ATTENTION

VERTICAL CLR. CHECKED
TEMP. REPAIRS(DECK AND BEAMS, BRGS.)



BRIDGE INSPECTION REPORT

INSPECTION TYPE:	Noutine inspection				
COUNTY GASTON	BRIDGE NUMBER	350002	INSPECTION CYCLE	2 YRS	19.7
ROUTE NC279	ACROSS 185			M.P.	0
LOCATION 0.5 MI. W. JCT. US29/74					
SUPERSTRUCTURE REINFORCED CONC	RETE DECK ON I-BE	AMS			
SUBSTRUCTURE END BENTS:RC CAP	& PPC PILES, INT.BE	NTS:RCP&E	3 ON PILE FTG.		
SPANS 1@60'0", 1@64'10", 1@65'1", 1@	@ 59'10"				
LONGITUDE 81° 8' 58.15"		LATITUDE	35° 16' 7.57"		
INSPECTION DATE 07/30/2014	P	RESENT CC	NDITION GOOD		
PRESENT POSTING N	NOT POSTED	PROPOSED	POSTING		
OTHER SIGNS PRESENT 4 DELINEATOR	RS				



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

SIGN NOT		NUMBERED REQUIRED
No	WEIGHT LIMIT	
No	DELINEATORS	
No	NARROW BRIDGE	
No	ONE LANE BRIDGE	
No	LOW CLEARANCE	

WEST APPROACH

- IDENTIFICATION -			
(1) STATE NAME -NORTH CAROLINA BRIDGE	350002	SUFFICIENCY RATING =	76
(8) STRUCTURE NUMBER(FEDERAL) 0000	000000710002	STATUS = Functionally Obsolete	
(5) INVENTORY ROUTE (ON/UNDER) - ON	31002790		
(2) STATE HIGHWAY DEPARTMENT DISTRICT	1		- CODE
(3) COUNTY CODE 71 (4) PLACE CODE	25580	(112)NBIS BRIDGE SYSTEM -	YES
(6) FEATURE INTERSECTED - 185		(104)HIGHWAY SYSTEM Is on the NHS	1
(7) FACILITY CARRIED NC279		(26) FUNCTIONAL CLASS - Other Principal Arterial	14
(9) LOCATION 0.5 MI. W. JCT. US29/74		(100)STRAHNET HIGHWAY - Not a STRAHNET Route	(
(11)MILEPOINT	0	(101)PARALLEL STRUCTURE - No Parallel Structure	Ν
(16)LAT 35° 16' 7.57" (17)LONG 81° 8' 58.1	15"	(102)DIRECTION OF TRAFFIC - 2-way Traffic	2
(98)BORDER BRIDGE STATE CODE PCT SHA	RE	(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: Steel		(22) OWNER - State Highway Agency	01
TYPE - Stringer Mutlibeam or Girder	CODE 302	(37) HISTORICAL SIGNIFICANCE - Not Eligible	5
(44) STRUCTURE TYPE APPR :		(4, 7, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	
TYPE -	CODE 000	CONDITION —	CODE
(45) NUMBER OF SPANS IN MAIN UNIT	4	(58) DECK	7
(46) NUMBER OF APPROACH SPANS		(59) SUPERSTRUCTURE	7
(107)DECK STRUCTURE TYPE - 1	CODE	(60) SUBSTRUCTURE	6
(108)WEARING SURFACE / PROTECTIVE SYSTEM:		(61) CHANNEL & CHANNEL PROTECTION	
(A) TYPE OF WEARING SURFACE -	CODE	(62) CULVERTS	N
(B) TYPE OF MEMBRANE -	CODE	• •	
(C) TYPE OF DECK PROTECTION -	CODE		CODE
(o) THE OF BEOKEROTEONON	0002	(31) DESIGN LOAD HS 20 + MOD	(
AGE AND SERVICE		(63) OPERATING RATING METHOD - Load Factor	1
(27) YEAR BUILT	1963	(64) OPERATING RATING - HS-51	92
(106)YEAR RECONSTRUCTED	1903	(65) INVENTORY RATING METHOD - Load Factor	1
(42) TYPE OF SERVICE : ON - Highway - Pedestrian		(66) INVENTORY RATING - HS-31	55
	CODE 51	(70) BRIDGE POSTING - No Posting Required	5
UNDER - Highway (28) LANES: ON STRUCTURE 6 UNDER STRUCTURE	CODE 51 6	(41) STRUCTURE OPEN, POSTED ,OR CLOSED	F
	20000	DESCRIPTION - Open, No Restriction	CODE
(29) AVERAGE DAILY TRAFFIC		-	- CODE
(30) YEAR OF ADT 2012 (109) TRUCK ADT PCT	12%	(67) STRUCTURAL EVALUATION	6
(19) BYPASS OR DETOUR LENGTH	0 MI	(68) DECK GEOMETRY	2
GEOMETRIC DATA	04.53	(69) UNDERCLEARANCES, VERTI & HORIZ	3
(48) LENGTH OF MAXIMUM SPAN	64 FT	(71) WATERWAY ADEQUACY	١
(49) STRUCTURE LENGTH	250 FT	(72) APPROACH ROADWAY ALIGNMENT	3404
(50)CURB OR SIDEWALK: LEFT 5.2 FT RIGHT	5.2 FT	(36) TRAFFIC SAFETY FEATURES	0101
(51) BRIDGE ROADWAY WIDTH CURB TO CURB	68 FT	(113)SCOUR CRITICAL BRIDGES	N
(52) DECK WIDTH OUT TO OUT	80.5 FT	PROPOSED IMPROVEMENTS	
(32) APPROACH ROADWAY WIDTH (W/SHOULDERS)	59 FT	(75) TYPE OF WORK - CODE	
(33) BRIDGE MEDIAN - No Median	CODE 0	(76) LENGTH OF STRUCTURE IMPROVEMENT	
(34) SKEW 27° (35) STRUCTURE FLARED	0	(94) BRIDGE IMPROVEMENT COST	
(10) INVENTORY ROUTE MIN VERT CLEAR	999.9 FT	(95) ROADWAY IMPROVEMENT COST	
(47) INVENTORY ROUTE TOTAL HORIZ CLEAR	68 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	15.92 FT	(114)FUTURE ADT 40000 (115) YEAR FUTURE ADT	2025
(55) MIN LAT UNDERCLEAR RT REF Highway	8.75 FT	INSPECTIONS	
(56) MIN LAT UNDERCLEAR LT REF -	6.33 FT	(-) 110550701515	7/20/004
		(20) 251 515	7/30/2014
NAVIGATION DATA		(92) CRITICAL FEATURE INSPECTION: (93) CFI DATE	
NAVIGATION DATA (38) NAVIGATION CONTROL - Not Applicable	CODE N	A) EDACTURE ORIT RETAIL	
(38) NAVIGATION CONTROL - Not Applicable	CODE N	A) FRACTURE CRIT DETAIL - NO A)	
(38) NAVIGATION CONTROL - Not Applicable (111) PIER PROTECTION -	CODE	B) UNDERWATER INSP - NO B)	
(38) NAVIGATION CONTROL - Not Applicable		•	

Structure No:	350002	County:	GASTON	Run Date:

			rtical					on			Fraffic	nce	S	See Not	e 1					ute
Span Number	Feature Intersected	Inventory Route	Minimum Maximum Ve Clearance	Milepoint	Base Highway Network	LRS Inventory Route	Toll	Functional Classificatio	Numer of Lanes	Average Daily Traffic	Year of Average Daily	Total Horizontal Clearan	Reference Feature	Minimum Vertical Underclearance	Right Lateral Underclearance	Left Lateral Underclearance	Underclearance Appraisal Grade		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
2	I 85 S	11000850	15.75	19.70	1	10085		11	3	54000	2012	50.92	Н	15.75	8.75	6.17	9	1	1	1
3	I 85 N	11000850	16.17	19.70	1	10085		11	3	54000	2012	51.08	Н	15.92	8.75	6.33	9	1	1	1

BRIDGE MANAGEMENT UNIT

DATA ON EXISTING STRUCTURE Run Date: 10/17/2014

6

UNDER

6

COUNTY: **DIVISION:** DISTRICT: STRUCTURE NUMBER: LENGTH:

250 **GASTON** 12 350002 FEET

ROUTE CARRIED: FEATURE INTERSECTED:

NC279 185

BRIDGE NAME: LOCATED: 0.5 MI. W. JCT. US29/74 CITY:

GASTONIA

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

NFA 2012 FΑ 20000 LT 139 RT 139

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

HS 20 + MOD 1963 SHC 8.16361 I-85-1(14)18

REHAB: TAN 117 ON

LANES: BY: PROJ: ALIGNMENT: SKEW:

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

VC. 0 FT HC 0 FT FT FT

SUPERSTRUCTURE: REINFORCED CONCRETE DECK ON I-BEAMS

SUBSTRUCTURE: E.BTS:RC CAPS/PPC PILES; INT.BTS:RC P&B/PILE FTGS.

SPANS: 1@60', 1@64'-10", 1@65'-1", 1@59'-10"

BEAMS OR GIRDERS: 12 LINES 33" I-BEAMS @ VARIOUS CTS.

FLOOR: **ENCROACHMENT:**

DECK (OUT TO OUT): 7.25" RC/NO

80.5 FT WATER,6" **AWS**

GAS

BETWEEN RAILS: CLEAR ROADWAY: SIDEWALK OR CURB:

68 FT 78.33 FT LT 5.2 FT RT 5.2 FT

VERT.CL.OVER: 999.9 FT

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

DATE HS-31 HS-51 IB(SpA) SV **TTST**

GREEN LINE ROUTE: SYSTEM:

Primary N.C. Route Υ

UNDER ROUTES AND CLEARANCES

		Vertical Cl	earances	Horizontal Clearances				
Span	Route Description	MMVC	MVC	Total	Left	Right		
2	I 85 S	15.75	15.75	50.92	6.17	8.75		
3	I 85 N	16.17	15.92	51.08	6.33	8.75		

Note: All measurements are in feet.

REMARKS:

BRIDGE I & A FORM1 (90)A

BRIDGE INSPECTION RECORD AND SUMMARY

INSPECTION TYPE Routine Inspection

BRIDGE NO. 350002 COUNTY GASTON ROUTE NC279 OVER 185

STRUCTURE TYPE REINFORCED CONCRETE DECK ON I-BEAMS

ROUTE ORIENTATION W - E SPANS 1@60'0", 1@64'10", 1@65'1", 1@59'10"

ROUTE ORIENTA	ATION W-E	SPANS 1	@60'0", 1@6	64'10", 1@65'1", 1@ 	259'10"						
	EVALUATION CODES:	CRITICAL	(C, 0 - 3);	POOR (P, 4); F	AIR (F, 5, 6); GO	OD (G, 7 - 9	9)				
	INSPECTION ITEM			ITEM 61							
	DECK ITEMS	C	SRADES		a. WATERWAY						
1. WEARING S	SURFACE			& CHANNEL PROT.	b. ALIGNMENT						
2. DECK NO.	a. CONCRETE	4	G	c. SCOUR							
OF EA TYPE SPN GRADE					d. SLOPE PRO	T., RIP-RAI	P, DIKES, ETC.				
RATES SI & A	c. STEEL PLANK			50. APPROAC	H ROADWAY CO	NDITION		G			
ITEM 58	d. OPEN GRID			51. APPROAC	H SLABS						
3. RAILING	a. CONCRETE			52. PAINT SYS	STEM	CODE	I	G			
	b. TIMBER			53. UTILITIES				G			
	c. ALUMINUM G 54. RESPONSE TO LIVE LOAD			G							
	d. STEEL		G	55. ESTIMATE	D REMAINING L	IFE		18			
4. CURBS, WI	HEELGUARDS, PARAPETS, MEDIA	NS	G								
5. WALKWAYS	ON OR ATTACHED TO STRUCT	URE)	G	60. REGULAT	ORY SIGN NOTIC	CE ISSUED)	NO			
6. DECK EXP	a. STEEL PL OR FINGER			61. PROMPT-	ACTION NOTICE	ISSUED		NO			
JTS. OR DEVICES.	b. MISC PREFAB			62. PRESENT	LY POSTED			NO			
NO. OF EACH	c. COMPRESSION SEAL	3	G	63. TOT. FIELI	O INSP TIME (IN	CLUDE WR	RITE UP)(MAN HR)	5			
	d. STANDARD JOINTS			64. TOTAL SN	OOPER INSP. TI	ME (HRS)					
	e. OPEN JOINTS			65. TOTAL TRAFFIC CONTROL TIME (MAN HRS)							
7. DECK DEB	RIS (INCLUDES EXCESS SAND/GR	RAVEL)	G								
				7	0. SI&A GENER	AL CONDIT	TION RATINGS				
S	UPER STR. (FM. 1 (90)B TRUSS) I	ΓΕM 59		a. DECK ITEM 58				7			
10. LONGITUE	DINAL BEAMS OR GIRDERS		G	b. SUPERSTRUCTURE ITEM 59			ITEM 59	7			
11. LONGITUE	DINAL JOIST OR STRINGERS			c. SUBSTRUCTURE ITEM 60				6			
12. INT. DIAP'S	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 SCO	OUR EVALUATION	N					
SU	B STR. ITEMS. ITEM 60 (INCLUDE	SCOUR)	•								
35. TIM SUB	a. ABUT. & INT. BENT CAPS & RIS	SERS		U	SE OF INSP. AC	CESSIBILI	TY 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	СК			NO			
SUB STR.	b. ABUT. & BENT COL'S BREAST	WALLS	G	BOAT				NO			
	c. ABUT. & INT. BENT PILES		G	OTHER							
d. BACKWALLS, WING'S, RETAIN. WALLS			G								
e. ABUT. & BENT FOOTINGS & SILLS											
37. STEEL a. ABUT. & INT. BENT CAPS & RISERS				SPECIAL INSPECTION REQUESTED FOR							
SUB STR. b. PILES, BRACING, AND BULKHEADS											
38. FOUNDATION PILES TYPE MATERIAL				NOTE							
	39. SLOPE PROT., RIP-RAP (INCLUDE DRAINAGE) G				T						
40. FENDER S	SYSTEMS			80. INSPECTE			Hel RL				
41. DRIFT				81. REVIEWE	D BY:		41. DRIFT 81. REVIEWED BY:				

Delatera IOA Fa	4(00)11				
Bridge I&A Fo		FIELD INSPECTION REPORT			
State of North Carolina		Dridge Inchesion & Analysis			
· ·	nsportation	Bridge Inspecion & Analysis			
Division of	Highways				
Team Leader	DEREK RIC	US			
Assisted By	EAP				
Item No.	Grade				
2a	G	DECK REHABED SINCE LAST INSP.			
40	0	STEEL PAINTED IN PAST.			
10	10 G STEEL PAINTED IN PAST.				
10A	NO	O CURVED GIRDERS			
36a	F	CRACKING ON THE LT. EXTERIOR DIAPH. AT BENT 1.			
		CRACKING ALONG THE EAST FACE OF BENT 1 UNDER BEAM. 10.			
36e		NOT VISIBLE			
000					
		NOT VISIBLE			
38		NOT VISIBLE			
50	G	THE APPROACHES PATCHED IN PAST FULL WIDTH X 15' LONG.			

BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 350002 County GASTON Date: 07/30/2014

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	8	THE EXTERIOR CONC. DIAPH. HAVE CRACKING WITH REBAR EXPOSED.	
3348	Maintain Concrete Substructure Components	LF	80	HORIZ. CRACKING ALONG MOST OF THE LENGTH ALONG THE TOP CORNER OF THE SOUTH FACE OF BENT 1 CAP.	





HORIZ. CRACKING ALONG MOST OF THE LENGTH ALONG THE TOP CORNER OF THE EAST FACE OF BENT 3 CAP.



CRACKING ALONG THE SOUTH FACE OF BENT 3 UNDER BEAM. 4.



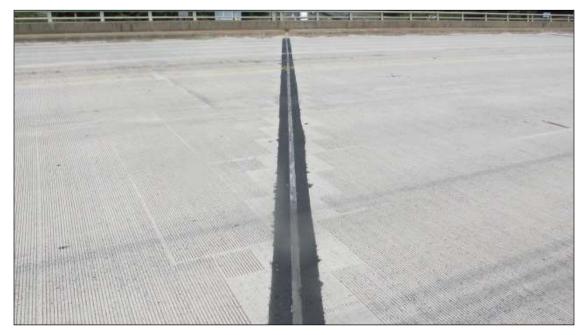
STEEL PAINTED IN PAST.



THE APPROACHES PATCHED IN PAST FULL WIDTH X 15' LONG.



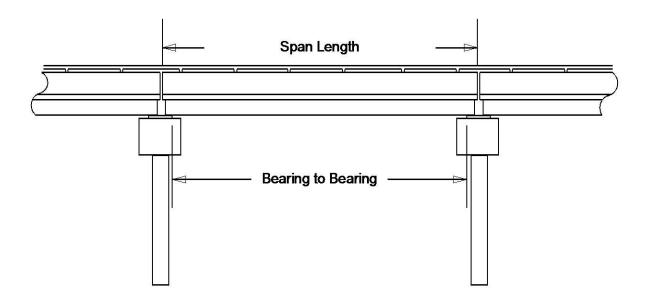
DECK REHABED SINCE LAST INSP.



JOINTS REWORKED SINCE LAST INSP.

Structure Data Worksheet

County: GASTON Structure No: 350002 Date: 07/30/2014 Inspected By: DCR



Span No	Span Length	Bearing to Bearing	Comments
1	60.00	57.917'	
2	64.83	63.747'	
3	65.08	63.667'	
4	59.83	57.765'	NBIS = 247'

Roadway	55.00ft Wide	6 Paved Lanes	Looking East
Left Shoulder	2ft Wide	2.00ft Paved	
Right Shoulder	2ft Wide	2.00ft Paved	
Left Guardrail			
Right Guardrail	6.50ft from road		

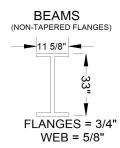
Title		Description						
APPROACH ROADWAY V	WIDTH	APPROACH ROADWAY WIDTH						
Bridge No: 350002	Drawn By: DCR		Date: 8/28/08	File Name: \$0286000095				



Measurements for Span #	1	SPANS 2 TO 4 SIMILAR	
Deck Thickness	0.60	Left Overhang	4.92
Top of Rail to Bottom of Beam	8.4'	Right Overhang	4.92

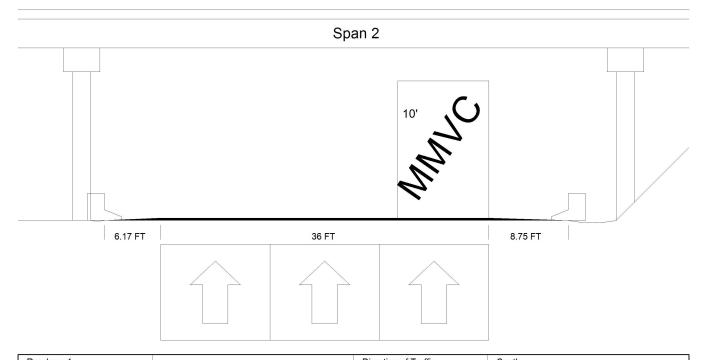
Beam No	Beam Type	Spacing	Comments
1	Steel I Beam	6.67ft	
2	Steel I Beam	6.67ft	
3	Steel I Beam	6.67ft	
4	Steel I Beam	6.67ft	
5	Steel I Beam	6.67ft	
6	Steel I Beam	4.00ft	
7	Steel I Beam	4.00ft	
8	Steel I Beam	6.67ft	
9	Steel I Beam	6.67ft	
10	Steel I Beam	6.67ft	
11	Steel I Beam	6.67ft	
12	Steel I Beam		

NOTE: 6" DIAM. GASLINE AND 9" DIAM. WATERLINE ATTACHED UNDER FIRST BAY ON NORTH SIDE



Title		Description				
TYPICAL SECTION		TYPICAL SECTION				
Bridge No: 350002	Drawn By: DCR		Date: 8/28/08	File Name: \$0286000096		

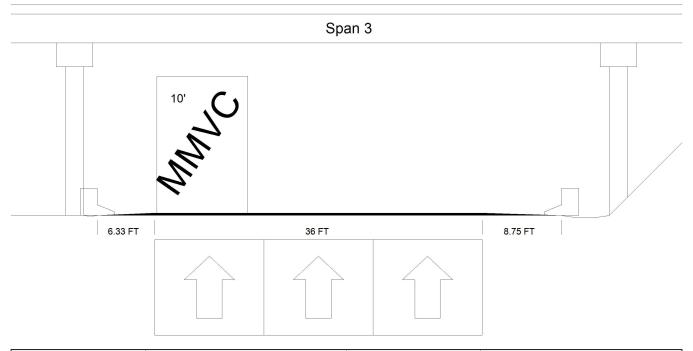




Roadway 1		Direction of Traffic	South					
Distance to Left Rail	6.17FT	Distance to Right Rail	8.75FT					
Distance to Left Toe of Slope		Distance to Left Bent	7.67FT					
Distance to Right Toe of Slope	14FT	Distance to Right Bent	10.25FT					
MMVC	15.75 Ft at Beam 12, 0 FT from RIGHT EDGE OF PAVEMENT							
MVC	15.75 Ft at Beam 12, 0 FT from RIGHT EDGE OF PAVEMENT							

MILEPOST 19.7

Title		Description				
SOUTHBOUND UNDERCLEARANCE		SOUTHBOUND UNDERCLEARANCE				
Bridge No: 350002	Drawn By: DCR		Date: 8/28/08	File Name: \$0286000166		



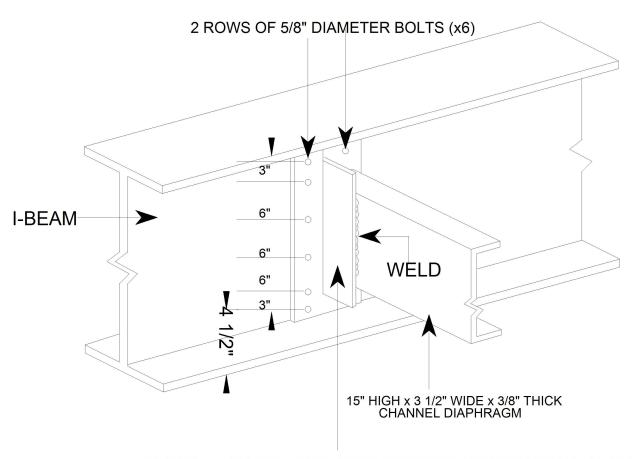
Roadway 1		Direction of Traffic	North				
Distance to Left Rail	6.33FT	Distance to Right Rail	8.75FT				
Distance to Left Toe of Slope		Distance to Left Bent	7.83FT				
Distance to Right Toe of Slope	14FT	Distance to Right Bent	10.25FT				
MMVC	16.17 Ft at Beam 12, 0 FT from LEFT EDGE OF PAVEMENT						
MVC	15.92 Ft at Beam 12, 36 FT from LEFT EDGE OF PAVEMENT						

MILEPOST 19.7

Title	Description					
NORTHBOUND UNDERCLEARANCE		NORTHBOUND UNDERCLEARANCE				
Bridge No: 350002	Drawn By: DCR	Date: 8/28/	08	File Name: \$0286000167		

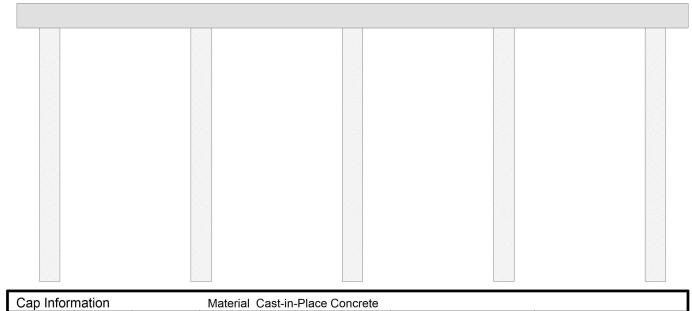
DIAPHRAGM DETAILS

LOCATIONS: 1/3 POINTS OF SPANS



27" HIGH x 7 3/4" WIDE x 9" DEEP (3/8" THICK) STEEL T-BRACKET WELDED TO WEB OF CHANNEL DIAPHRAGM AND BOLTED TO WEB OF BEAM

Title		Description				
INTERMEDIATE DIAPHRAGMS		DIAPHRAGM DETAILS				
Bridge No: 350002	Drawn By: DELVIN ADAMS	Da	^{ate:} 8/7/2012	File Name: S0146031696		



Cap In	formation		Material	Cast-in-	Place Concre	ete						
Lengt	th Width	Height	Left Over	hang	Right Overhang Left		Left Beam to End of Cap.		Right Beam to End of Cap		nd of Cap.	
82.000	ft. 3.000 ft.	3.000 ft.	4.000	ft.	4.000 ft		2.5	500 ft.		2	2.500 ft.	
Subca	p Information		Material									
Lengt	th Width	Height	Left Over	Overhang Right Overhang Left Pile to Splice.								
Sill Information Material												
Lengt	th Width	Height										
Pile#	Material	Spacing	Width/Dia.	Height	Length	Orien	tation	Driven?	Replacem	nent?	Removed?	Collar?
1	Concrete	18.500 ft.	2.500 ft.	3.000 f	t.	Vertic	al	No	No		No	No
2	Concrete	18.500 ft.	2.500 ft.	3.000 f	t.	Vertic	al	No	No		No	No
3	Concrete	18.500 ft.	2.500 ft.	3.000 f	t.	Vertic	al	No	No		No	No
4	Concrete	18.500 ft.	2.500 ft.	3.000 f	t.	Vertic	Vertical		No		No	No
5	Concrete		2.500 ft.	3.000 f	t.	Vertical		No	No		No	No
VE	ERIFIED	BY ER	IC PAT	TER	SON O	N 7-:	30-2	2014				
Bent/A	butment #:	1	Similar E	Bents:	2.3						1	

Title Description
INTERIOR BENTS SUBSTRUCTURE DETAILS

Bridge No: 350002 Drawn By: DELVIN ADAMS Date: 8/7/2012 File Name: \$0146031697



BENT 2



BENT 3



ABUT.2



EAST APPROACH



GUARDRAIL END FOR THE NORTHEAST AND SOUTHWEST CORNERS



INFOR. PLATE AT THE NORTHEAST CORNER



GUARDRAIL ATTACHED TO THE BRIDGE RAIL FOR THE SOUTHEAST AND NORTHWEST CORNERS



GUARDRAIL LOOKING EAST



GUARDRAIL LOOKING WEST



WEST APPROACH



WEST APPROACH



INFOR. PLATE AT THE SOUTHWEST CORNER



ABUT. 1



BENT 1



LOOKING NORTH



LOOKING SOUTH