OTHER SIGNS PRESENT 4 DELINEATORS

ATTENTION VERTICAL CLR. CHECKED



BRIDGE INSPECTION REPORT

	INSPECTION TYPE:	Routine ins	spection					
COUNTY GASTON	1	BRIDGE NU	JMBER	350142	INSPECTION CYCL	.E 2	YRS	
ROUTE SR2213		ACROSS _	185				M.P.	0
LOCATION 0.4 MI.	E. JCT. SR2339							
SUPERSTRUCTURE	RC DECK ON PRECA	AST PRESTR	ESSED C	CONCRETE	GIRDERS			
SUBSTRUCTURE	E.BTS:RC CAP ON ST	EEL PILES,II	NT.BNTS	:RCP&B W/	SPREAD FTGS.			
SPANS 1@59'7, 3	@59'0							
LONGITUDE 81° 5'	54.06"			LATITUDE	35° 15' 39.63"			
INSPECTION DATE	08/25/2014		PI	RESENT CO	NDITION FAIR			
PRESENT POSTING	Not Posted	NOT POSTED)	PROPOSED	POSTING			



Fracture Critical No **Temporary Shoring** No Scour Critical No Scour POA No

SIGN NOTI	-	NUMBERED REQUIRED
No	WEIGHT LIMIT	
No	DELINEATORS	
No	NARROW BRIDGE	
No	ONE LANE BRIDGE	
No	LOWICE	

WEST APPROACH

NATIONAL BRIDGE INVENTORY------ STRUCTURE INVENTORY AND APPRAISAL Run Date: 10/07/2014

IDENTIFICATION			
(1) STATE NAME -NORTH CAROLINA BRIDGE	350142	SUFFICIENCY RATING =	82
(8) STRUCTURE NUMBER(FEDERAL) 000	0000000710142	STATUS = Functionally Obsolete	
(5) INVENTORY ROUTE (ON/UNDER) - ON	31022130		
(2) STATE HIGHWAY DEPARTMENT DISTRICT	1		CODE
(3) COUNTY CODE 71 (4) PLACE CODE	39480	(112)NBIS BRIDGE SYSTEM -	YES
(6) FEATURE INTERSECTED - 185		(104)HIGHWAY SYSTEM Is not on NHS	(
(7) FACILITY CARRIED SR2213		(26) FUNCTIONAL CLASS - Minor Arterial	16
(9) LOCATION 0.4 MI. E. JCT. SR2339		(100)STRAHNET HIGHWAY - Not a STRAHNET Route	(
(11)MILEPOINT	0	(101)PARALLEL STRUCTURE - No Parallel Structure	N
(16)LAT 35° 15' 39.63" (17)LONG 81° 5' 54.	.06"	(102)DIRECTION OF TRAFFIC - 2-way Traffic	2
(98)BORDER BRIDGE STATE CODE PCT SHA	ARE	(103)TEMPORARY STRUCTURE -	
(99)BORDER BRIDGE STRUCTURE NO		(110)DESIGNATED NATIONAL NETWORK - Not on the National Network	(
		(20) TOLL On Free Road	3
STRUCTURE TYPE AND MATERIAL —		(31) MAINTAIN - State Highway Agency	01
(43) STRUCTURE TYPE MAIN: Prestressed Concrete		(22) OWNER - State Highway Agency	01
TYPE - Stringer Mutlibeam or Girder	CODE 502	(37) HISTORICAL SIGNIFICANCE - Not Eligible	5
(44) STRUCTURE TYPE APPR :		· ,	
TYPE -	CODE 000	CONDITION	CODE
(45) NUMBER OF SPANS IN MAIN UNIT	4	(58) DECK	7
(46) NUMBER OF APPROACH SPANS		(59) SUPERSTRUCTURE	6
(107)DECK STRUCTURE TYPE - 1	CODE	(60) SUBSTRUCTURE	Ę
(108)WEARING SURFACE / PROTECTIVE SYSTEM:		(61) CHANNEL & CHANNEL PROTECTION	N
(A) TYPE OF WEARING SURFACE -	CODE	(62) CULVERTS	N
(B) TYPE OF MEMBRANE -	CODE	• •	0005
(C) TYPE OF DECK PROTECTION -	CODE	LOAD RATING AND POSTING —	
(5) = 5 = 5		(31) DESIGN LOAD HS 20 + MOD	(
AGE AND SERVICE		(63) OPERATING RATING METHOD - Load Factor	1
(27) YEAR BUILT	1961	(64) OPERATING RATING - HS-55	99
(106)YEAR RECONSTRUCTED		(65) INVENTORY RATING METHOD - Load Factor	1
(42) TYPE OF SERVICE : ON - Highway		(66) INVENTORY RATING - HS-34	61
UNDER - Highway	CODE 11	(70) BRIDGE POSTING - No Posting Required	Ę
(28) LANES: ON STRUCTURE 2 UNDER STRUCTURE	6	(41) STRUCTURE OPEN, POSTED ,OR CLOSED	F
(29) AVERAGE DAILY TRAFFIC	4500	DESCRIPTION - Open, No Restriction APPRAISAL	- CODE
(30) YEAR OF ADT 2012 (109) TRUCK ADT PCT	6%	(67) STRUCTURAL EVALUATION	· CODE
(19) BYPASS OR DETOUR LENGTH	0 MI	(68) DECK GEOMETRY	ç
GEOMETRIC DATA	O IVII	(69) UNDERCLEARANCES, VERTI & HORIZ	3
(48) LENGTH OF MAXIMUM SPAN	58 FT	(71) WATERWAY ADEQUACY	,
(49) STRUCTURE LENGTH	237 FT	(72) APPROACH ROADWAY ALIGNMENT	
(50)CURB OR SIDEWALK: LEFT 1.6 FT RIGHT	1.6 FT	(36) TRAFFIC SAFETY FEATURES	0000
		(113)SCOUR CRITICAL BRIDGES	
(51) BRIDGE ROADWAY WIDTH CURB TO CURB	52.17 FT 55.5 FT		١
(52) DECK WIDTH OUT TO OUT		PROPOSED IMPROVEMENTS	
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)	52 FT	(75) TYPE OF WORK - CODE	
(33) BRIDGE MEDIAN - No Median	CODE 0	(76) LENGTH OF STRUCTURE IMPROVEMENT	
(34) SKEW 31° (35) STRUCTURE FLARED	-	(94) BRIDGE IMPROVEMENT COST	
(10) INVENTORY ROUTE MIN VERT CLEAR	999.9 FT	(95) ROADWAY IMPROVEMENT COST	
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR	52.17 FT	(96) TOTAL PROJECT COST	
(53) MIN VERT CLEAR OVER BRIDGE RDWY	999.9 FT	(97) YEAR OF IMPROVEMENT COST ESTIMATE	
(54) MIN VERT UNDERCLEAR REF Highway	18.17 FT	(114)FUTURE ADT 9000 (115) YEAR FUTURE ADT	2025
(55) MIN LAT UNDERCLEAR RT REF Highway	12.5 FT		
(56) MIN LAT UNDERCLEAR LT REF -	3.67 FT	(40) 110000000000000000000000000000000000	8/25/2014
———NAVIGATION DATA		(00) 051 5 155	
(38) NAVIGATION CONTROL - Not Applicable	CODE N	(=)	
(111)PIER PROTECTION -	CODE	,	
· · ·		B) UNDERWATER INSP - NO B)	
(39) NAVIGATION VERTICAL CLEARANCE	0	C) OTHER CRECIAL INCR. NO. 20	
(39) NAVIGATION VERTICAL CLEARANCE (116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR	0 FT	C) OTHER SPECIAL INSP NO C) SCOUR	

Structure No: 350142 County: GASTON Run Date:

			rtical		~			L			Traffic	ance		See Not	e 1					Route
Span Number	Feature Intersected	Inventory Route	Minimum Maximum Ve Clearance	Milepoint	Base Highway Network	LRS Inventory Route	Toll	Functional Classification	Numer of Lanes	Average Daily Traffic	Year of Average Daily	contal Clear	Reference Feature	Minimum Vertical Underclearance	Right Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade	STRAHNET Highway	Traffic	Highway System of Ro
	6	5	10	11	12	13	20	26	28	29	30	47	54A	54	55	56	69	100	102	104
2	I 85 S	11000850	18.33	22.80	1	10085		11	3	59500	2012	51.92	Н	18.17	7.92	8	9	1	1	1
3	I 85 N	11000850	18.33	22.80	1	10085		11	3	59500	2012	52.17	Н	18.17	12.5	3.67	9	1	1	1

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE Run Date: 10/07/2014

CITY:

UNDER

6

COUNTY: DIVISION: DISTRICT: STRUCTURE NUMBER: LENGTH:

237 **GASTON** 12 350142 FEET

ROUTE CARRIED: FEATURE INTERSECTED:

SR2213 185

BRIDGE NAME: LOCATED: 0.4 MI. E. JCT. SR2339

LOWELL

FUNC. CLASS: SYST.ON: SYST.UNDER: ADT & YR: RAIL TYPE:

NFA 2012 FΑ 4500 LT 111 RT 111

BUILT: BY: PROJ: FED.AID PROJ: **DESIGN LOAD:**

HS 20 + MOD 1961 SHC 8.16318 I-85-1(6)20

REHAB: BY: PROJ: ALIGNMENT: SKEW: LANES: TAN 121 ON

2

NAVIGATION: HT. CRN. TO BED: WATER DEPTH:

VC. 0 FT HC 0 FT FT

FT

RC DECK ON PRESTRESSED CONCRETE GIRDERS SUPERSTRUCTURE:

E.BTS:RC CAPS/H- PILES; INT.BNTS:RC P&B/SPREAD FTGS. SUBSTRUCTURE:

SPANS: 1@59'-7, 3@59'

BEAMS OR GIRDERS: 9 LINES 45 PPC GIRDERS @ 6'-2 CENTERS

FLOOR: **ENCROACHMENT:** DECK (OUT TO OUT):

6.25 RC/3.5 12 PIPE, 55.5 FT

AWS 9-4 TEL

CLEAR ROADWAY: BETWEEN RAILS: SIDEWALK OR CURB:

52.17 FT 55.33 FT LT 1.6 FT RT 1.6 FT

VERT.CL.OVER:

999.9 FT

INV.RTG.: OPE.RTG.: CONTR.MEMBER: POSTED:

HS-55 HS-34 SV TTST DATE

SYSTEM: **GREEN LINE ROUTE:**

Ν Primary S.R. Route

UNDER ROUTES AND CLEARANCES

		Vertical CI	earances	Horizo	rances	
Span	Route Description	MMVC	MVC	Total	Left	Right
2	I 85 S	18.33	18.17	51.92	8	7.92
3	I 85 N	18.33	18.17	52.17	3.67	12.50

Note: All measurements are in feet.

REMARKS:

BRIDGE I & A FORM1 (90)A

BRIDGE INSPECTION RECORD AND SUMMARY

INSPECTION TYPE Routine Inspection

BRIDGE NO. 350142 COUNTY GASTON ROUTE SR2213 OVER 185

STRUCTURE TYPE RC DECK ON PRECAST PRESTRESSED CONCRETE GIRDERS ROUTE ORIENTATION W - E SPANS 1@59'7, 3@59'0

ROUTE ORIENTA	ATION W - E	SPANS 1	@59 ¹ 7, 3@5 ¹	9'0					
	EVALUATION CODES:	CRITICAL	(C, 0 - 3);	POOR (P, 4); F	AIR (F, 5, 6); GOOD (G, 7	- 9)			
INSPECTION ITEM				ITEM 61					
	DECK ITEMS	G	RADES		a. WATERWAY				
1. WEARING	SURFACE		F	& CHANNEL PROT.	b. ALIGNMENT				
2. DECK NO.	a. CONCRETE	4	G	c. SCOUR					
OF EA TYPE SPN GRADE	b. TIMBER				d. SLOPE PROT., RIP-RA	PROT., RIP-RAP, DIKES, ETC.			
RATES SI & A				50. APPROAC	50. APPROACH ROADWAY CONDITION				
ITEM 58	d. OPEN GRID			51. APPROAC	H SLABS				
3. RAILING	a. CONCRETE		G	52. PAINT SYS	STEM CODE	=			
	b. TIMBER			53. UTILITIES			G		
	c. ALUMINUM			54. RESPONS	E TO LIVE LOAD		G		
	d. STEEL			55. ESTIMATE	D REMAINING LIFE		20		
4. CURBS, WI	HEELGUARDS, PARAPETS, MEDIA	NS	G						
5. WALKWAYS	S (ON OR ATTACHED TO STRUCT	URE)		60. REGULAT	ORY SIGN NOTICE ISSUE	ED .	NO		
6. DECK EXP	a. STEEL PL OR FINGER			61. PROMPT-A	ACTION NOTICE ISSUED		NO		
JTS. OR DEVICES.	b. MISC PREFAB			62. PRESENTI	_Y POSTED		NO		
NO. OF EACH	c. COMPRESSION SEAL			63. TOT. FIELI	O INSP TIME (INCLUDE W	/RITE UP)(MAN HR)	5		
	d. STANDARD JOINTS	3	G	64. TOTAL SN	OOPER INSP. TIME (HRS	5)			
	e. OPEN JOINTS			65. TOTAL TR	AFFIC CONTROL TIME (M	MAN HRS)			
7. DECK DEB	RIS (INCLUDES EXCESS SAND/GR	RAVEL)	G	,					
				7	ITION RATINGS				
S	UPER STR. (FM. 1 (90)B TRUSS) I	ΓΕΜ 59		a. DECK ITEM 58			7		
10. LONGITUE	DINAL BEAMS OR GIRDERS		F	b. SUPERSTRUCTURE ITEM 59			6		
11. LONGITUE	DINAL JOIST OR STRINGERS			c. SUBSTRUCTURE ITEM 60			5		
12. INT. DIAP'	S, X-FRAMES, BRACING & CONN'S	3	G	d. CHANNEL & CHANNEL PROT. ITEM 61					
13. END DIAP	'S, CURTAIN WALLS, & CONN'S		G						
14. FLOOR BE	AMS AND CONNECTIONS			71. SI&A FIELD APPRAISAL RATINGS					
15. BEARING	ASSEMBLIES (INCLUDING MISALI	GN)	G	a. WATERWAY ADAQUACY					
16. DRAINAGE	SYSTEM (ON STRUCTURE)		G	b. APPR. RDV	VY. ALIGNMENT		8		
17. MOVABLE	SPAN MACHINERY								
				72. FIELD SCOUR EVALUATION					
SU	B STR. ITEMS. ITEM 60 (INCLUDE	SCOUR)							
35. TIM SUB	a. ABUT. & INT. BENT CAPS & RIS	SERS		U	SE OF INSP. ACCESSIBIL	ITY EQUIPMENT			
STR.	b. PILES, POST, SILLS, & BRACIN	IG		SNOOPER (C	ODE S, 4, OR N)	HRS	NO		
	c. BULKHEADS, WING'S, & TIE BA	ACKS		LADDER			NO		
36. CONC	a. ABUT. & INT. BENT CAPS		F	BUCKET TRU	CK		NO		
SUB STR.	b. ABUT. & BENT COL'S BREAST	WALLS	F	BOAT			NO		
	c. ABUT. & INT. BENT PILES			OTHER			NO		
	d. BACKWALLS, WING'S, RETAIN	. WALLS	G						
	e. ABUT. & BENT FOOTINGS & SI	LLS							
37. STEEL	a. ABUT. & INT. BENT CAPS & RIS	SERS		SPECIAL INS	PECTION REQUESTED F	OR			
SUB STR.	b. PILES, BRACING, AND BULKHE	EADS							
38. FOUNDATION PILES TYPE MATERIAL				NOTE					
39. SLOPE PR	ROT., RIP-RAP (INCLUDE DRAINAG	SE)	F						
40. FENDER S	SYSTEMS			80. INSPECTE	D BY:	Ild Ped			
41. DRIFT				81. REVIEWE	D BY:				
· ·									

Team Leader	derek rick
State of Nort Dept. of Tran Division of H	sportation
Ctoto of North	h Caralina
Bridge I&A Forr	n 1(82)H

FIELD INSPECTION REPORT

Bridge Inspecion & Analysis

kus

Assisted By eap

Assisted By	eap	
Item No.	Grade	
1	F	TRANS. CRACKING CRACKING IN THE ASPHALT WEARING SURFACE IN SPAN 1. SIMILAR IN SPAN 2 AND 3.
2a	G	THE DECK IS NOT VISIBLE FROM THE TOPSIDE DUE TO ASPHALT OVERLAY. THE UNDERSIDE SHOWS HAIRLINE CRACKING WITH EFFLORESCENCE IN THE OVERHANGS.
10	F	SPALL ON THE EXTERIOR GIRDERS AT THE INT. BENTS WITH STEEL EXPOSED FOR 3" L X 2" HIGH.
10A	NO	no curved girders
36a	F	3' WIDE X 1' LONG SPALL BTWN. COLUMNS 1 AND 2 WITH REBAR EXPOSED AT BENT 3. SPALL 3' L X 2' WIDE X 1" DEEP WITH REBAR EXPOSED ALONG THE BOTTOM OF BENT 3 CAP IN BTWN. BAYS 1 AND 3. SPALL FORMING BTWN. COLUMNS 2 AND 3 AT BENT 3 2' W X 18" LONG. SPALL FORMING ALONG THE TOP CORNER OF BENT 1 CAP WEST FACE 10" HIGH X 32" WIDE, BTWN. BEAM. 8 AND 9.
36b	F	BENT 3, COLUMN 3 SOUTH FACE HAS A 2 FT DIAMETER SPALL FORMING. COLUMNS HAVE RANDOM HAIRLINE VERTICAL CRACKS THROUGHOUT.
36e		not visible
38		not visible
39	F	CONCRETE SLOPE PROT. CRACKED AT THE TOP FOR 15' HORIZONTALLY.

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

County GASTON Bridge: 350142 Date: 08/25/2014

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
3306	Maintain Concrete Superstructure Components	SF	6	SPALL ON THE EXTERIOR GIRDERS AT THE INT. BENTS WITH STEEL EXPOSED FOR 3" L X 2" HIGH.	
3334	Bridge Bearings	EA	4	THE EXTERIOR BRGS AT THE ABUTS. SHOW SURFACE RUST WITH 1/16" DEEP PITTING.	
3348	Maintain Concrete Substructure Components	LF	2	SPALL FORMING BTWN. COLUMNS 2 AND 3 AT BENT 3 2' W X 18" LONG.	
3348	Maintain Concrete Substructure Components	LF	3	3' WIDE X 1' LONG SPALL BTWN. COLUMNS 1 AND 2 WITH REBAR EXPOSED AT BENT 3.	
3348	Maintain Concrete Substructure Components	LF	3	SPALL 3' L X 2' WIDE X 1" DEEP WITH REBAR EXPOSED ALONG THE BOTTOM OF BENT 3 CAP IN BTWN. BAYS 1 AND 3.	
3348	Maintain Concrete Substructure Components	LF	3	SPALL FORMING ALONG THE TOP CORNER OF BENT 1 CAP WEST FACE 10" HIGH X 32" WIDE, BTWN. BEAM. 8 AND 9.	
3352	Maint Slope Protection	SF	15	CONCRETE SLOPE PROT. CRACKED AT THE TOP FOR 15' HORIZONTALLY.	





TRANS. CRACKING CRACKING IN THE ASPHALT WEARING SURFACE IN SPAN 1. SIMILAR IN SPAN 2 AND 3.



THE EXTERIOR BRGS AT THE ABUTS. SHOW SURFACE RUST WITH 1/16" DEEP PITTING.



CONCRETE SLOPE PROT. CRACKED AT THE TOP FOR 15' HORIZONTALLY.



3' WIDE X 1' LONG SPALL BTWN. COLUMNS 1 AND 2 WITH REBAR EXPOSED AT BENT 3.



BENT 2



SPALL ON THE EXTERIOR GIRDERS AT THE INT. BENTS WITH STEEL EXPOSED FOR 3" L X 2" HIGH.



SPALL 3' L X 2' WIDE X 1" DEEP WITH REBAR EXPOSED ALONG THE BOTTOM OF BENT 1 CAP IN BTWN. BAYS 1 AND 3.



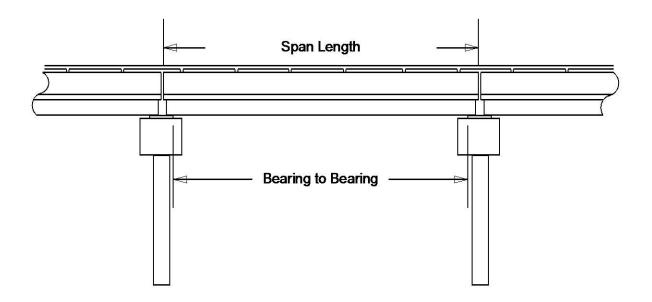
SPALL FORMING BTWN. COLUMNS 2 AND 3 AT BENT 1-2' W X 18" LONG.



SPALL FORMING ALONG THE TOP CORNER OF BENT 1 CAP WEST FACE 10" HIGH X 32" WIDE, BTWN. BEAM. 8 AND 9.

Structure Data Worksheet

County: GASTON Structure No: 350142 Date: 08/25/2014 Inspected By: dcr



Span No	Span Length	Bearing to Bearing	Comments
1	59.583'	57.500'	
2	59.000'	57.542'	
3	59.000'	57.542'	
4	59.000'	57.208'	NBIS =231.583'

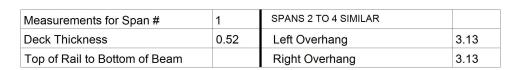
Bridge Inspection Field Sketch

Roadway	48.00ft Wide	2 Paved Lanes	Looking East
Left Shoulder	2ft Wide	2.00ft Paved	
Right Shoulder	2ft Wide	2.00ft Paved	
Left Guardrail			
Right Guardrail			

Title		Descri	ption	
APPROACH ROADWAY		LOOKI	NG EAST	
Bridge No: 350142	Drawn By: DJA		Date: 8/20/2008	File Name:S0298000774

Bridge Inspection Field Sketch

Deck Width/Out to Out	55.50ft	Wearing Surface	0.29ft
Between Rails	55.33ft	Median Width	
Curb Height	0.58ft	Median Height	
Top Rail to Deck/Wearing Surface	2.25ft	Left Guardrail Width	
Clear Roadway	52.17ft	Right Guardrail Width	
Left Bridge Rail	Type 11	Right Bridge Rail	Type 11

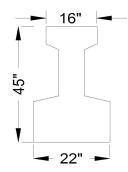


Beam No	Beam Type	Spacing	Comments	
1	PPC Girder	6.17ft		
2	PPC Girder	6.17ft		
3	PPC Girder	6.17ft		
4	PPC Girder	6.17ft		
5	PPC Girder	6.17ft		
6	PPC Girder	6.17ft		
7	PPC Girder	6.17ft		
8	PPC Girder	6.17ft		
9	PPC Girder			

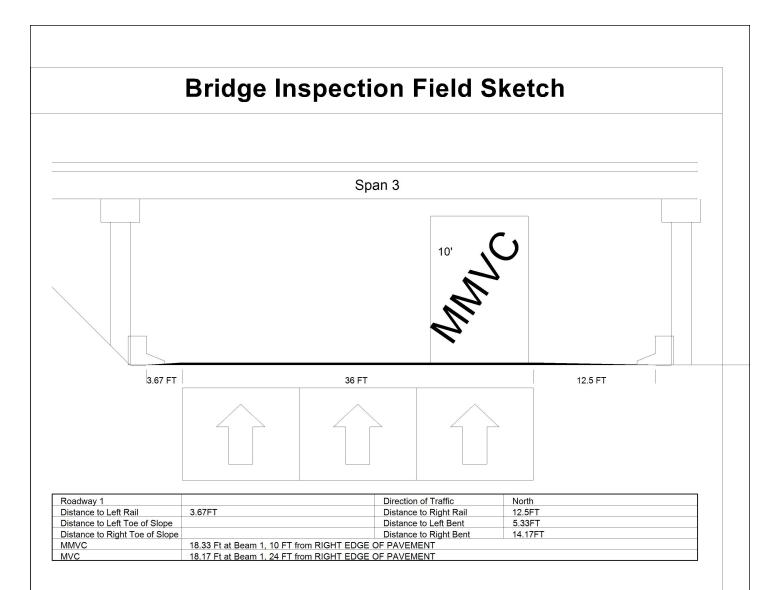
NOTE: 9 LINES OF 4" DIAM. PVC IN BAY 2

NOTE: 12" DIAM. C.I. PIPE IN BAY 1

BEAMS

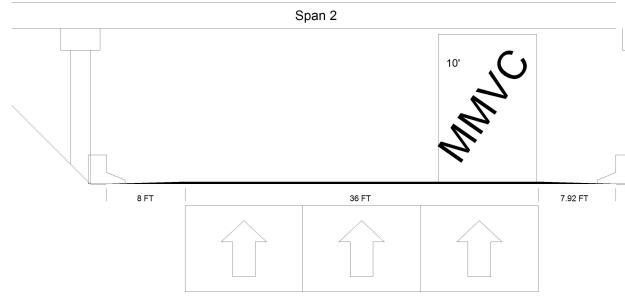


Title		Descri	ption	
DECK DIMENSIONS		TYPICAL SECTION		
Bridge No: 350142	Drawn By: DJA		Date: 8/20/2008	File Name: \$0298000775
	·			·



Title		Descri	ption	
NORTHBOUND UNDERCLEARANCE		NORTHBOUND UNDERCLEARANCE		
Bridge No: 350142	Drawn By: DJA		Date: 8/21/2008	File Name: \$0298000776

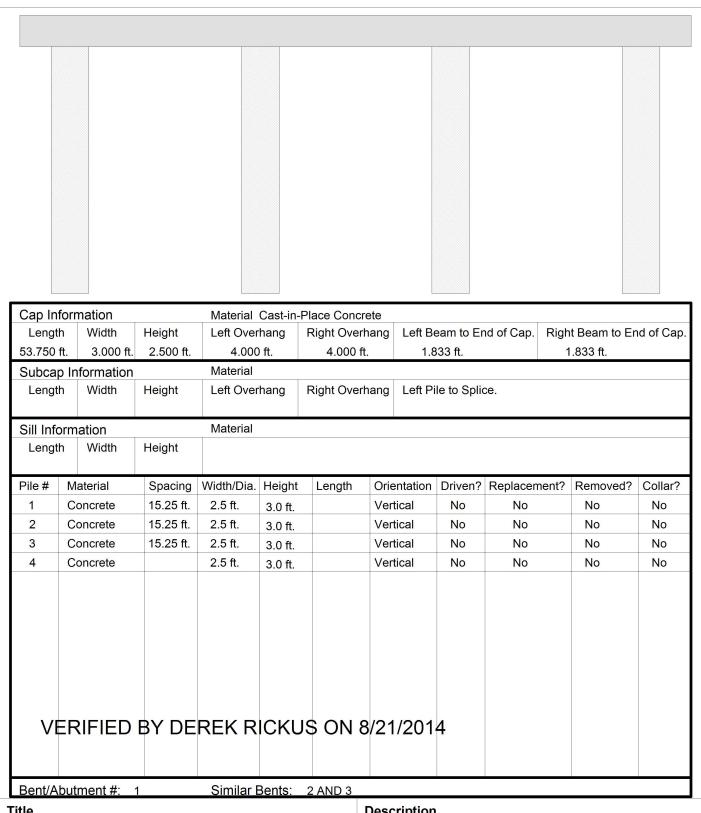




Roadway 1		Direction of Traffic	South	
Distance to Left Rail	8FT	Distance to Right Rail	7.92FT	
Distance to Left Toe of Slope		Distance to Left Bent	9.67FT	
Distance to Right Toe of Slope		Distance to Right Bent	9.58FT	
MMVC	18.33 Ft at Beam 1, 10 FT from RIGHT EDGE OF PAVEMENT			
MVC	18.17 Ft at Beam 1, 26 FT from RIGHT EDGE OF PAVEMENT			

Title		Description
SOUTHBOUND UNDERCLEARANCE		SOUTHBOUND UNDERCLEARANCE
Bridge No: 350142	Drawn By: DJA	Date: 8/21/2008 File Name: \$0298000777

Bridge Inspection Field Sketch



Title		Descri	ption	
SUBSTRUCTURE		DETAILS		
Bridge No: 350142	Drawn By: DEREK RICKUS		Date: 8/15/2012	File Name: S0142001850



WEST APPROACH



INFOR. AT THE SOUTHWEST CORNER

Structure 350142 County GASTON Date: 08/25/2014 Structure Photos



INFOR. PLATE AT THE NORTHEAST CORNER



EAST APPROACH



ABUT. 2



UTILITY IN BAY 8



UTILITY IN BAY 7



BENT 3

Structure 350142 County GASTON Date: 08/25/2014 Structure Photos



LOOKING SOUTH



BENT 3

Structure 350142 County GASTON Date: 08/25/2014 Structure Photos



ABUT. 2