



NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 STRUCTURE MANAGEMENT UNIT

ATTENTION: **PARS ISSUED FOR SCOURING AND SPALLS.**

Structure Safety Report

2 Year Complete Topside and Underwater Element Inspection

INSPECTION DATE: 01/03/2022

DIVISION: 6 COUNTY: COLUMBUS STRUCTURE NUMBER: 230372 FREQUENCY: 24 MONTHS

FACILITY CARRIED: NC87 MILE POST: _____

LOCATION: 0.1 MI. S. JCT. NC11

FEATURE INTERSECTED: WEYMAN CREEK

LATITUDE: 34° 22' 25.58" LONGITUDE: 78° 16' 22.94"

SUPERSTRUCTURE: TRIPLE 8'X14' RCBC; 76'ALONG CENTERLINE OF CULVERT

SUBSTRUCTURE: _____

SPANS: 3 BARRELS. SEE CULVERT SKETCH FOR DETAILS.

FRACTURE CRITICAL TEMPORARY SHORING SCOUR CRITICAL SCOUR PLAN OF ACTION

GRADES: (Inspector/NBI Coding) DECK N/N SUPERSTRUCTURE N/N SUBSTRUCTURE N/N CULVERT 4/4

POSTED SV: Not Posted POSTED TTST: Not Posted

OTHER SIGNS PRESENT: 2 DELINEATORS



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 _____

NORTH

INSPECTED BY PATRICK G. RUTHERFORD	SIGNATURE 	ASSISTED BY STAN MATTHAIE, JOHN RORES, JASPER BENSON
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IDENTIFICATION

(1) STATE NAME NORTH CAROLINA BRIDGE 230372
 (8) STRUCTURE NUMBER (FEDERAL) 0470372
 (5) INVENTORY ROUTE (ON/UNDER) ON 131000870
 (2) STATE HIGHWAY DEPARTMENT DISTRICT 6
 (3) COUNTY CODE (FEDERAL) 47 (4) PLACE CODE 00000
 (6) FEATURE INTERSECTED WEYMAN CREEK
 (7) FACILITY CARRIED NC87
 (9) LOCATION 0.1 MI. S. JCT. NC11
 (11) MILEPOINT 0.0
 (12) BASE HIGHWAY NETWORK 1
 (13) LRS INVENTORY ROUTE & SUBROUTE 30087
 (16) LATITUDE 34° 22' 25.58" (17) LONGITUDE 78° 16' 22.94"
 (98) BORDER BRIDGE STATE CODE PERCENT SHARED
 (99) BORDER BRIDGE STRUCTURE NUMBER

SUFFICIENCY RATING 67.70
 STATUS = Structurally Deficient

CLASSIFICATION CODE

(112) NBIS BRIDGE SYSTEM YES
 (104) HIGHWAY SYSTEM Inventory Route is on NHS 1
 (26) FUNCTIONAL CLASS Rural Minor Arterial 06
 (100) STRAHNET HIGHWAY STRAHNET Connector 3
 (101) PARALLEL STRUCTURE No parallel structure exists N
 (102) DIRECTION OF TRAFFIC 2-way traffic 2
 (103) TEMPORARY STRUCTURE
 (110) DESIGNATED NATIONAL NETWORK - on national network for trucks 0
 (20) TOLL On Free Road 3
 (21) MAINT - 01
 (22) OWNER - 01
 (37) HISTORICAL SIGNIFICANCE - 5

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE MAIN Concrete Continuous
 TYPE Culvert CODE 219
 (44) STRUCTURE TYPE APPROACH
 TYPE CODE
 (45) NUMBER OF SPANS IN MAIN UNIT 3
 (46) NUMBER OF SPANS IN APPROACH 0
 (107) DECK STRUCTURE TYPE CODE N
 (108) WEARING SURFACE/PROTECTIVE SYSTEM
 (A) TYPE OF WEARING SURFACE CODE N
 (B) TYPE OF MEMBRANE CODE N
 (C) TYPE OF DECK PROTECTION CODE N

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 H 20 + Mod 6
 (63) OPERATING RATING METHOD - 0
 (64) OPERATING RATING - HS-26 46
 (65) INVENTORY RATING METHOD - 0
 (66) INVENTORY RATING HS-20 36
 (70) BRIDGE POSTING No Posting Required 5
 (41) STRUCTURE OPEN, POSTED, OR CLOSED
 DESCRIPTION Open, no restriction A

AGE AND SERVICE

(27) YEAR BUILT 1965
 (106) YEAR RECONSTRUCTED 0
 (42) TYPE OF SERVICE ON - Highway
 OFF - Waterway CODE 15
 (28) LANES ON STRUCTURE 2 LANES UNDER STRUCTURE 0
 (29) AVERAGE DAILY TRAFFIC 7500
 (30) YEAR OF ADT 2018 (109) TRUCK ADT PCT 8
 (19) BYPASS OR DETOUR LENGTH 4.0

APPRAISAL CODE

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

GEOMETRIC DATA

(48) LENGTH OF MAXIMUM SPAN 8.0
 (49) STRUCTURE LENGTH 26.0
 (50) CURB OR SIDEWALK: LEFT 0.0 RIGHT 0.0
 (51) BRIDGE ROADWAY WIDTH, CURB TO CURB 0.0
 (52) DECK WIDTH OUT TO OUT 0.0
 (32) APPROACH ROADWAY WITH (W/ SHOULDERS) 32.0
 (33) BRIDGE MEDIAN No median CODE 0
 (34) SKEW 0 (35) STRUCTURE FLARED 0
 (10) INVENTORY ROUTE MIN VERT CLEAR 999.9
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 32.2
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 999.9
 (54) MIN VERT UNDERCLEAR: REFERENCE 0.0
 (55) MIN LAT UNDERCLEARANCE RT: REFERENCE N 0.0
 (56) MIN LAT UNDERCLEARANCE LT: 0.0

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 15,000 YEAR OF FUTURE ADT 2040

NAVIGATION DATA

(38) NAVIGATION CONTROL - CODE 0
 (111) PIER PROTECTION CODE
 (39) NAVIGATION VERTICAL CLEARANCE 0.0
 (116) VERT - LIFT BRIDGE NAV MIN VERT CLEAR 0.0
 (40) NAVIGATION HORIZONTAL CLEARANCE 0.0

INSPECTION

(90) INSPECTION DATE 01/22 (91) FREQUENCY 24
 (92) CRITICAL FEATURE INSPECTION (93) CFI DATE
 A) FRACTURE CRIT DETAIL A)
 B) UNDERWATER INSP 60 B) 01/22
 C) OTHER SPECIAL INSP C)

SCOUR

Superstructure Build Details

Span Number 1

Span Length 8.0000

Skew 90.0000

Number of Items	Type of Component	Element Name	Quantity	Protective System Applied	Quantity (Sq Ft)
1	Reinforced Concrete Box Culvert	Reinforced Concrete Culvert	76 Feet		

Span Number 2

Span Length 8.0000

Skew 90.0000

Number of Items	Type of Component	Element Name	Quantity	Protective System Applied	Quantity (Sq Ft)
1	Reinforced Concrete Box Culvert	Reinforced Concrete Culvert	77 Feet		

Span Number 3

Span Length 8.0000

Skew 90.0000

Number of Items	Type of Component	Element Name	Quantity	Protective System Applied	Quantity (Sq Ft)
1	Reinforced Concrete Box Culvert	Reinforced Concrete Culvert	76 Feet		

Structure Element Scoring

Structure Number: 230372

Inspection Date 1/3/2022

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	229	0	193	36	0

Summary of Maintenance Needs

Maintenance By Defect

Structure Number: 230372

Inspection Date: 01/03/2022

MMS Code	Element Name	Defect Name	Recommended Quantity
3370	Reinforced Concrete Culvert	Scour	5 Feet
3370	Reinforced Concrete Culvert	Delamination/Spall	16 Feet
3370	Reinforced Concrete Culvert	Exposed Rebar	13 Feet

Element Structure Maintenance Quantities

Structure Number: 230372

Inspection Date 01/03/2022

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	34	229	0	36	193	0

Priority Actions Request

Structure Number 230372

Span1

3370 Culvert Section 1 Reinforced Concrete Box Culvert

Priority Level	Defect Type	Quantity	Defect Description
2	Delamination/Spall	5	Span 1 Culvert Section 1: 5 AREAS OF SPALLS- 6' LONG X 8" WIDE X 1" DEEP (PAR)
2	Scour	1	Span 1 Culvert Section 1: UPSTREAM CURTAIN WALL EXPOSURE 2.2' VERT (PAR)

Span2

3370 Culvert Section 1 Reinforced Concrete Box Culvert

Priority Level	Defect Type	Quantity	Defect Description
2	Exposed Rebar	6	Span 2 Culvert Section 1: REBAR EXPOSED, SECTION LOSS DUE TO SPALLS ON INTERIOR WALL 2, 15' FROM EAST END. (PAR)
2	Scour	2	Span 2 Culvert Section 1: UPSTREAM CURTAIN WALL EXPOSURE 2.7' WITH 0.5' VERT. BELOW CURTAINWALL WITH PROBE TO 0.5'. DOWNSTREAM CURTAIN WALL EXPOSURE 1.1' VERT. (PAR)

Span3

3370 Culvert Section 1 Reinforced Concrete Box Culvert

Priority Level	Defect Type	Quantity	Defect Description
2	Exposed Rebar	2	Span 3 Culvert Section 1: REBAR EXPOSED, SECTION LOSS DUE TO SPALLS ON TOP SLAB. (PAR)
2	Scour	2	Span 3 Culvert Section 1: UPSTREAM CURTAIN WALL EXPOSURE 3.0' VERT. WITH 0.5' VERT. BELOW CURTAINWALL X 0.5' PROBE. (PAR)

Wingwalls

3350 Wingwalls Wingwalls

Priority Level	Defect Type	Quantity	Defect Description
2		60	SCOURING ON THE SW WING, 2'V AT THE C/L.(PAR) NW WING, 2.3'V AT THE C/L (PAR) NE WING, 2'V AT THE C/L (PAR) SE WING, 0.8' AT THE C/L (PAR)

Element Condition and Maintenance Data

Structure Number: 230372

Inspection Date: 01/03/2022

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	76	0	63	13	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
241	Delamination/Spall	5 AREAS OF SPALLS- 6' LONG X 8" WIDE X 1" DEEP (PAR)	3	5	5 Feet
241	Efflorescence/Rust Staining	CONSTRUCTION JOINTS OPEN TO 1/16" WITH EFFLORESCENCE/WATER LEAKAGE (ALL BARRELS SIMILIAR)	3	2	Feet
241	Exposed Rebar	REBAR EXPOSED, SECTION LOSS DUE TO SPALLS	3	5	5 Feet
241	Scour	UPSTREAM CURTAIN WALL EXPOSURE 2.2' VERT (PAR)	3	1	1 Feet
241	Abrasion/Wear (PSC/RC)	COARSE AGGREGATE EXPOSED TO 1/4"	2	63	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	77	0	60	17	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
241	Delamination/Spall	TOP SLAB SPALLS NEAR C/L- 9' LONG X 8" WIDE X 1" DEEP. SPALL ON INTERIOR WALL 1, 20' FROM WEST END.	3	9	9 Feet
241	Exposed Rebar	REBAR EXPOSED, SECTION LOSS DUE TO SPALLS ON INTERIOR WALL 2, 15' FROM EAST END. (PAR)	3	6	6 Feet
241	Scour	UPSTREAM CURTAIN WALL EXPOSURE 2.7' WITH 0.5' VERT. BELOW CURTAINWALL WITH PROBE TO 0.5'. DOWNSTREAM CURTAIN WALL EXPOSURE 1.1' VERT. (PAR)	3	2	2 Feet
241	Abrasion/Wear (PSC/RC)	COARSE AGGREGATE EXPOSED TO 1/4"	2	58	Feet
241	Efflorescence/Rust Staining	CONSTRUCTION JOINTS OPEN TO 1/16" WITH EFFLORESCENCE/WATER LEAKAGE	2	2	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	76	0	70	6	0 Feet

Element Number	Defect Type	Defect Description	CS	CS Qty	Maint Qty
241	Delamination/Spall	SPALLS IN TOP SLAB AN DEXTERIOR WALLS, 18" LONG X 6" WIDE X 1" DEEP. +/- 15' FROM WEST END.	3	2	2 Feet
241	Exposed Rebar	REBAR EXPOSED, SECTION LOSS DUE TO SPALLS ON TOP SLAB. (PAR)	3	2	2 Feet
241	Scour	UPSTREAM CURTAIN WALL EXPOSURE 3.0' VERT. WITH 0.5' VERT. BELOW CURTAINWALL X 0.5' PROBE. (PAR)	3	2	2 Feet
241	Abrasion/Wear (PSC/RC)	COARSE AGGREGATE EXPOSED TO 1/4"	2	68	Feet
241	Efflorescence/Rust Staining	CONSTRUCTION JOINTS OPEN TO 1/16" WITH EFFLORESCENCE/WATER LEAKAGE	2	2	Feet

General Comments

Elements Verified

Location	Name	Component	Element Name	Amount
Span 1	Culvert Section 1	Reinforced Concrete Box Culvert	Reinforced Concrete Culvert	76
Span 2	Culvert Section 1	Reinforced Concrete Box Culvert	Reinforced Concrete Culvert	77
Span 3	Culvert Section 1	Reinforced Concrete Box Culvert	Reinforced Concrete Culvert	76

General Inspection Notes

National Bridge and NC Inspection Items

Structure Number: 230372

Inspection Date: 01/03/2022

National Bridge Inventory Items

Item	Grade Scale	Grade	
Item 58: Deck	0 - 9 , N	N	<p>Note:</p> <p>Items 58,59,60,62 reflect this inspection only.</p> <p>For overall NBI coding grade, see cover sheet.</p>
Item 59: Superstructure	0 - 9 , N	N	
Item 60: Substructure	0 - 9 , N	N	
Item 61: Channel and Channel Protection	0 - 9 , N	4	
Item 62: Culvert	0 - 9 , N	4	
Item 71: Waterway Adequacy	0 - 9 , N	7	
Item 72: Approach Roadway Alignment	0 - 9 , N	8	

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	F	5	4675
Wingwall	G, F, P, or C	F	120	3350
Scour	G, F, P, or C	P		
Drift	G, F, P, or C	F	50	3366
Estimated Remaining Life	G, F, P, or C			

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

Inspection Information

Item	Grade Scale	Grade
Sign Noticed Issued	YES/NO	N
Priority Maintenance Request Submitted	YES/NO	Y
Inspection Time	Hours	4
Traffic Control Time	Hours	
Snooper Time	Hours	
Ladder Used	YES/NO	N
Bucket Truck Used	YES/NO	N
Boat Used	YES/NO	N
Other Equipment Used	YES/NO	Y
Portion of Structure in > 3' of water	YES/NO	Y

National Bridge and NC SMU Inspection Item Details

Structure Number: 230372

Inspection Date: 01/03/2022

Item	Priority Maintenance Issued	Grade	Y	Maint Code	Qty.	0
Details	PARS ISSUED FOR SCOURING AND SPALLS.					
Item	Other Equipment Used	Grade	Y	Maint Code	Qty.	0
Details	DRYSUIT, LIGHT, AGA, OTS, SCUBA SDM, 10.4', 30 MINUTES					
Item	Drift	Grade	F	Maint Code	3366	Qty. 50
Details	RANDOM LOGS AND BRANCHES ALONG THE M/L UP TO 5' AW/L. UP TO 4" DIAMETER.					
Item	Scour	Grade	P	Maint Code		Qty. 0
Details	SCOUR AT THE UP/DOWN STREAM ENDS OF THE CULVERT. (SEE ELEMENT DEFECTS AND SCOUR SKETCH FOR DETAILS)					
	FOOTING EXPOSURES AT ALL WINGS: SW WING- 2'V EXPOSURE AT THE C/L NW WING- 2.3'V EXPOSURE AT THE C/L SE WING- 0.8'V EXPOSURE AT THE C/L NE WING- 2'V EXPOSURE AT THE C/L					
Item	Headwalls	Grade	F	Maint Code	4675	Qty. 5
Details	MOWER DAMAGE AT THE NE CORNER RANDOM CHIPS ALONG THE EDGES					
Item	Wingwalls	Grade	F	Maint Code	3350	Qty. 120
Details	COARSE AGGREGATE EXPOSED TO 1/4" ON ALL WINGS					
	SCOURING ON THE SW WING, 2'V AT THE C/L.(PAR) NW WING, 2.3'V AT THE C/L (PAR) NE WING, 2'V AT THE C/L (PAR) SE WING, 0.8' AT THE C/L (PAR)					
Item	General Comments and Misc Items	Grade	F	Maint Code		Qty. 0
Details	CRACKING IN AWS UP TO 1/8"					
Item	Portion of structure in > 3' of water (Y or N)	Grade	Y	Maint Code		Qty. 0
Details	MAX. DEPTH- 10.4'					



CRACKING IN AWS UP TO 1/8"



BARREL 2- DRIFT



SCOUR AT SW WING (PAR)



Span 1 Culvert Section 1: UPSTREAM CURTAIN WALL EXPOSURE 2.2' VERT (PAR)



Span 2 Culvert Section 1: UPSTREAM CURTAIN WALL EXPOSURE 2.7' WITH 0.5' VERT. BELOW CURTAINWALL WITH PROBE TO 0.5'. DOWNSTREAM CURTAIN WALL EXPOSURE 1.1' VERT. (PAR)



Span 3 Culvert Section 1: UPSTREAM CURTAIN WALL EXPOSURE 3.0' VERT. WITH 0.5' VERT. BELOW CURTAINWALL X 0.5' PROBE. (PAR)



NW WING SCOUR (PAR)



Span 1 Culvert Section 1: CONSTRUCTION JOINTS OPEN TO 1/16" WITH EFFLORESCENCE/WATER LEAKAGE (ALL BARRELS SIMILIAR)



Span 1 Culvert Section 1: 5 AREAS OF SPALLS- 6' LONG X 8" WIDE X 1" DEEP (PAR)



Span 2 Culvert Section 1: REBAR EXPOSED, SECTION LOSS DUE TO SPALLS ON INTERIOR WALL 2, 15' FROM EAST END. (PAR)



Span 2 Culvert Section 1: TOP SLAB SPALLS NEAR C/L- 9' LONG X 8" WIDE X 1" DEEP. SPALL ON INTERIOR WALL 1, 20' FROM WEST END.



Span 2 Culvert Section 1: TOP SLAB SPALLS NEAR C/L- 9' LONG X 8" WIDE X 1" DEEP. SPALL ON INTERIOR WALL 1, 20' FROM WEST END.



Span 2 Culvert Section 1: TOP SLAB SPALLS NEAR C/L- 9' LONG X 8" WIDE X 1" DEEP. SPALL ON INTERIOR WALL 1, 20' FROM WEST END.



Span 3 Culvert Section 1: REBAR EXPOSED, SECTION LOSS DUE TO SPALLS ON TOP SLAB. (PAR)



NE WING, SCOUR (PAR)



SE WING, SCOUR (PAR)

Structure Number: 230372

Inspection Date 01/03/2022

Barrel Number 1

Skew 90 ° Length along centerline (ft) 76.333 Height Crown to Bed (ft) 24.0 Fill Depth (ft) 10.0

Section 1 Details Barrel Height (ft) 14.0 Barrel Width (ft) 8.0

Barrel Number 2

Skew 90 ° Length along centerline (ft) 76.333 Height Crown to Bed (ft) 24.0 Fill Depth (ft) 10.0

Section 1 Details Barrel Height (ft) 14.0 Barrel Width (ft) 8.0

Barrel Number 3

Skew 90 ° Length along centerline (ft) 76.333 Height Crown to Bed (ft) 24.0 Fill Depth (ft) 10.0

Section 1 Details Barrel Height (ft) 14.0 Barrel Width (ft) 8.0



SOUTH



WEST PROFILE



WEST



EAST



EAST PROFILE



NORTH



ROADWAY OVERVIEW



LOOKING UPSTREAM



LOOKING DOWNSTREAM








BRIDGE INSPECTOR'S RECOMMENDATION FOR MAINTENANCE REPAIRS

Bridge: 230372

County COLUMBUS

Date:

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

MMS Code	Description of Function	Unit	Quantity	Remarks	Est. Cost
 3350	Maint R C Wings and Walls	SF	60	SCOURING ON THE SW WING, 2'V AT THE C/L.(PAR) NW WING, 2.3'V AT THE C/L (PAR) NE WING, 2'V AT THE C/L (PAR) SE WING, 0.8' AT THE C/L (PAR)	
 3370	Maintenance and Repair of NBIS Pipes and Culverts	LF	1	Span 1 Culvert Section 1: UPSTREAM CURTAIN WALL EXPOSURE 2.2' VERT (PAR)	
 3370	Maintenance and Repair of NBIS Pipes and Culverts	LF	5	Span 1 Culvert Section 1: 5 AREAS OF SPALLS- 6' LONG X 8" WIDE X 1" DEEP (PAR)	
 3370	Maintenance and Repair of NBIS Pipes and Culverts	LF	2	Span 2 Culvert Section 1: UPSTREAM CURTAIN WALL EXPOSURE 2.7' WITH 0.5' VERT. BELOW CURTAINWALL WITH PROBE TO 0.5'. DOWNSTREAM CURTAIN WALL EXPOSURE 1.1' VERT. (PAR)	
 3370	Maintenance and Repair of NBIS Pipes and Culverts	LF	6	Span 2 Culvert Section 1: REBAR EXPOSED, SECTION LOSS DUE TO SPALLS ON INTERIOR WALL 2, 15' FROM EAST END. (PAR)	
 3370	Maintenance and Repair of NBIS Pipes and Culverts	LF	2	Span 3 Culvert Section 1: UPSTREAM CURTAIN WALL EXPOSURE 3.0' VERT. WITH 0.5' VERT. BELOW CURTAINWALL X 0.5' PROBE. (PAR)	
 3370	Maintenance and Repair of NBIS Pipes and Culverts	LF	2	Span 3 Culvert Section 1: REBAR EXPOSED, SECTION LOSS DUE TO SPALLS ON TOP SLAB. (PAR)	

Key

 Priority Maintenance Item

 Critical Finding Item

 Priority Maintenance Level Not Determined

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 230372

County COLUMBUS

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

MMS Code	MMS Description	Quantity
3350	Maint R C Wings and Walls	60 SF
Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
01/03/2022	JOHN RORES	
Details		
SCOURING ON THE SW WING, 2'V AT THE C/L.(PAR) NW WING, 2.3'V AT THE C/L (PAR) NE WING, 2'V AT THE C/L (PAR) SE WING, 0.8' AT THE C/L (PAR)		

MMS Code	MMS Description	Quantity
3370	Maintenance and Repair of NBIS Pipes and Culverts	1 LF
Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
01/03/2022	JOHN RORES	
Details		
Span 1 Culvert Section 1: UPSTREAM CURTAIN WALL EXPOSURE 2.2' VERT (PAR)		

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 230372

County COLUMBUS

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	5 LF
Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
01/03/2022	JOHN RORES	
Details		
Span 1 Culvert Section 1: 5 AREAS OF SPALLS- 6' LONG X 8" WIDE X 1" DEEP (PAR)		

MMS Code	MMS Description	Quantity
3370	Maintenance and Repair of NBIS Pipes and Culverts	2 LF
Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
01/03/2022	JOHN RORES	
Details		
Span 2 Culvert Section 1: UPSTREAM CURTAIN WALL EXPOSURE 2.7' WITH 0.5' VERT. BELOW CURTAINWALL WITH PROBE TO 0.5'. DOWNSTREAM CURTAIN WALL EXPOSURE 1.1' VERT. (PAR)		

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 230372

County COLUMBUS

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	6 LF
Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
01/03/2022	JOHN RORES	
Details		
Span 2 Culvert Section 1: REBAR EXPOSED, SECTION LOSS DUE TO SPALLS ON INTERIOR WALL 2, 15' FROM EAST END. (PAR)		

MMS Code	MMS Description	Quantity
3370	Maintenance and Repair of NBIS Pipes and Culverts	2 LF
Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
01/03/2022	JOHN RORES	
Details		
Span 3 Culvert Section 1: UPSTREAM CURTAIN WALL EXPOSURE 3.0' VERT. WITH 0.5' VERT. BELOW CURTAINWALL X 0.5' PROBE. (PAR)		

BRIDGE INSPECTOR'S RECOMMENDATION FOR PRIORITY MAINTENANCE REPAIRS

Bridge: 230372

County COLUMBUS

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	2 LF
Location:		
Bent/Span No.		
Priority Level	Status	
Priority Maintenance	Division Bridge Maintenance Notification Received	
Submitted Date:	Submitted By:	Assisted By:
01/03/2022	JOHN RORES	
Details		
Span 3 Culvert Section 1: REBAR EXPOSED, SECTION LOSS DUE TO SPALLS ON TOP SLAB. (PAR)		

Culvert Segment Details

Barrel 1

Has Bands?: No

Distance From Upstream End to Edge of Pavement: 22ft

	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	8	14													RCBC	Concrete
Downstream End	76	8	14													RCBC	Concrete

Barrel 2

Has Bands?: No

Distance From Upstream End to Edge of Pavement: 22ft

	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	8	14													RCBC	Concrete
Downstream End	76	8	14													RCBC	Concrete

Culvert Segment Details

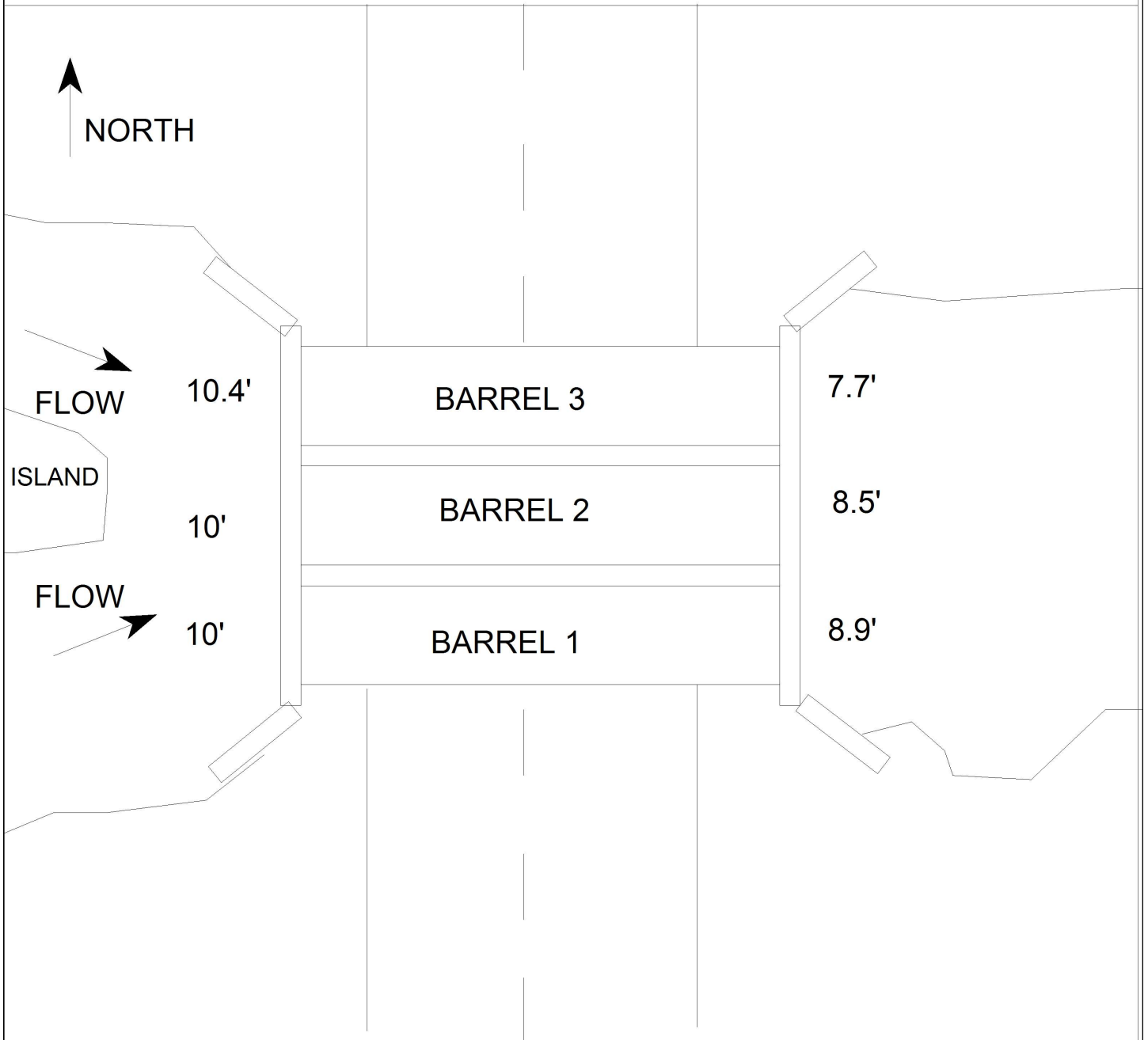
Barrel 3

Has Bands?: No

Distance From Upstream End to Edge of Pavement: 22ft

	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	8	14													RCBC	Concrete
Downstream End	76	8	14													RCBC	Concrete

Bridge Inspection Field Sketch



Title
PLAN VIEW

Description
CHANNEL OVERVIEW

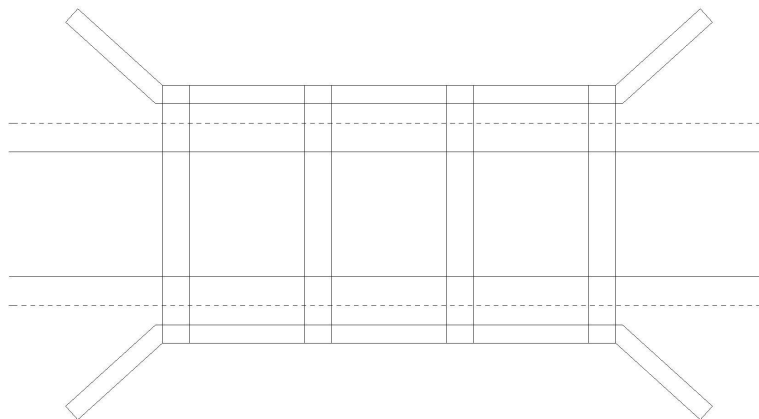
Bridge No: 230372

Drawn By: PGR

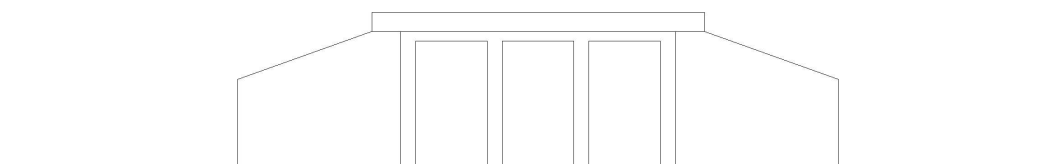
Date: 1/8/20

File Name: S0178000578

Bridge Inspection Field Sketch



Crown of Roadway



Bed

Looking Downstream

Number of Barrels	Skew	Distance From Crown to Bed	Fill Depth
3	90°	24ft	10ft
Length Along Center Line of Culvert		Length Along Center Line of Roadway	
76ft		26ft	

Barrel #	Width	Height	Wall Thickness	Scour at Inlet	Scour at Outlet
1	8ft	14ft		2.2' C.W. EXPOSED	FILLED
2	8ft	14ft	1ft	2.7'V X 0.5' HORIZ	1.1' C/W EXP
3	8ft	14ft	1ft	3'V X 0.5' HORIZ	FILLED

EOP LEFT - 22'
 EOP RIGHT - 22.8'
 SL - 55MPH
 NO GUARDRAILS

MAX. DEPTH 10.4'

VERIFIED BY JER 1/3/22

Title CULVERT PROFILE	Description END VIEW
Bridge No: 230372	Drawn By: WRM
Date: 3/17/2008	File Name: S0178000592

Bridge Inspection Field Sketch

MEASUREMENTS TAKEN +/- 50' SOUTH



Roadway	24.2ft Wide	2 Unpaved Lanes	Looking North
Left Shoulder	8ft Wide	4ft Paved	4ft Unpaved
Right Shoulder	8ft Wide	4ft Paved	4ft Unpaved
Left Guardrail			
Right Guardrail			

VERIFIED BY JER 1/3/22

Title

Approach Roadway

Description

NC 87

Bridge No: 230372

Drawn By: FCJ

Date: 03/19/2007

File Name: S0254000189

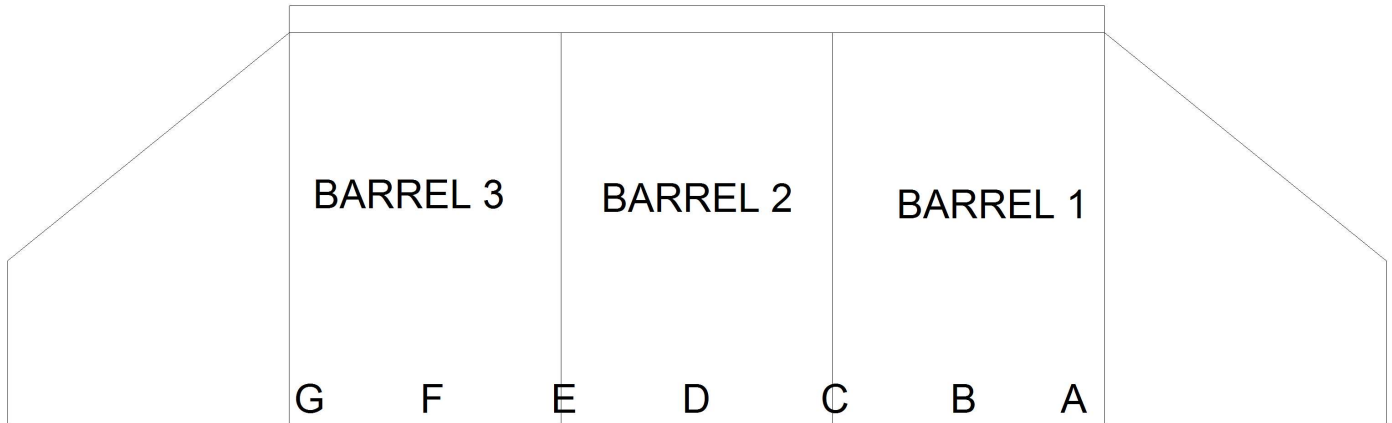
Bridge Inspection Field Sketch

MEASUREMENTS TAKEN TO TOP OF BOTTOM SLAB
NORTH



(INLET, WEST SIDE)

UPDATED BY PGR 1/8/20



2018

STATION	VERTICAL	HORIZONTAL
A	1.6'	
B	2.4'	
C	2.0'	
D	3.0'	1.0' PROBE X 1.5' WIDE
E	2.9'	1.0' PROBE X 1.5' WIDE
F	2.4'	
G	2.3'	

2014

STATION	VERTICAL	HORIZONTAL
A	2.2'	
B	2.3'	
C	1.8'	
D	2.4'	
E	3'	0.5' PROBE (1' WIDE)
F	2.3'	
G	2.6'	

2016

STATION	VERTICAL	HORIZONTAL
A	2.1'	
B	2.0'	
C	1.8'	
D	2.5'	
E	2.7'	0.5' PROBE (1' WIDE)
F	2.5'	
G	2.6'	

2020

STATION	VERTICAL	HORIZONTAL
A	1.9'	
B	2.5'	
C	2.6'	
D	3.2'	0.5' probe
E	3.0'	0.5' probe
F	3.0'	0.5' probe
G	3.0'	0.5' probe

2022

STATION	VERTICAL	HORIZONTAL
A	1.8'	
B	2.2'	
C	2.6'	
D	2.7'	0.5' PROBE
E	1.6'	0.5' PROBE
F	3'	0.5' PROBE
G	3'	0.5' PROBE

Title
SCOUR DETAIL

Description
SCOUR SKETCH

Bridge No: 230372

Drawn By: PGR

Date: 1/8/20

File Name: S0174012741