right Lanes			
Roadway	48ft Wide	4 Paved Lanes	North Bound
Left Shoulder	10ft Wide	10ft Paved	
Right Shoulder	10ft Wide	10ft Paved	
Left Guardrail			
Right Guardrail			

MEASUREMENTS VERIFIED 02/06/2014 ROBBIE JAMES

Title
APPROACH ROADWAY

Description
SHEET 1

Bridge No: 590820

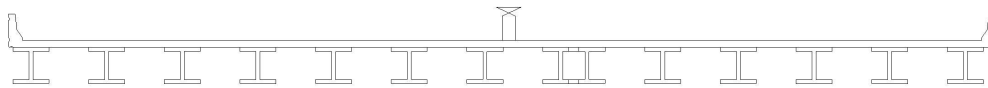
Drawn By: STEVE AUSTIN

Date: 03/30/2010

File Name: S0082002134

Bridge Inspection Field Sketch

Deck Width/Out to Out	148.646ft	Between Rails	145.5ft		
Clear Roadway	143.083ft	Wearing Surface			
Median Width	2ft	Median Height	5ft		
Curb Height		Left	Right		
Sidewalk Width		Left	Right		
Clear Roadway (Rail to Median)		Left	71.542ft	Right	71.542ft
Guardrail Width		Left	1.417ft	Right	1.417ft
Top of Rail to Deck/Wearing Surface		Left	2.833ft	Right	2.833ft
Bridge Rail		Left	Type 4	Right	Type 4



Measurements for Span #	1		
Deck Thickness	1	Left Overhang	3.425
Top of Rail to Bottom of Beam	8.833	Right Overhang	3.425

Beam Number	Beam Type	Spacing	Comments
1	Steel I Beam	11.483ft	
2	Steel I Beam	11.483ft	
3	Steel I Beam	11.483ft	
4	Steel I Beam	11.483ft	
5	Steel I Beam	11.483ft	
6	Steel I Beam	11.483ft	
7	Steel I Beam	11.483ft	
8	Steel I Beam	4ft	
9	Steel I Beam	11.483ft	
10	Steel I Beam	11.483ft	
11	Steel I Beam	11.483ft	
12	Steel I Beam	11.483ft	
13	Steel I Beam	11.483ft	
14	Steel I Beam	ft	

ABUT. DETAIL = RC CAPS ON PPC PILES

GIRDER DETAIL = 5/8 X 60 PLATE GIRDERS

MEASUREMENTS VERIFIED 02/06/2014 ROBBIE JAMES

Title
TYPICAL SECTION

Description
SHEET 2

Bridge No: 590820

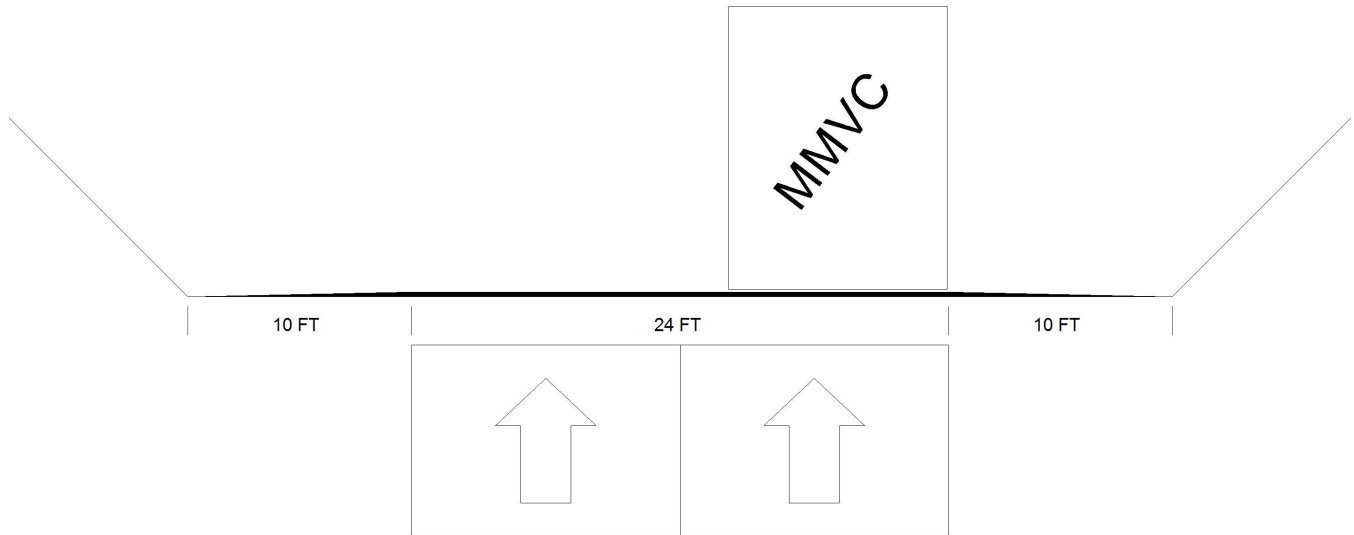
Drawn By: STEVE AUSTIN

Date: 03/30/2010

File Name: S0082002135

Bridge Inspection Field Sketch

Span 1



Roadway 1		Direction of Traffic	West
Distance to Left Rail		Distance to Right Rail	
Distance to Left Toe of Slope	10FT	Distance to Left Bent	
Distance to Right Toe of Slope	10FT	Distance to Right Bent	
MMVC	18.167 Ft at Beam 14, 10 FT from RIGHT EDGE OF RDWY.		
MVC	17.833 Ft at Beam 14, 0 FT from LEFT EDGE OF RDWY.		

MEASUREMENTS VERIFIED 02/06/2014 ROBBIE JAMES

Title
CLEARANCE

Description
SHEET 3

Bridge No: 590820

Drawn By: STEVE AUSTIN

Date: 03/30/2010

File Name: S0082002136



LOOKING EAST



EAST OPENING



SPLICE PLATES



ABUTMENT 1



BEARINGS



LOOKING SOUTH



RAMPS LOOKING SOUTH



EXP. JOINTS AT BOTH ABUTMENTS



LOOKING NORTH



SUPERSTRUCTURE



LOOKING WEST



WEST OPENING



1 - 4" UTILITY IN BAY # 13