



NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 STRUCTURE MANAGEMENT UNIT

ATTENTION: **PRIORITY MAINT ISSUED. NEWLY STRUCTURALLY DEFICIENT DUE TO SCOUR.**

# Structure Safety Report

## 2 Year Complete Topside and Underwater Element Inspection

COUNTY: ROBESON STRUCTURE NUMBER: 770168 FREQUENCY: 24 MONTHS

FACILITY CARRIED: 195 MILE POST: 36.7

LOCATION: 0.3 MI.N.JCT. SR1723

FEATURE INTERSECTED: BUCKHORN SWAMP

LATITUDE: 34° 53' 8.16" LONGITUDE: 78° 57' 38.81"

SUPERSTRUCTURE: TRIPLE 9'X8' RCBC, 135' ALONG CENTERLINE OF CULVERT

SUBSTRUCTURE: \_\_\_\_\_

SPANS: \_\_\_\_\_

FRACTURE CRITICAL     TEMPORARY SHORING     SCOUR CRITICAL     SCOUR PLAN OF ACTION

PRESENT CONDITION: Fair INSPECTION DATE: 10/05/2017

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: NONE



Sign noticed issued for	Number Required
<u>NO</u> WEIGHT LIMIT	<u>0</u>
<u>NO</u> DELINEATORS	<u>0</u>
<u>NO</u> NARROW BRIDGE	<u>0</u>
<u>NO</u> ONE LANE BRIDGE	<u>0</u>
<u>NO</u> LOW CLEARANCE	<u>0</u>

DIRECTION OF INSPECTION S-N

DIRECTION MATCHES PLANS \_\_\_\_\_

LOOKING NORTH

INSPECTED BY PATRICK G. RUTHERFORD	SIGNATURE 	ASSISTED BY STAN MATTHIAE, JOHN RORES
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# Structure Element Scoring

Structure Number: 770168

Inspection Date 10/5/2017

Element Number	Parent Number	Element Name	Location	Total Quantity	Level 1 Quantity	Level 2 Quantity	Level 3 Quantity	Level 4 Quantity
241	0	Reinforced Concrete Culvert	Culverts and Pipes	405	0	381	24	0

# Summary of Maintenance Needs

Maintenance By Defect

Structure Number: 770168

Inspection Date: 10/05/2017

<b>MMS Code</b>	<b>Element Name</b>	<b>Defect Name</b>	<b>Recommended Quantity</b>
3370	Reinforced Concrete Culvert	Scour	2 Feet
3370	Reinforced Concrete Culvert	Exposed Rebar	1 Feet
3370	Reinforced Concrete Culvert	Cracking (RC and Other)	20 Feet

## Element Structure Maintenance Quantities

Structure Number: 770168

Inspection Date 10/05/2017

Location	MMS Code	Description	Maint Quantity	Total Quantity	Severe Quantity	Poor Quantity	Fair Quantity	Good Quantity
Culverts and Pipes	3370	Maintenance of NBI Culverts and Pipes	23	405	0	24	381	0

## Element Condition and Maintenance Data

Structure Number: 770168

Inspection Date: 10/05/2017

### Span 1 Culvert Section 1

#### Reinforced Concrete Box Culvert

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
241	Reinforced Concrete Culvert	135	0	123	12	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
241	Cracking (RC and Other)	(1') CONSTRUCTION JOINT OPEN TO 1/4" WITH WATER LEAKAGE	3	1	1 Feet
241	Cracking (RC and Other)	(9') VERTICAL H/L - 1/32" CRACKS W/ EFFLO.	3	9	9 Feet
241	Exposed Rebar	1.5' FROM EAST ON EXTERIOR WALL - 3' BELOW TOP SLAB - REBAR EXPOSED - 6" LONG X 4.5" VERTICAL X 1" DEEP(1/16" LOSS ON REBAR).	3	1	1 Feet
241	Scour	1.5' CURTAINWALL EXPOSURE AT THE WEST END OF BARREL 1	3	1	Feet
241	Abrasion/Wear (PSC/RC)	COARSE AGGREGATE EXPOSED TO 3/8"	2	114	Feet
241	Cracking (RC and Other)	(9') VERTICAL H/L CRACKS	2	9	Feet

**General Comments**

### Span 2 Culvert Section 1

#### Reinforced Concrete Box Culvert

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
241	Reinforced Concrete Culvert	135	0	127	8	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
241	Cracking (RC and Other)	(1') CONSTRUCTION JOINT OPEN TO 1/4" WITH WATER LEAKAGE - 9' H/L - 1/32" VERTICAL - 6' H/L - 1/16" WITH (6') VERTICAL H/L - 1/16" CRACKS WITH EFFLO.	3	7	7 Feet
241	Scour	2.0' CURTAINWALL EXPOSURE AT THE WEST END.	3	1	1 Feet
241	Abrasion/Wear (PSC/RC)	COARSE AGGREGATE EXPOSED TO 3/8"	2	118	Feet
241	Cracking (RC and Other)	(9') VERTICAL H/L - 1/32" CRACKING	2	9	Feet

**General Comments**

### Span 3 Culvert Section 1

#### Reinforced Concrete Box Culvert

Element Number	Element Name	Total Qty	CS1 Qty	CS2 Qty	CS3 Qty	CS4 Qty
241	Reinforced Concrete Culvert	135	0	131	4	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
241	Cracking (RC and Other)	(1') CONSTRUCTION JOINT OPEN TO 1/4" WITH WATER LEAKAGE. (2') VERTICAL H/L - 1/16" CRACKING WITH EFFLO.	3	3	3 Feet
241	Scour	2.0' CURTAINWALL EXPOSURE AT THE WEST END	3	1	1 Feet
241	Abrasion/Wear (PSC/RC)	COARSE AGGREGATE EXPOSED TO 3/8"	2	128	Feet
241	Cracking (RC and Other)	(3') VERTICAL H/L CRACKING	2	3	Feet

**General Comments**

Structure Number: 770168

Inspection Date: 10/05/2017

## Elements Verified

Location	Name	Component	Element Name	Amount
Span 1	Culvert Section 1	Reinforced Concrete Box Culvert	Reinforced Concrete Culvert	135
Span 2	Culvert Section 1	Reinforced Concrete Box Culvert	Reinforced Concrete Culvert	135
Span 3	Culvert Section 1	Reinforced Concrete Box Culvert	Reinforced Concrete Culvert	135

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# General Inspection Notes



# National Bridge and NC Inspection Items

Structure Number: 770168

Inspection Date: 10/05/2017

## National Bridge Inventory Items

Item	Grade Scale	Grade
Item 58: Deck	0 - 9 , N	<b>N</b>
Item 59: Superstructure	0 - 9 , N	<b>N</b>
Item 60: Substructure	0 - 9 , N	<b>N</b>
Item 61: Channel and Channel Protection	0 - 9 , N	<b>4</b>
Item 62: Culvert	0 - 9 , N	<b>4</b>
Item 71: Waterway Adequacy	0 - 9 , N	<b>7</b>
Item 72: Approach Roadway Alignment	0 - 9 , N	<b>8</b>

Note: If NBI Inspection Item is not present, code NBI item with "N"

## NC SMU Inspection Items

Item	Grade Scale	Grade	Maint. Qty.	Maint. Code
Headwall	G, F, P, or C	<b>F</b>	<b>2</b>	<b>4675</b>
Wingwall	G, F, P, or C	<b>F</b>	<b>33</b>	<b>3350</b>
Scour	G, F, P, or C	<b>P</b>		
Drift	G, F, P, or C	<b>G</b>	<b>0</b>	<b>3366</b>
Estimated Remaining Life	G, F, P, or C	<b>18</b>		

Note: If NC SMU Inspection Item is not present, leave NC SMU item blank

## Inspection Information

Item	Grade Scale	Grade
Regulatory Sign Noticed Issued	YES/NO	<b>N</b>
Priority Maintenance Request Submitted	YES/NO	<b>Y</b>
Inspection Time	Hours	<b>12</b>
Traffic Control Time	Hours	
Snooper Time	Hours	
Ladder Used	YES/NO	<b>N</b>
Bucket Truck Used	YES/NO	<b>N</b>
Boat Used	YES/NO	<b>N</b>
Other Equipment Used	YES/NO	<b>Y</b>

# National Bridge and NC SMU Inspection Item Details

**Structure Number:** 770168

**Inspection Date:** 10/05/2017

<b>Item</b>	Priority Maintenance Issued	<b>Grade</b> Y	<b>Maint Code</b>	<b>Qty.</b> 0
<b>Details</b>	PRIORITY MAINT. ISSUED FOR CURTAINWALL EXPOSURE.			
<b>Item</b>	Other Equipment Used	<b>Grade</b> Y	<b>Maint Code</b>	<b>Qty.</b> 0
<b>Details</b>	DRYSUIT PGR 25 MIN. 5.1' W/D 80D/CLEAR			
<b>Item</b>	Scour	<b>Grade</b> P	<b>Maint Code</b>	<b>Qty.</b> 0
<b>Details</b>	CURTAINWALL EXPOSURE AT THE WEST END. BRL 1- 1.5' VERT BRL 2- 2.0' VERT. BRL 3- 2.0' VERT.			
<b>Item</b>	Headwalls	<b>Grade</b> F	<b>Maint Code</b> 4675	<b>Qty.</b> 2
<b>Details</b>	WEST HEADWALL SPALL AT SOUTH END 3.5" L X 3" W X 2" DEEP. EAST HEADWALL SPALL AT SOUTH END 16" L X 3" W X 1.5" DEEP.			
<b>Item</b>	Wingwalls	<b>Grade</b> F	<b>Maint Code</b> 3350	<b>Qty.</b> 33
<b>Details</b>	N.W. WING SPALLED 7" L X 4.5" VERT. X 1.25" DEEP. S.E.. WING H/L TO 1/16" CRACK AT JUNCTION. COARSE AGGREGATE EXPOSED TO M3/8" FROM M/L TO W/L.			



COARSE AGG EXPOSED ON INTERIOR WALL



COARSE AGG EXPOSED ON WINGWALL



SPALL, SW CORNER HEADWALL, 3'L X 5"W X 2"D



HEADWALL, H/L CRACK



SPALL, NW WINGWALL, 6"DIA. X 1"D



NE GUARDRAIL DAMAGED



CRACK AT SE WING TO 1/16"



BARREL 1: SPALL NEAR EAST END, W/REBAR



CRACK W/EFFLO, BARREL 1



BARREL 1: CONSTRUCTION JOINT W/RUST



BARREL 2: CRACK W/EFFLO



CONSTRUCTION JOINT OPEN TO 1/4" W/EXPOSED REBAR. NO SECTION LOSS IN SPALL, 3"V X 3"W X 1"D





BAREL 3: H/L CRACK W/EFFLO



BARREL 3: CONSTRUCTION JOINT OPEN TO 1/4"



LOOKING EAST



EAST PROFILE



GUARDRAIL-BACK



GUARDRAIL-FRONT



OVERVIEW NBL



MEDIAN CABLE RAIL



LOOKING NORTH



LOOKING SOUTH



OVERVIEW SBL



LOOKING WEST



WEST PROFILE

NATIONAL BRIDGE INVENTORY----- STRUCTURE INVENTORY AND APPRAISAL

Run Date: 03/12/2018

**IDENTIFICATION**

(1) STATE NAME -NORTH CAROLINA BRIDGE **770168**  
 (8) STRUCTURE NUMBER(FEDERAL) 000000001550168  
 (5) INVENTORY ROUTE (ON/UNDER) - ON 11000950  
 (2) STATE HIGHWAY DEPARTMENT DISTRICT 1  
 (3) COUNTY CODE 155 (4) PLACE CODE 0  
 (6) FEATURE INTERSECTED - BUCKHORN SWAMP  
 (7) FACILITY CARRIED I95  
 (9) LOCATION 0.3 MI.N.JCT. SR1723  
 (11)MILEPOINT 36.7  
 (16)LAT 34° 53' 8.16" (17)LONG 78° 57' 38.81"  
 (98)BORDER BRIDGE STATE CODE PCT SHARE  
 (99)BORDER BRIDGE STRUCTURE NO

SUFFICIENCY RATING = 66.16  
 STATUS = Structurally Deficient

**CLASSIFICATION** **CODE**

(112)NBIS BRIDGE SYSTEM - YES  
 (104)HIGHWAY SYSTEM Is on the NHS 1  
 (26) FUNCTIONAL CLASS - Arterial - Interstate 01  
 (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: Concrete continuous  
 TYPE - Culverts (includes frame culverts) CODE 219  
 (44) STRUCTURE TYPE APPR :  
 TYPE - CODE 000  
 (45) NUMBER OF SPANS IN MAIN UNIT 3  
 (46) NUMBER OF APPROACH SPANS  
 (107)DECK STRUCTURE TYPE - N 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 N  
 (59) SUPERSTRUCTURE N  
 (60) SUBSTRUCTURE N  
 (61) CHANNEL & CHANNEL PROTECTION 4  
 (62) CULVERTS 4

**LOAD RATING AND POSTING** **CODE**

(31) DESIGN LOAD HS 20 + MOD 6  
 (63) OPERATING RATING METHOD - Field Evaluation and Document 0  
 (64) OPERATING RATING - HS-26 46  
 (65) INVENTORY RATING METHOD - Field Evaluation and Document 0  
 (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**

(27) YEAR BUILT 1960  
 (106)YEAR RECONSTRUCTED  
 (42) TYPE OF SERVICE : ON - Highway  
 UNDER - Waterway CODE 15  
 (28) LANES: ON STRUCTURE 4 UNDER STRUCTURE 0  
 (29) AVERAGE DAILY TRAFFIC 44000  
 (30) YEAR OF ADT 2015 (109) TRUCK ADT PCT 23%  
 (19) BYPASS OR DETOUR LENGTH 1 MI

**APPRAISAL** **CODE**

(67) STRUCTURAL EVALUATION 4  
 (68) DECK GEOMETRY N  
 (69) UNDERCLEARANCES,VERTI & HORIZ N  
 (71) WATERWAY ADEQUACY 7  
 (72) APPROACH ROADWAY ALIGNMENT 8  
 (36) TRAFFIC SAFETY FEATURES 1NNN  
 (113)SCOUR CRITICAL BRIDGES 8

**GEOMETRIC DATA**

(48) LENGTH OF MAXIMUM SPAN 9 FT  
 (49) STRUCTURE LENGTH 28 FT  
 (50)CURB OR SIDEWALK: LEFT 0 FT RIGHT 0 FT  
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 0 FT  
 (52) DECK WIDTH OUT TO OUT 0 FT  
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 77 FT  
 (33) BRIDGE MEDIAN - No Median CODE 0  
 (34) SKEW 0° (35) STRUCTURE FLARED 0  
 (10) INVENTORY ROUTE MIN VERT CLEAR 999.9 FT  
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 76.6 FT  
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 999.9 FT  
 (54) MIN VERT UNDERCLEAR REF Not a Highway or Railroad 0 FT  
 (55) MIN LAT UNDERCLEAR RT REF Not a Highway or Railroad 000 FT  
 (56) MIN LAT UNDERCLEAR LT REF - 000 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 88000 (115) YEAR FUTURE ADT 2025

**INSPECTIONS**

(90) INSPECTION DATE 10/05/2017  
 (92) CRITICAL FEATURE INSPECTION : (93) CFI DATE  
 A) FRACTURE CRIT DETAIL - NO A)  
 B) UNDERWATER INSP - YES 24Mo B) 10/05/2017  
 C) OTHER SPECIAL INSP NO C)  
 SCOUR

**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: 03/12/2018

COUNTY : ROBESON DIVISION : 6 DISTRICT : 1 STRUCTURE NUMBER : 770168 LENGTH : 28 FEET

ROUTE CARRIED : I95 FEATURE INTERSECTED : BUCKHORN SWAMP

LOCATED : 0.3 MI.N.JCT. SR1723 BRIDGE NAME : CITY :

FUNC. CLASS : 01 SYST.ON : FA SYST.UNDER : NFA ADT & YR : 44000 2015 RAIL TYPE : LT 0 RT 0

BUILT : 1960 BY : BMU PROJ : FED.AID PROJ : DESIGN LOAD : HS 20 + MOD

REHAB : BY : PROJ : ALIGNMENT : TAN SKEW : 90 LANES : ON 4 UNDER 0

NAVIGATION : VC 0 FT HC 0 FT HT. CRN. TO BED : 13 FT WATER DEPTH : 5 FT

SUPERSTRUCTURE : TRIPLE 9'X8' RCBC, 135' ALONG CENTERLINE OF CULVERT

SUBSTRUCTURE :

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 : RCBC POSTED : SV TTST DATE

SYSTEM : Primary Interstate GREEN LINE ROUTE : Y

UNDER ROUTES AND CLEARANCES

REMARKS :

# **BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS**

Bridge: 770168

County ROBESON

Date: 10/05/2017

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
3370	Maintenance and Repair of NBIS Pipes and Culverts	LF	0	Barrel 1 Section 1: 1.5' CURTAINWALL EXPOSURE AT THE WEST END OF BARREL 1	
3370	Maintenance and Repair of NBIS Pipes and Culverts	LF	1	Barrel 2 Section 1: 2.0' CURTAINWALL EXPOSURE AT THE WEST END.	
3370	Maintenance and Repair of NBIS Pipes and Culverts	LF	1	Barrel 3 Section 1: 2.0' CURTAINWALL EXPOSURE AT THE WEST END	

## Key



Priority Maintenance Item



Critical Finding Item



Priority Maintenance Level Not Determined

## BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 770168

County ROBESON

THE FOLLOWING MAINTENANCE ITEMS HAVE BEEN SUBMITTED IN CONJUNCTION WITH A PRIORITY MAINTENANCE REQUEST

MMS Code	MMS Description	Quantity
3370	Maintenance and Repair of NBIS Pipes and Culverts	0      LF
Location:		
Bent/Span No.		
Priority Level	Status	
Recommended	Routine Maintenance	
Submitted Date:	Submitted By:	Assisted By:
10/16/2017	PATRICK G. RUTHERFORD	
Details		
Barrel 1 Section 1: 1.5' CURTAINWALL EXPOSURE AT THE WEST END OF BARREL 1		

MMS Code	MMS Description	Quantity
3370	Maintenance and Repair of NBIS Pipes and Culverts	1      LF
Location:		
Bent/Span No.		
Priority Level	Status	
Recommended	Routine Maintenance	
Submitted Date:	Submitted By:	Assisted By:
10/16/2017	PATRICK G. RUTHERFORD	
Details		
Barrel 2 Section 1: 2.0' CURTAINWALL EXPOSURE AT THE WEST END.		

## BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 770168                      County ROBESON

THE FOLLOWING MAINTENANCE ITEMS HAVE BEEN SUBMITTED IN CONJUNCTION WITH A PRIORITY MAINTENANCE REQUEST

MMS Code	MMS Description	Quantity
3370	Maintenance and Repair of NBIS Pipes and Culverts	1            LF
Location:		
Bent/Span No.		
Priority Level		Status
Recommended		Routine Maintenance
Submitted Date:	Submitted By:	Assisted By:
10/16/2017	PATRICK G. RUTHERFORD	
Details		
Barrel 3 Section 1: 2.0' CURTAINWALL EXPOSURE AT THE WEST END		

# Culvert Segment Details

Barrel 1

Has Bands?: No

Distance From Upstream End to Edge of Pavement: 16ft

	Distance From Upstream End of Segment (ft)	Width (ft)	Height (ft)	Pipe Thickness (in)	Corrugation Pattern	Leg Length (ft)	Top Radius (ft)	Bolt Material	Bolt Diameter (in)	# of Long. Bolt Rows	Transverse Spacing b/w Bolt Rows (ft)	Longitudinal Bolt Spacing (ft)	Bolt Condition	Rib Length (ft)	Rib Spacing (ft)	Type	Material
Upstream End	0	9	8													RCBC	Concrete
Downstream End	135	9	8													RCBC	Concrete

Barrel 2

Has Bands?: No

Distance From Upstream End to Edge of Pavement: 16ft

	Distance From Upstream End of Segment (ft)	Width (ft)	Height (ft)	Pipe Thickness (in)	Corrugation Pattern	Leg Length (ft)	Top Radius (ft)	Bolt Material	Bolt Diameter (in)	# of Long. Bolt Rows	Transverse Spacing b/w Bolt Rows (ft)	Longitudinal Bolt Spacing (ft)	Bolt Condition	Rib Length (ft)	Rib Spacing (ft)	Type	Material
Upstream End	0	9	8													RCBC	Concrete
Downstream End	135	9	8													RCBC	Concrete

# Culvert Segment Details

Barrel 3

Has Bands?: No

Distance From Upstream End to Edge of Pavement: 16ft

	Distance From Upstream End of Segment (ft)	Width (ft)	Height (ft)	Pipe Thickness (in)	Corrugation Pattern	Leg Length (ft)	Top Radius (ft)	Bolt Material	Bolt Diameter (in)	# of Long. Bolt Rows	Transverse Spacing b/w Bolt Rows (ft)	Longitudinal Bolt Spacing (ft)	Bolt Condition	Rib Length (ft)	Rib Spacing (ft)	Type	Material
Upstream End	0	9	8													RCBC	Concrete
Downstream End	135	9	8													RCBC	Concrete

# Bridge Inspection Field Sketch



Left Lanes			
Roadway	23.9ft Wide	2 Paved Lanes	South Bound
Right Shoulder	12.6ft Wide	10.6ft Paved	2ft Unpaved
Left Shoulder	22.1ft Wide	3.8ft Paved	18.3ft Unpaved
Right Guardrail	12.6ft from road		
Left Guardrail			
Median	28.3ft Wide	-3ft High	
Right Lanes			
Roadway	23.9ft Wide	2 Paved Lanes	North Bound
Left Shoulder	13.9ft Wide	3.9ft Paved	10ft Unpaved
Right Shoulder	11ft Wide	10.5ft Paved	0.5ft Unpaved
Left Guardrail			
Right Guardrail	10.5ft from road		

**Title**

Approach Roadway

**Description**

NBL and SBL of I-95

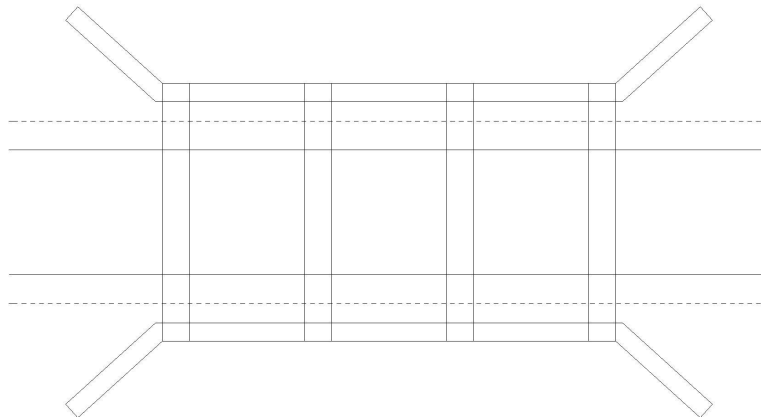
Bridge No: 770168

Drawn By: RJH

Date: 07/12/2006

File Name: S0258004642

# Bridge Inspection Field Sketch



Crown of Roadway



Bed

Looking Downstream

Number of Barrels	Skew	Distance From Crown to Bed	Fill Depth
3	90°	12.7ft	4.7ft
Length Along Center Line of Culvert		Length Along Center Line of Roadway	
135ft		28.3ft	

Barrel #	Width	Height	Wall Thickness	Scour at Inlet	Scour at Outlet
1	9ft	8ft	.67ft	1.5' C/W EXP.	
2	9ft	8ft	.67ft	2.0' C/W EXP.	
3	9ft	8ft	.67ft	2.0' C/W EXP.	

EOP LEFT - 16'  
 EOP RIGHT - 16.4'  
 LEFT GUARDRAIL - 12.6'  
 RIGHT GUARDRAIL - 10.5'

SL - 70 MPH

**Title**  
CULVERT ELEVATION

**Description**  
TRIPLE BARREL RCBC

Bridge No: 770168

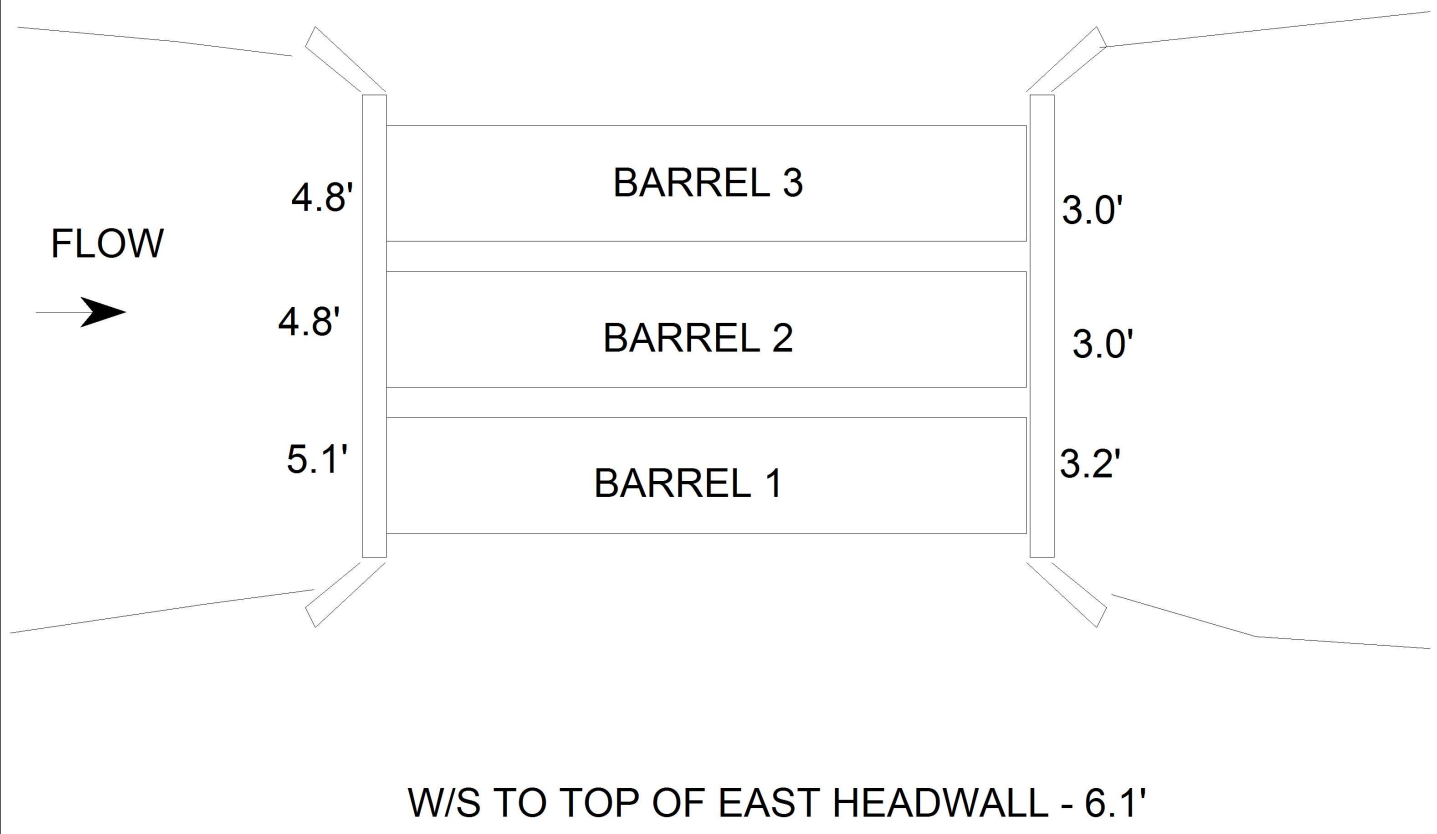
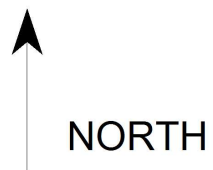
Drawn By: PGR

Date: 10/5/17

File Name: S0374000174



# Bridge Inspection Field Sketch



<b>Title</b> PLAN VIEW		<b>Description</b> CHANNEL OVERVIEW	
Bridge No: 770168	Drawn By: WRM	Date: 10/6/2015	File Name: S0174013128