



Hamilton County

Cursory Inspection Report

<u>Location</u>: 33-03578-00.80 <u>Federal ID</u>: 33100240059

Closeout Agency:

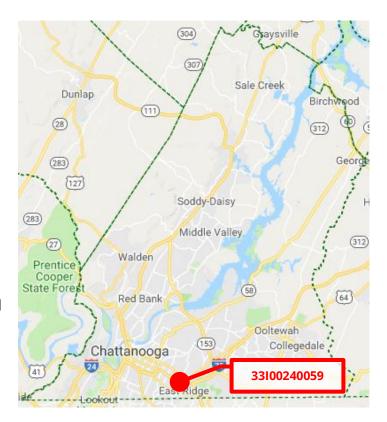
TDOT

<u>Description</u>: 4 Span Bridge FAU 3578 – Moore Road OVER

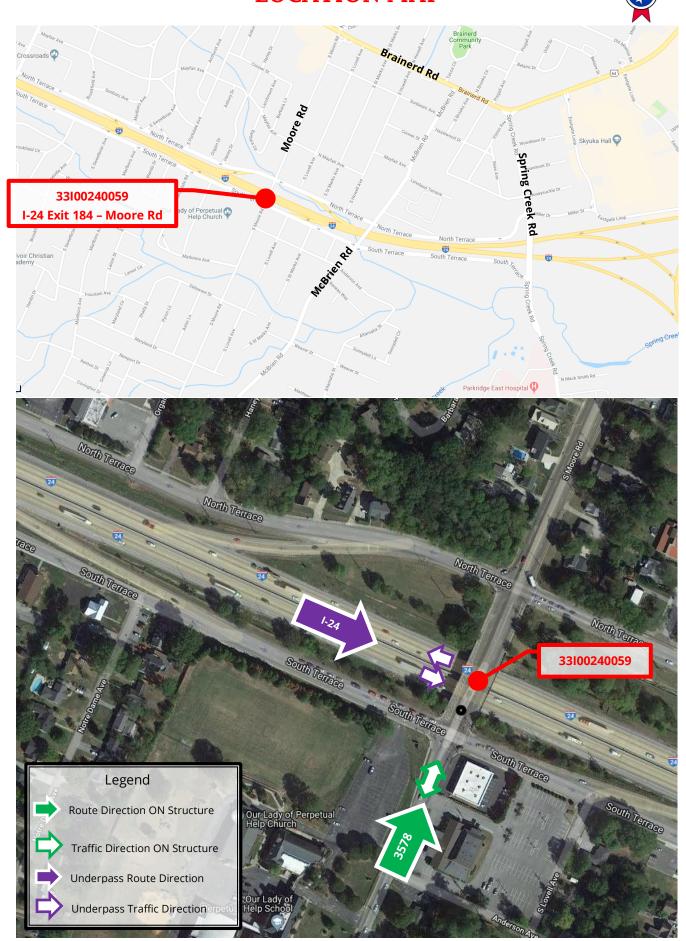
I-24 (LM 13.34) - Eastbound & Westbound

<u>Inspection Date</u>: April 7, 2022 <u>Overall Condition Rating</u>:

POOR



LOCATION MAP



BRIDGE MAINTENANCE RECOMMENDATIONS

COUNTY: HAMILTON

LOCATION: 33-03578-00.80-

CO. SEQ.: 1 SPEC. CASE: 0



REVISED:

04/07/2022

REPAIR LIST NO.: CROSSING: I-24 DATE ADDED: 10/18/2018 FED. BRIDGE NO.: 33100240059

MAINT. DIST.: 33

FACILITY CARRIED:		S. MOO	RE RD.	NUMBER OF MAIN SPANS:	4
HIGHWAY SYSTEM:	18-STP URBAN,	NON-STAT	E SYS.	NUMBER OF APPROACH SPANS:	0
BRIDGE WIDTH (CURB TO CURB):		63 FT	11 IN	BRIDGE LENGTH (FT):	175
BRIDGE WIDTH (OUT TO OUT):		76 FT	5 IN	MAXIMUM SPAN LENGTH (FT):	55
APPROACH ROADWAY (W/SHOULDERS):		58 FT	0 IN	SKEW ANGLE (DEGREES):	90
MAINTAINED BY:				STATE HIGHWAY AGENCY	
MAIN SPAN MATERIAL:			PRESTRESSED CONCRETE		
MAIN SPAN DESIGN TYPE:		BOX	BEAM C	OR GIRDERS - MULTIPLE	
APPROACH SPAN MATERIAL:			OTH	HER OR NOT APPLICABLE	
APPROACH SPAN DESIGN TYPE:			OTH	HER OR NOT APPLICABLE	
INSPECTION DATE:	10/14/2020	1	G	ENERAL CONDITION:	POOR
EVALUATION DATE:	11/13/2020	<u> </u>	S	TRUCTURALLY DEFICIENT:	YES
PPRM PIN NUMBER:					
H TRUCK RATING @ INV	7.: 29 TONS	5	S	UFFICIENCY RATING:	56.3

SUGGESTED ROUTINE MAINTENANCE AND COMMENTS			
REPLACE BEAM "Y" - SPAN NO. 1			
REPAIR CAPBEAM AT BENT NO. 3 (DELAMINATIONS CRACKS SPALLS AND REBAR SPALLS)			
REPAIR COLUMN "B" AT BENT NO. 3 (DELAMINATION AND REBAR SPALLS)			
REPAIR COLUMN "C" AND "F" AT BENT NO. 1 (DELAMINATION AND REBAR SPALLS)			
SEAL CRACKS IN ASPHALT WEARING SURFACE			
APPROACH GUARDRAIL TERMINALS ARE SUBSTANDARD (NONEXISTENT)			
APPROACH GUARDRAILS ARE NON-EXISTENT			
TRANSITIONS ARE SUBSTANDARD (NONEXISTENT)			
INSTALL PADDLEBOARD SIGNS AT APPROPRIATE LOCATIONS (NO. 1 LEFT SIDE)			
REPLACE THE MISSING "SIDEWALK CLOSED" SIGN AT APPROACH #2			
TIGHTEN SIGN BOLTS AND MONITOR SIGN CONNECTIONS TO BEAM "B" SPAN NO. 2			

GENERAL COMMENTS:

SIGNS SHOW NO MOVEMENT SINCE 04/13/2021 ON 1/7/2020 BEAM "A" WAS STRUCK AT SPAN NO. 2 BY A LOAD OF EXCESSIVE HEIGHT IT WAS REMOVED ALONG WITH APPROXIMATELY 65 FEET OF THE SIDEWALK AND 75 FEET OF THE BRIDGE RAIL MONITOR SEPERATION BETWEEN BEAMS IN SPANS NO. 1 AND NO 4



Bridge Number: (Includes Item 5A) **Feature Intersected:**

Bridge Condition Coding Form

Revised	0.4	/11	1202	•
Kevised	l U4	/11	/202	1

County:	33
Route:	03578
Special Case:	0
County Sequence:	1

Log Mile: 0.80 NO CHANGE BUT STILL EVALUATE **Evaluation Status:**

331002400591

I-24

CODE	ONLY THOSE VALUES W	HICH HAVE CHAN	NGED
ITEM #	DESCRIPTION	VALUE	CONDITION CODING GUIDELINES
90	LAST INSPECTION DATE EARLIEST DATE OF	10/14/2020 08/15/2022	(Values for Coding Items 58, 59, 60 and 62)
	NEXT REGULAR INSPECTION	/ /	N NOT APPLICABLE
		99 FT. 99 IN.	9 EXCELLENT CONDITION
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	FT IN.	8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
520	MINIMUM V.C. OVER DECK	99 FT. 99 IN.	7 GOOD CONDITION - SOME MINOR PROBLEMS
26	(EXCLUDES SHOULDERS)	FT IN.	6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
36	TRAFFIC SAFETY FEATURES Br. Rail Trans. Appr. Rail To	erminal SPEED LIMIT 0 30	5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.
41	STRC OPEN/CLOSED/POSTED A K P	A	4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.
58	DECK	6	3 SERIOUS CONDITION - LOSS OF SECTION,
59	SUPERSTRUCTURE	4	DETERIORATION, SPALLING OR SCOUR HAVE SERIOUSLY AFFECTED PRIMARY STRUCTURAL COMPONENTS. LOCAL FAILURES ARE POSSIBLE. FATIGUE CRACKS
60	SUBSTRUCTURE	5	IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT.
61	CHANL/CHANL PROTECTION	N	2 CRITICAL CONDITION - ADVANCED DETERIORATION OF PRIMARY STRUCTURAL
62	CULVERT AND RETAIN WALL	N	ELEMENTS. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT OR SCOUR MAY HAVE REMOVED
71	WATERWAY ADEQUACY	N	SUBSTRUCTURE SUPPORT. UNLESS CLOSELY MONITORED IT MAY BE NECESSARY TO CLOSE THE BRIDGE UNTIL
72	APPROACH RDWY ALIGNMENT	8	CORRECTIVE ACTION IS TAKEN.
521	OVERALL CONDITION	POOR	1 "IMMINENT" FAILURE CONDITION - MAJOR DETERIORATION OR SECTION LOSS PRESENT IN CRITICAL STRUCTURAL COMPONENTS OR OBVIOUS VERTICAL OR
	LATITUDE 17 LONGITUI N 35° .3770′ W 85° 13.9020		HORIZONTAL MOVEMENT AFFECTING STRUCTURAL STABILITY, BRIDGE IS CLOSED TO TRAFFIC BUT CORRECTIVE ACTION MAY PUT IT BACK IN LIGHT SERVICE
•	<u> </u>	_	0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.



BRIDGE NO. - #1 RIGHT - BRIDGE RAIL



LOOKING AHEAD ON ROUTE



LOOKING BACK ON ROUTE



TRAFFIC CONTROL - LOOKING AHEAD



TRAFFIC CONTROL - LOOKING BACK - "SIDEWALK CLOSED" SIGN IS MISSING



BEAM "A" REMOVED - SPAN #2 - LOOKING AHEAD



BOTTOM OF SPAN #2 - LOOKING AHEAD ON UNDERPASS



LEFT SIDEVIEW OF SPAN #2 - LOOKING AHEAD ON UNDERPASS



BEAM "A" REMOVED - BENT #2



BEAM "A" REMOVED - BENT #1



BOTTOM OF DECK - SPAN #2 - LEFT



BOTTOM OF DECK - SPAN #2 - RIGHT



SPALLED BEAMS - "F" AND "G" - SPAN #2



SPALLED BEAMS "P" AND "Q" - SPAN #2



DAMAGE TO PARAPET - FROM BEAM REMOVAL - BENT #1



ANGLE IRON INSTALLED AFTER THE CURSORY INSPECTION OF 7-23-2020

Bridge ID#: 33I00240059 Date: 04/07/2022



ANGLE IRON INSTALLED AFTER THE CURSORY INSPECTION OF 7-23-2020



2" GAP BETWEEN BEAMS "A" AND "B" - SPAN #1



SIGN ATTACHMENT - LEFT



LEFT BACK ATTACHMENT OF SIGN – PLAN VIEW



LEFT BACK OF SIGN - FRONT RIGHT



LEFT BACK OF SIGN - FRONT MIDDLE



LEFT BACK OF SIGN - FRONT LEFT



LEFT BACK OF SIGN - LEFT SIDE - MIDDLE



LEFT BACK OF SIGN - LEFT SIDE FRONT



LEFT BACK OF SIGN - RIGHT SIDE BACK



LEFT BACK OF SIGN - RIGHT SIDE - MIDDLE



LEFT BACK OF SIGN - RIGHT SIDE - FRONT



LEFT BACK OF SIGN - WELD



LEFT BACK OF SIGN - WELD



LEFT BACK OF SIGN – LEFT CORNER - CRACK



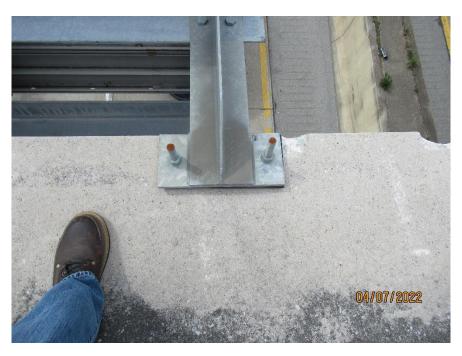
LEFT BACK OF SIGN – LEFT CORNER - CRACK



BACK OF SIGN - RIGHT CORNER - CRACK



BACK OF SIGN - RIGHT CORNER - CRACK



PLAN VIEW – RIGHT BACK OF SIGN



RIGHT BACK OF SIGN - FRONT - RIGHT



RIGHT BACK OF SIGN - FRONT - MIDDLE



RIGHT BACK OF SIGN - FRONT - LEFT



2.5" GAP BETWEEN BEAMS "B" AND "C" IN SPAN #4



STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

REGION 2 BRIDGE

7508 VOLKSWAGEN DRIVE CHATTANOOGA, TENNESSEE 37416 (423) 892-3430

JOSEPH GALBATO, III
INTERIM COMMISSIONER

BILL LEE GOVERNOR

Date: April 7, 2022

Cursory Inspection Report

County: Hamilton

Bridge Location Number: 33-03578-00.80

Bridge Number: 33100240059

Route: Moore Road over Interstate 24

A TDOT Bridge Inspection crew conducted a cursory inspection on 4/07/2022.

Conclusions: The left bridge rail and Beam "A" in Span #2 have been removed. Concrete jersey barriers exist on the left side of the bridge. A sign reading "Sidewalk Closed" is present on the left side of the bridge at Approach #1, but it is missing on the left side at Approach #2. Spalls are present on Beams "F", "G", "P", "Q", "R", "S", and "W". Wide cracks are present in the ashphalt wearing surface in all spans. The underpass right barrier wall between Columns "A" and "B" at Bent #1 has a spalled area (4' x 2' x 8") with rebar exposed due to the construction work of the removal of Beam "A" in Span #2. Seperation up to 2" wide exists between Beams "A" and "B" and "B" and "C" in Span #1. Seperation up to 2.5" exists between Beams "B" and "C" in Span No. 4. No additional separation or cracking of beams in Span #2 has been observed since the initial damage. Bridge repair installed angle irons on the bent caps of Bents #1 and #2 to inhibit Beam "B" from walking, noted from 10-14-2020 report. Signs attached to Beam "B" in Span #2 are showing no movement from the pictures taken on 04/26/2021.

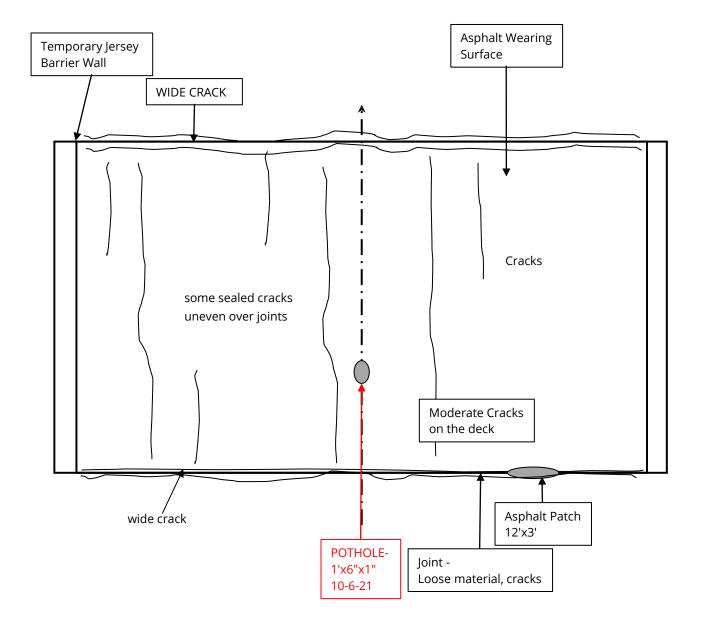
<u>Recommendations:</u> Monitor the deck, superstructure, and substructure until permanent repairs have been designed and executed. Tighten sign bolts and monitor sign connections to Beam "B", Span #2. Monitor seperation between Beams in Spans No. 1 and No. 4. Replace the missing "Sidewalk Closed" sign at Approach #2.

<u>Inspection Crew:</u> Jonathan Edwards (Team Leader) and John Garrison.



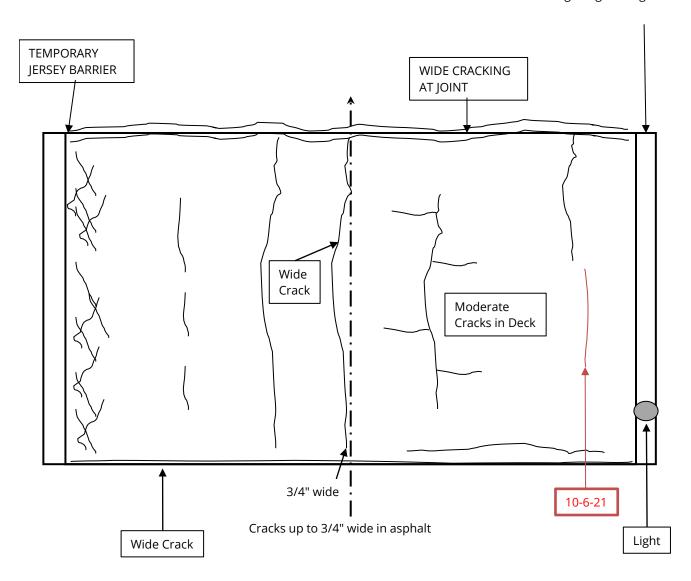
Route Carried: FAU 3578 - Moore Rd

Route Direction: From Georgia



Inspector's Comment: The wearing surface is asphalt.

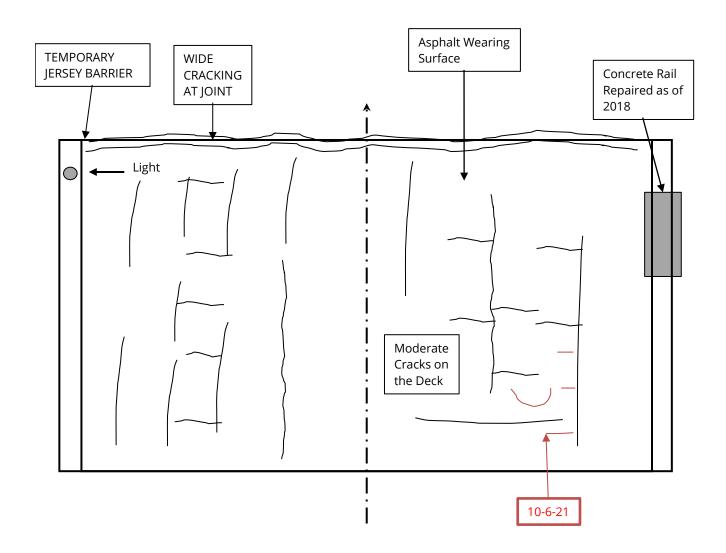
Rebar exposed up to 6" long in right bridge rail

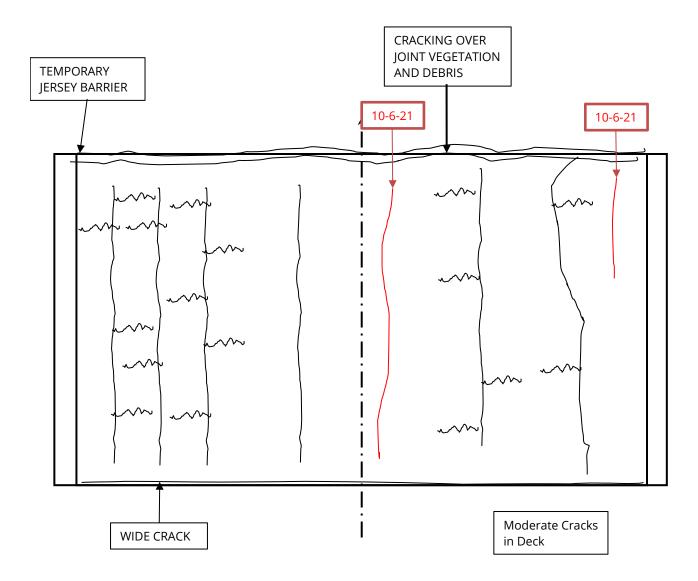


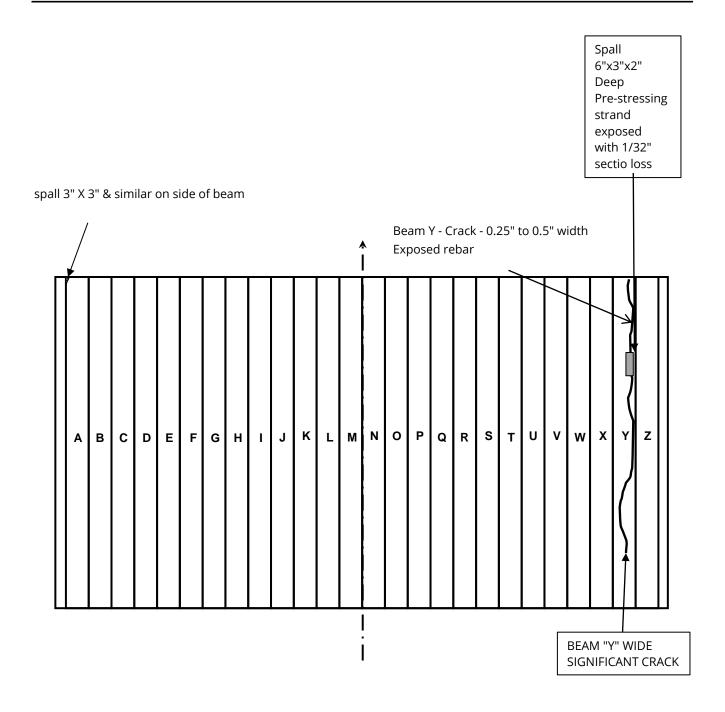
Note: Spalled areas (4'10"x7"x7" and 6"x2"x6") with rebar exposed exist on the left outside edge of the sidewalk behind the concrete barrier.

Bridge: 33-03578-00.80

Underpass: 33-I0024-13.34



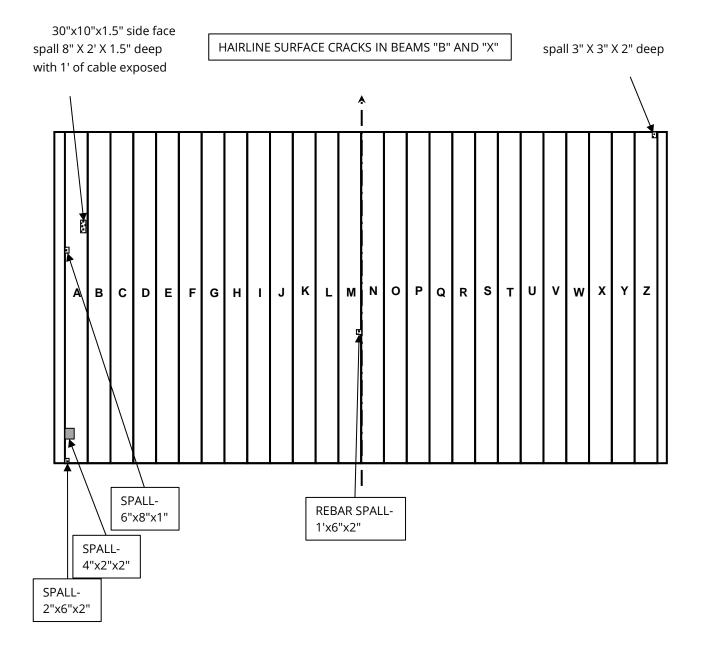




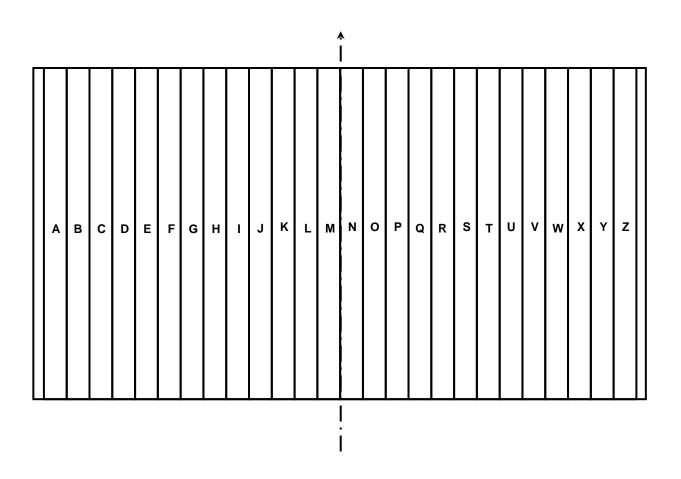
SEPERATION UP TO 2" WIDE EXISTS BETWEEN BEAMS "A"-"B" AND "B"-"C"-WATER LEAKAGE EXISTS BETWEEN SOME BEAMS-

Inspector's Note: The damage in red resulted from the collision on 1/7/2020. Spall Beam "A" 21" x 40" x 7" deep Removed at the junction of on 1/7/2020 Beams "F" and "G," **Exposed Pre-stressing** Strand and Cracks -Beam "W" has Beam "F" 2 scrape marks 4" x 1" x 1" deep each Α P∕ Q Κ U Z Ν 0 Т В Ε G H J L М R ı Spall Spall 8" x 1' x 2" deep 20" x 18" x 3" deep at the junction of at the junction of Beams "R" and "S" Beams "P" and "Q"

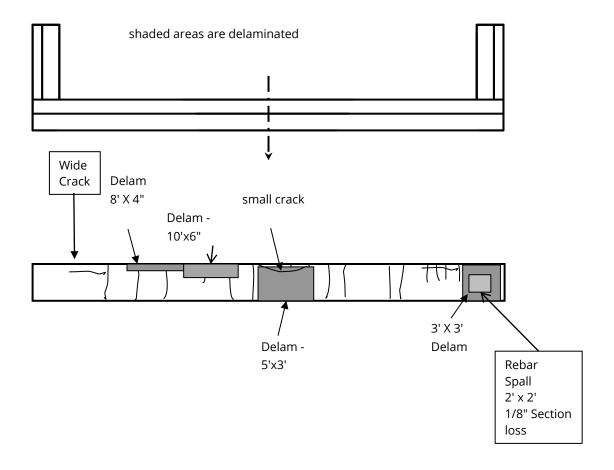
WATER LEAKAGE EXISTS BETWEEN SOME BEAMS



WATER LEAKAGE EXISTS BETWEEN SOME BEAMS



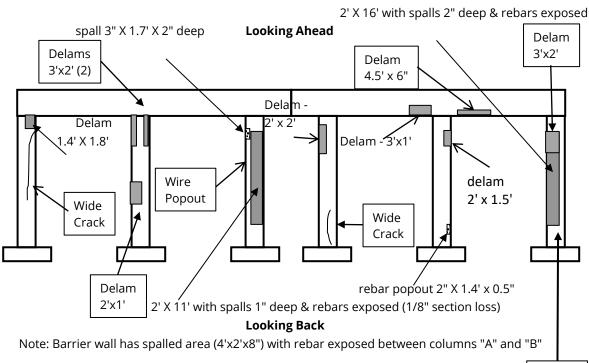
WATER LEAKAGE BETWEEN SOME BEAMS UP TO 2.5" BETWEEN BEAMS "B" AND "C" UP TO 1" BETWEEN ALL OTHER BEAMS

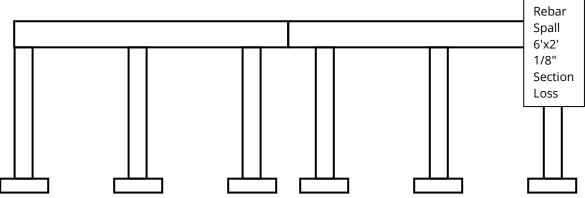


All cracks are moderate unless indicated otherwise.

WATER LEAKAGE ON CAP

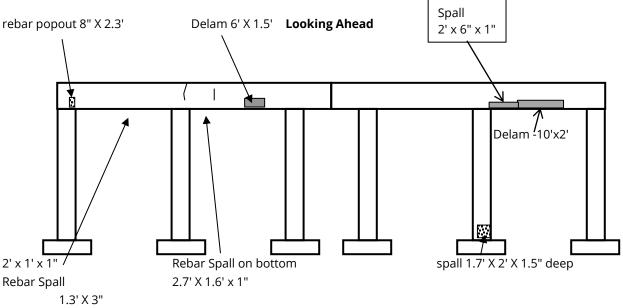
shaded areas are delaminated cracks are hairline unless noted otherwise

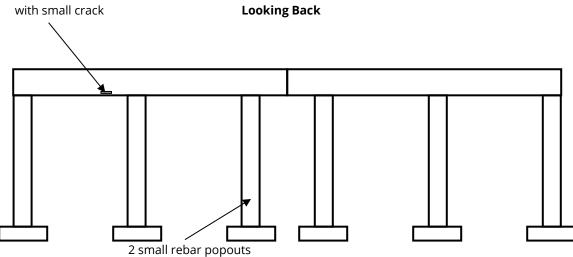




Bridge: 33-03578-00.80 4 Span Bridge
Underpass: 33-10024-13.34 Bent 1 Inspection Date: 4/7/2022

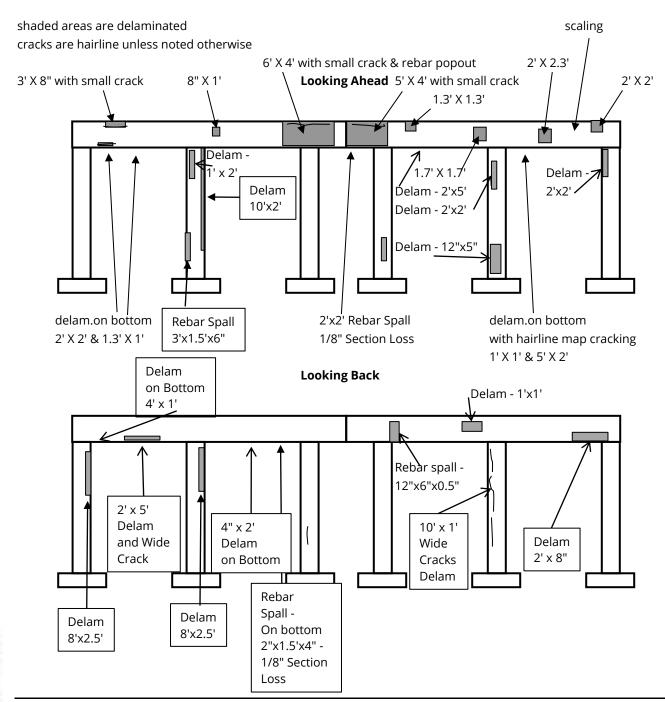
shaded areas are delaminated cracks are hairline unless noted otherwise

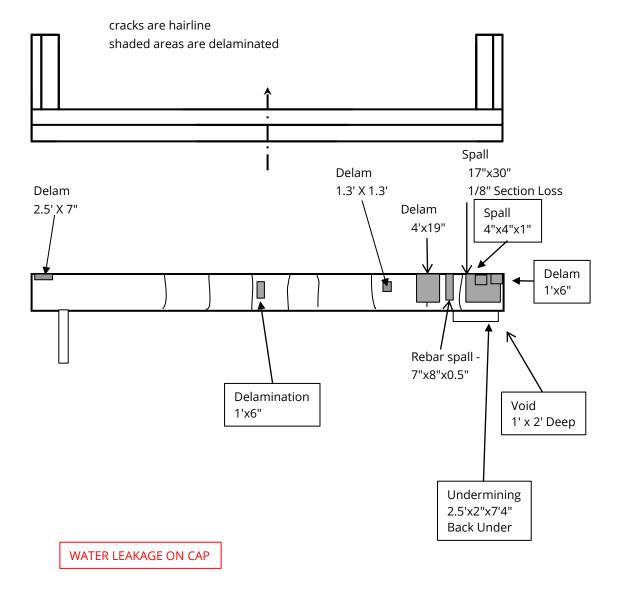




Bridge: 33-03578-00.80 Underpass: 33-10024-13.34

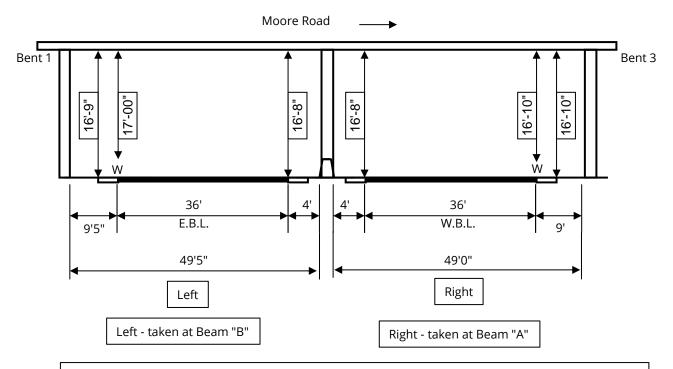
App Guardrail: F Terminal - nonstandard. End of rail - missing bolts





Route Carried: FAU 3578 - Moore Rd

Route Direction: From Georgia



Note: It was unsafe to measure the vertical clearances any closer than approximately 3 feet from the white lines at the outermost edge of the travelling lanes.

Looking Back on the Underpass Route (I-24)

Bridge: 33-03578-00.80

Underpass: 33-I0024-13.34