



NC DEPARTMENT OF TRANSPORTATION ATTENTION  
 DIVISION OF HIGHWAYS  
 BRIDGE MANAGEMENT UNIT

# BRIDGE INSPECTION REPORT

INSPECTION TYPE: Routine Inspection

COUNTY MECKLENBURG BRIDGE NUMBER 590069 INSPECTION CYCLE 2 YRS  
 ROUTE 185 ACROSS PAW CREEK M.P. 30100

LOCATION 0.75 MI. N. JCT. SR1625

SUPERSTRUCTURE QUADRUPLE 9'0X13'1 TO 10'X11'3 RC BOX CULVERT

SUBSTRUCTURE 510'10 ALONG CENTERLINE OF CULVERT

SPANS EXTENTIONS-EXTERIOR WALLS:9 TO 10, INTERIOR WALLS:8

LONGITUDE 80° 58' 14.07" LATITUDE 35° 14' 58.91"

INSPECTION DATE 05/21/2014 PRESENT CONDITION FAIR

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	_____

IDENTIFICATION							
(1) STATE NAME -NORTH CAROLINA	BRIDGE	590069		SUFFICIENCY RATING =			98
(8) STRUCTURE NUMBER(FEDERAL)		000000001190069		STATUS =	Not Deficient		
(5) INVENTORY ROUTE (ON/UNDER) - ON		11000850					
(2) STATE HIGHWAY DEPARTMENT DISTRICT		2		CLASSIFICATION		CODE	
(3) COUNTY CODE	119	(4) PLACE CODE	12000	(112)NBIS BRIDGE SYSTEM -			YES
(6) FEATURE INTERSECTED - PAW CREEK				(104)HIGHWAY SYSTEM	Is on the NHS		1
(7) FACILITY CARRIED I85				(26) FUNCTIONAL CLASS -	Arterial - Interstate		11
(9) LOCATION 0.75 MI. N. JCT. SR1625				(100)STRAHNET HIGHWAY -	Interstate STRAHNET Route		1
(11)MILEPOINT		30.1		(101)PARALLEL STRUCTURE -	No Parallel Structure		N
(16)LAT 35° 14' 58.91"	(17)LONG	80° 58' 14.07"		(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 -	On the National Network		1
				(20) TOLL	On Free Road		3
STRUCTURE TYPE AND MATERIAL				(31) MAINTAIN -	State Highway Agency		01
(43) STRUCTURE TYPE MAIN: Concrete continuous				(22) OWNER -	State Highway Agency		01
TYPE - Culverts (includes frame culverts)		CODE	219	(37) HISTORICAL SIGNIFICANCE -	Not Eligible		5
(44) STRUCTURE TYPE APPR :				CONDITION		CODE	
TYPE -		CODE	000	(58) DECK			N
(45) NUMBER OF SPANS IN MAIN UNIT			4	(59) SUPERSTRUCTURE			N
(46) NUMBER OF APPROACH SPANS				(60) SUBSTRUCTURE			N
(107)DECK STRUCTURE TYPE -	N	CODE		(61) CHANNEL & CHANNEL PROTECTION			7
(108)WEARING SURFACE / PROTECTIVE SYSTEM :				(62) CULVERTS			6
(A) TYPE OF WEARING SURFACE -		CODE		LOAD RATING AND POSTING		CODE	
(B) TYPE OF MEMBRANE -		CODE		(31) DESIGN LOAD	HS 20 + MOD		6
(C) TYPE OF DECK PROTECTION -		CODE		(63) OPERATING RATING METHOD -	No Rating Analysis or Evaluatic		5
				(64) OPERATING RATING -	HS-26		46
				(65) INVENTORY RATING METHOD -	No Rating Analysis or Evaluatic		5
				(66) INVENTORY RATING -	HS-20		36
				(70) BRIDGE POSTING -	No Posting Required		5
				(41) STRUCTURE OPEN, POSTED ,OR CLOSED			A
				DESCRIPTION -	Open, No Restriction		
AGE AND SERVICE				APPRAISAL			
(27) YEAR BUILT		1960		(67) STRUCTURAL EVALUATION			6
(106)YEAR RECONSTRUCTED		2005		(68) DECK GEOMETRY			N
(42) TYPE OF SERVICE : ON - Highway				(69) UNDERCLEARANCES,VERTI & HORIZ			N
UNDER - Waterway		CODE	15	(71) WATERWAY ADEQUACY			7
(28) LANES: ON STRUCTURE 8 UNDER STRUCTURE			0	(72) APPROACH ROADWAY ALIGNMENT			8
(29) AVERAGE DAILY TRAFFIC		112500		(36) TRAFFIC SAFETY FEATURES			NNNN
(30) YEAR OF ADT 2012	(109) TRUCK ADT PCT	16%		(113)SCOUR CRITICAL BRIDGES			8
(19) BYPASS OR DETOUR LENGTH		0 MI		PROPOSED IMPROVEMENTS		CODE	
GEOMETRIC DATA				(75) TYPE OF WORK -			
(48) LENGTH OF MAXIMUM SPAN		10 FT		(76) LENGTH OF STRUCTURE IMPROVEMENT			
(49) STRUCTURE LENGTH		42 FT		(94) BRIDGE IMPROVEMENT COST			
(50)CURB OR SIDEWALK: LEFT 0 FT RIGHT		0 FT		(95) ROADWAY IMPROVEMENT COST			
(51) BRIDGE ROADWAY WIDTH CURB TO CURB		0 FT		(96) TOTAL PROJECT COST			
(52) DECK WIDTH OUT TO OUT		0 FT		(97) YEAR OF IMPROVEMENT COST ESTIMATE			
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)		128 FT		(114)FUTURE ADT	225000	(115) YEAR FUTURE ADT	2025
(33) BRIDGE MEDIAN - No Median		CODE	3	INSPECTIONS			
(34) SKEW 0°	(35) STRUCTURE FLARED		0	(90) INSPECTION DATE			05/21/2014
(10) INVENTORY ROUTE MIN VERT CLEAR		999.9 FT		(92) CRITICAL FEATURE INSPECTION :		(93) CFI DATE	
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR		99.9 FT		A) FRACTURE CRIT DETAIL -	NO	A)	
(53) MIN VERT CLEAR OVER BRIDGE RDWY		999.9 FT		B) UNDERWATER INSP -	NO	B)	
(54) MIN VERT UNDERCLEAR REF Not a Highway or Railroad		0 FT		C) OTHER SPECIAL INSP	NO	C)	
(55) MIN LAT UNDERCLEAR RT REF Not a Highway or Railroad		000 FT		SCOUR			
(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				

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE

Run Date: 06/12/2014

COUNTY : MECKLENBURG DIVISION : 10 DISTRICT : 2 STRUCTURE NUMBER : 590069 LENGTH : 42 FEET

ROUTE CARRIED : I85 FEATURE INTERSECTED : PAW CREEK

LOCATED : 0.75 MI. N. JCT. SR1625 BRIDGE NAME : CITY : \*CHARLOTTE

FUNC. CLASS : 11 SYST.ON : FA SYST.UNDER : NFA ADT & YR : 112500 2012 RAIL TYPE : LT 0 RT 0

BUILT : 1960 BY : SHC PROJ : FED.AID PROJ : STPNHF-117-1 DESIGN LOAD : HS 20 + MOD

REHAB : 2005 BY : DOH PROJ : 8.U672209 ALIGNMENT : TAN SKEW : 90 LANES : ON 8 UNDER 0

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 35 FT WATER DEPTH : 1 FT

SUPERSTRUCTURE : QUADRUPLE 9'0" X 13'1" TO 10'0" X 11'3" RC BOX CULVERT, 510'10" ALONG CENTERLINE OF CULVERT

SUBSTRUCTURE : EXTENTIONS-TOP SLAB:1'7" TO 1'8 1/2", BOTTOM SLAB:1'9" TO 1'11", EXT. WALLS:9" TO 10", INT. WALLS:8"

SPANS :

BEAMS OR GIRDERS :

FLOOR : ENCROACHMENT : DECK (OUT TO OUT) : 0 FT

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

VERT.CL.OVER : 999.9 FT

INV.RTG. : HS-20 OPE.RTG. : HS-26 CONTR.MEMBER : POSTED : SV TTST DATE

SYSTEM : Primary Interstate GREEN LINE ROUTE : Y

UNDER ROUTES AND CLEARANCES

REMARKS :

# BRIDGE INSPECTION RECORD AND SUMMARY (R. C. BOX CULVERTS)

 INSPECTION TYPE Routine Inspection  
 BRIDGE NO. 590069

ROUTE I85

INSPECTION DATE 05/21/2014

OVER PAW CREEK

ROUTE ORIENTATION N - S

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

1. Top Slab		F
2. Bottom Slab		F
3. Ext. & Int. Walls		F
4. Wingwalls - Retaining Walls		F
5. Headwalls, Toewalls, Flumes		G
6. Structure Alignment - Settlement		G
7. Drainage Systems (On Structure)		G
8. Channel & Channel Protection	a. Waterway	G
	b. Alignment	G
	c. Scour	G
	d. Slope Prot. (Rip-Rap, Dikes, etc.)	
9. Approach Roadway Condition		G
10. Estimated Remaining Life		26
11. Channel & Channel Protection	Item 61	7
12. Culvert & Retaining Walls	Item 62	6
13. Waterway Adequacy	Item 71	7
14. Approach Roadway	Item 72	8
15. Field Scour Evaluation		G
16. Presently Posted		NO
17. Regulatory Sign Notice Issued		NO
18. Prompt Action Notice Issued		NO
19. Total Field Inspection Time		3
20. Inspected By		<i>Ellen Kiker</i>

Bridge I&A Form 1(82)H State of North Carolina Dept. of Transportation Division of Highways		<b>FIELD INSPECTION REPORT</b> <u>Bridge Inspeccion &amp; Analysis</u>	
Team Leader GLEN KIKER			
Assisted By ROBBIE JAMES			
Item No.	Grade		
1	F	SEVERAL CONSTRUCTION JOINTS ARE OPEN UP TO 1" WIDE  SPALLS ON THE TOP SLAB OF ALL BARRELS 80 FT. FROM THE INLET END UP TO 3" DEEP X 1 FT. WIDE X FULL WIDTH WITH REBAR EXPOSED	
2	F	HAIRLINE CRACKS WITH EFFLO IN THE TOP SLAB LONGT. CRACKS IN THE BOTTOM SLAB OF BARREL 2 UP TO 1/16" WIDE. REMAINING BOTTOM SLABS NOT VISIBLE	
3	F	HL. MAP CRACKS IN EXTERIOR WALL # 2, LEFT END  VERTICAL CRACKING HAIRLINE TO 1/16"	
4	F	ALL WINGS ARE LEANING OUT AT THE TOP UP TO 2"	
5	G	BOTH HEADWALLS HAVE VERTICAL HL CRACKS WITH EFFLO	

# BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 590069

County MECKLENBURG


Date: 05/21/2014


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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
2910	Manual Brush and Tree Control	LF	250	BRUSH AND TREES AT THE STRUCTURE	
4675	Maintenance of reinforced Concrete Box Culverts	LF	250	SPALLS ON TOP SLAB, CRACKS IN WALLS AND TOP SLAB, OPEN CONSTRUCTION JOINTS	

## Key

 Priority Maintenance Item

 Critical Finding Item

 Priority Maintenance Level Not Determined



CRACKS IN BOTH HEADWALLS



HL. MAP CRACKS IN EXTERIOR WALL # 2, LEFT END



ALL WINGS ARE LEANING OUT AT THE TOP



CRACKS IN THE TOP SLAB





CRACKS IN ALL WALLS



OPEN CONSTRUCTION JOINTS

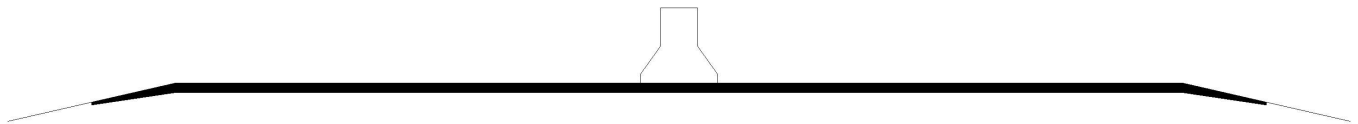


SPALLS ON THE TOP SLAB 80 FT. FROM THE INLET END WITH REBAR EXPOSED



LONGT. CRACKS IN THE BOTTOM SLAB OF BARREL 2 UP TO 1/16" WIDE

# Bridge Inspection Field Sketch



Left Lanes			
Roadway	48ft Wide	4 Unpaved Lanes	South Bound
Left Shoulder	8ft Wide	8ft Paved	
Right Shoulder	8ft Wide	8ft Paved	
Left Guardrail			
Right Guardrail			
Median	1.417ft Wide	5ft High	
Right Lanes			
Roadway	48ft Wide	4 Unpaved Lanes	North Bound
Left Shoulder	8ft Wide	8ft Paved	
Right Shoulder	8ft Wide	8ft Paved	
Left Guardrail			
Right Guardrail			

MEASUREMENTS VERIFIED 5-21-14 GLEN KIKER

**Title**

APPROACH ROADWAY

**Description**

SHEET 1

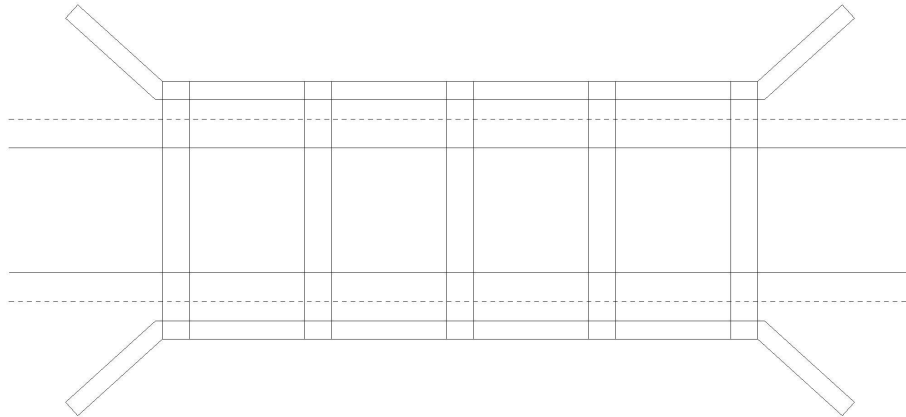
Bridge No: 590069

Drawn By: STEVE AUSTIN

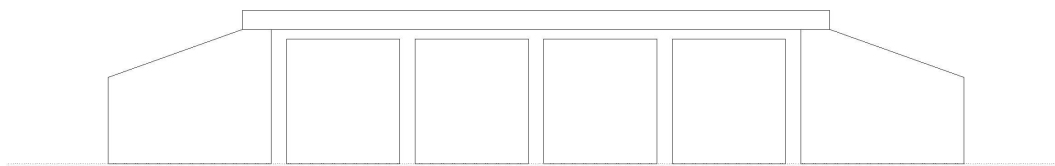
Date: 07/15/2010

File Name: S0082001215

# Bridge Inspection Field Sketch



Crown of Roadway



Bed

Number of Barrels	Skew	Distance From Crown to Bed
4	90°	35ft
Length Along Center Line of Culvert		Length Along Center Line of Roadway
510.83ft		42ft

Barrel #	Width	Height	Wall Thickness	Scour at Inlet	Scour at Outlet
1	10ft	11ft		0	0
2	10ft	11ft	.667ft	0	0
3	10ft	11ft	.667ft	0	0
4	10ft	11ft	0.667ft	0	0

MEASUREMENTS VERIFIED 5-21-14 GLEN KIKER  
 WATER DEPTH = .5 FT.

BARRELS GO FROM 9'X13'1" TO 10'X11'3"

**Title**  
 CULVERT

**Description**  
 SHEET 2

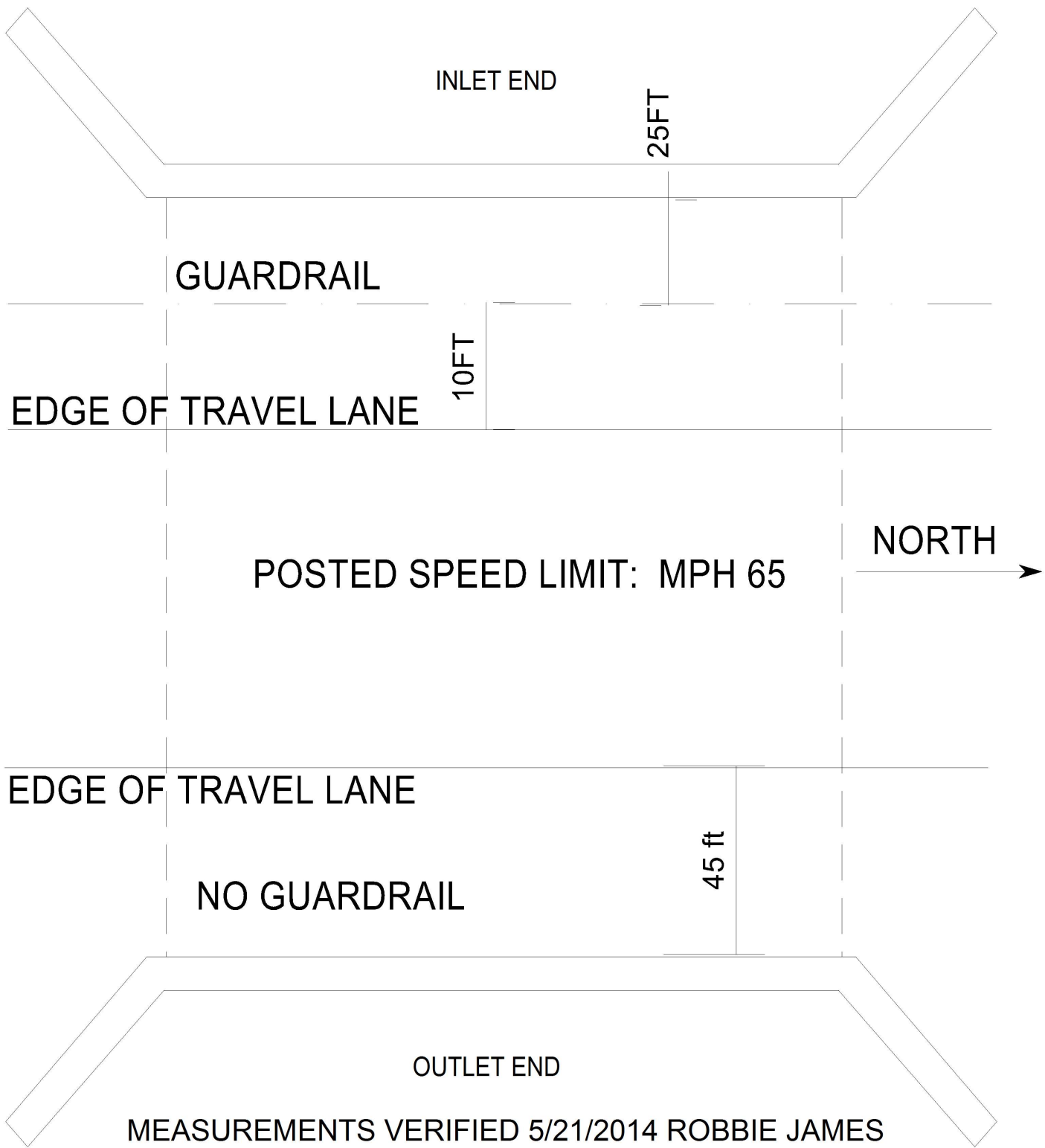
**Bridge No:** 590069

**Drawn By:** STEVE AUSTIN

**Date:** 07/15/2010

**File Name:** S0082001216

# Bridge Inspection Field Sketch



<b>Title</b> CULVERT TOPSIDE		<b>Description</b> CULVERT TOPSIDE	
<b>Bridge No:</b> 590069	<b>Drawn By:</b> ROBBIE JAMES	<b>Date:</b> 5/21/2014	<b>File Name:</b> S0082003192



LOOKING NORTH



LOOKING WEST



LOOKING DOWNSTREAM



LOOKING UPSTREAM



LOOKING SOUTH



LOOKING EAST