



## Hamilton County

### Regular Inspection Report

Location: 33-I0075-01.38

Federal ID: 33I00240067

Maintenance Responsibility:

State of Tennessee

Description:

3 Span Bridge

I-75-LM 1.38 Southbound

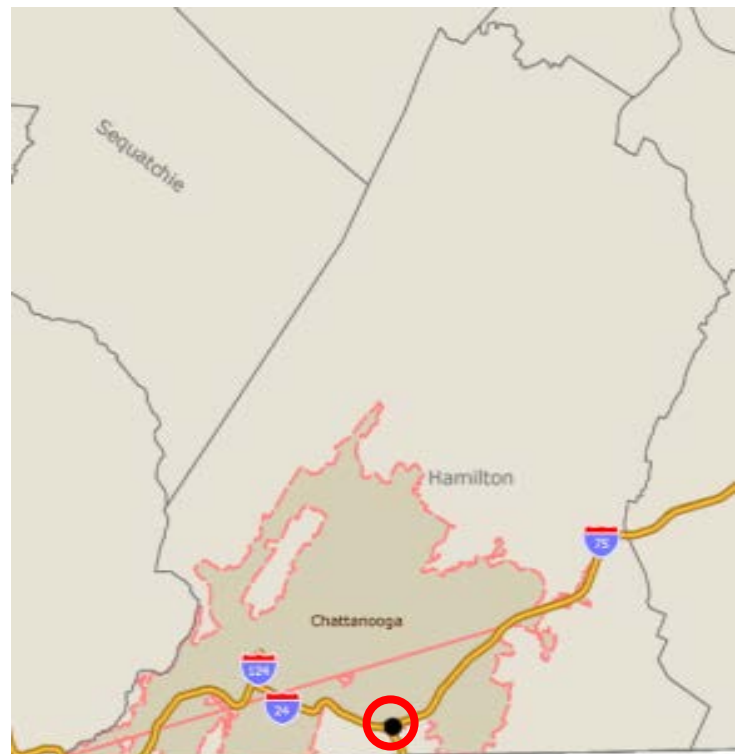
OVER

I-24-LM 14.52 Eastbound

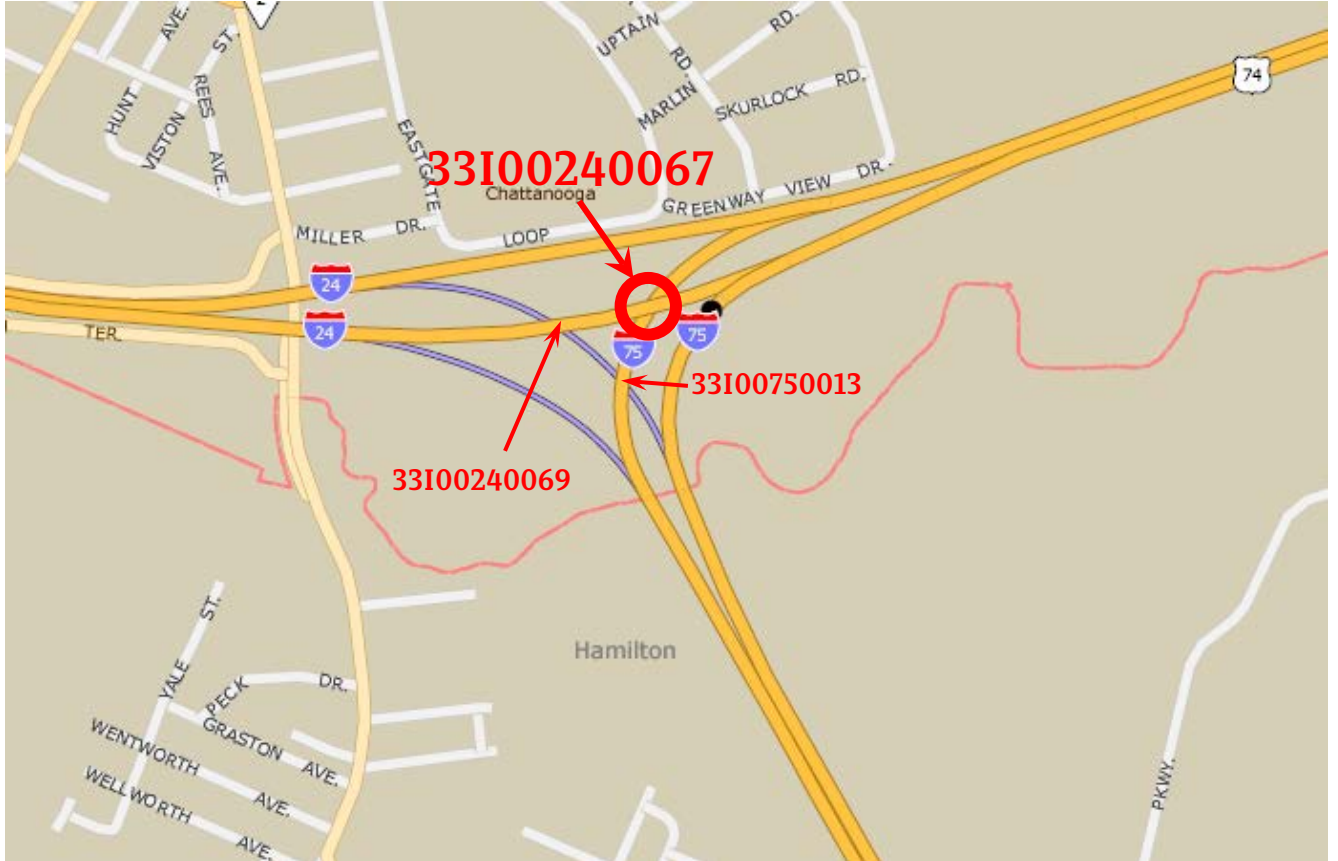
Inspection Date: July 12, 2016

Overall Condition Rating:

**FAIR**



# LOCATION MAP



- Route Direction ON Structure
- Underpass Route Direction
- Recommended Parking Area
- Traffic Direction ON Structure
- Underpass Traffic Direction

**BRIDGE MAINTENANCE RECOMMENDATIONS**



Tennessee Department  
of Transportation

COUNTY: HAMILTON  
 LOCATION: 33-I0075-01.38-  
 CO. SEQ.: 1 SPEC. CASE: 0  
 MILEPOST: 1.32

CROSSING: I-75 / I-24 EB  
 FED. BRIDGE NO.: 33I00240067  
 MAINT. DIST.: 33

REPAIR LIST NO.: N  
 DATE ADDED: 08/09/2002  
 REVISED: 07/18/2016

FACILITY CARRIED:	<u>I-75 SBL</u>	NUMBER OF MAIN SPANS:	<u>3</u>
HIGHWAY SYSTEM:	<u>02-INTERSTATE URBAN</u>	NUMBER OF APPROACH SPANS:	<u>0</u>
BRIDGE WIDTH (CURB TO CURB):	<u>29 FT 10 IN</u>	BRIDGE LENGTH (FT):	<u>184</u>
BRIDGE WIDTH (OUT TO OUT):	<u>36 FT 5 IN</u>	MAXIMUM SPAN LENGTH (FT):	<u>68</u>
APPROACH ROADWAY (W/SHOULDERS):	<u>41 FT 11 IN</u>	SKEW ANGLE (DEGREES):	<u>39</u>
MAINTAINED BY:	<u>STATE HIGHWAY AGENCY</u>		
MAIN SPAN MATERIAL:	<u>PRESTRESSED CONCRETE</u>		
MAIN SPAN DESIGN TYPE:	<u>BOX BEAM OR GIRDERS - MULTIPLE</u>		
APPROACH SPAN MATERIAL:	<u>OTHER OR NOT APPLICABLE</u>		
APPROACH SPAN DESIGN TYPE:	<u>OTHER OR NOT APPLICABLE</u>		
INSPECTION DATE:	<u>07/12/2016</u>	GENERAL CONDITION:	<u>FAIR</u>
EVALUATION DATE:	<u>08/12/2014</u>	STRUCTURALLY DEFICIENT:	<u>NO</u>
PPRM PIN NUMBER:		SUFFICIENCY RATING:	<u>76.6</u>
H TRUCK RATING @ INV.:	<u>20 TONS</u>		

**SUGGESTED ROUTINE MAINTENANCE AND COMMENTS**  
 CLEAR VEGETATION FROM ABUTMENT #1, Right

**GENERAL COMMENTS:**



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

# Bridge Condition Coding Form

Revised 07/26/2016

Bridge Number:   
(Includes Item 5A)

Feature Intersected:

Evaluation Status:

County:

Route:

Special Case:

County Sequence:

Log Mile:

**CODE ONLY THOSE VALUES WHICH HAVE CHANGED**

ITEM #	DESCRIPTION	VALUE	CONDITION CODING GUIDELINES
90	LAST INSPECTION DATE	<input type="text" value="07/12/2016"/>	(Values for Coding Items 58, 59, 60 and 62)
	EARLIEST DATE OF NEXT REGULAR INSPECTION	<input type="text" value="05/13/2018"/>	
		<input type="text" value="/ /"/>	
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN.	<p>N NOT APPLICABLE</p> <p>9 EXCELLENT CONDITION</p> <p>8 VERY GOOD CONDITION - NO PROBLEMS NOTED.</p> <p>7 GOOD CONDITION - SOME MINOR PROBLEMS.</p> <p>6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.</p> <p>5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.</p> <p>4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.</p> <p>3 SERIOUS CONDITION - LOSS OF SECTION, DETERIORATION, SPALLING OR SCOUR HAVE SERIOUSLY AFFECTED PRIMARY STRUCTURAL COMPONENTS. LOCAL FAILURES ARE POSSIBLE. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT.</p> <p>2 CRITICAL CONDITION - ADVANCED DETERIORATION OF PRIMARY STRUCTURAL ELEMENTS. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT OR SCOUR MAY HAVE REMOVED SUBSTRUCTURE SUPPORT. UNLESS CLOSELY MONITORED IT MAY BE NECESSARY TO CLOSE THE BRIDGE UNTIL CORRECTIVE ACTION IS TAKEN.</p> <p>1 "IMMINENT" FAILURE CONDITION - MAJOR DETERIORATION OR SECTION LOSS PRESENT IN CRITICAL STRUCTURAL COMPONENTS OR OBVIOUS VERTICAL OR HORIZONTAL MOVEMENT AFFECTING STRUCTURAL STABILITY. BRIDGE IS CLOSED TO TRAFFIC BUT CORRECTIVE ACTION MAY PUT IT BACK IN LIGHT SERVICE.</p> <p>0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.</p>
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN.	
36	TRAFFIC SAFETY FEATURES		
	Br. Rail Trans. Appr. Rail Terminal SPEED LIMIT		
	1 0 0 N 55		
	<input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/>		
41	STRC OPEN/CLOSED/POSTED	A	
	A K P		
58	DECK	7	
59	SUPERSTRUCTURE	7	
60	SUBSTRUCTURE	7	
61	CHANL/CHANL PROTECTION	N	
62	CULVERT AND RETAIN WALL	N	
71	WATERWAY ADEQUACY	N	
72	APPROACH RDWY ALIGNMENT	6	
521	OVERALL CONDITION	FAIR	
16	LATITUDE	<input type="text" value="N 35° .2570'"/>	
17	LONGITUDE	<input type="text" value="W 85° 12.6960'"/>	
		<input type="text" value=""/> <input type="text" value=""/>	
	TEAM LEADER SIGNATURE	REVIEW DATE	

# Photographs

Bridge ID#: 33I00240067

Date: 07/12/2016



LOOKING AHEAD



CLEARANCE - AHEAD ON I24

# Photographs



LOOKING BACK



CLEARANCE - BACK ON I24

# Photographs



RIGHT SIDEVIEW - BACK ON I24



LEFT SIDEVIEW - AHEAD ON I24

# Photographs



LEFT SIDEVIEW - AHEAD ON I24



SPAN 1



## Photographs



SPAN 3



BEARINGS - ABUTMENT

## Photographs



BEARINGS - BENT



WEARING SURFACE

# Photographs



## TRAFFIC SAFETY FEATURES



## APPROACH 2

## Photographs



BEAM K - CRACKS AT BENT 1



BEAM K - CRACKS AT BENT 1

## Photographs



BEAM A - SPAN 2 - CRACK

**BRIDGE INSPECTION REPORT**

Page No. \_\_\_\_\_

Form BIR 3.0  
(Rev. 9-22-98)  
DT-0069

Field Report No. 23 Date 7/12/2016  
Previous Report No. 22 Date 7/7/2014  
Plans: DESIGN

Bridge No. 33100240067  
Eleven Digit No.

Bridge Location No. 33 - I0075 - 0138  
Co. Route Log Mile

I75 SB over I24 EB  
Facility Carried by Structure Crossing Structure Name (If Named)  
Year Constructed 1959 ACTUAL County \_\_\_\_\_ Maintenance District 21  
Year Widened NA NA Year Rehabilitated 1983 ACTUAL

**FEATURES**

Wearing Surface Concrete Depth \_\_\_\_\_ (in.)  
Flared Width NO Median Width NONE  
Navigational Control NO Bridge Skew 39° RT  
Structure Type (Main Span) PCBB  
Structure Type (Appr.Spans) NA  
No. Main Spans 3 No. Approach Spans 0  
Maximum Span Length 68.4 (\*\*.\* ft.)  
Total Length 183.8 (\*\*.\* ft.)

**TEAM LEADER**

Tays

**INSPECTORS**

Haas  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**WIDTHS** (\*.\* ft.)

Deck Out-to-Out 36.5  
Roadway Curb/Curb NA  
Roadway Rail/Rail 30.0  
Sidewalk Rt. NA Lt. NA  
\*Approach Roadway 24.0  
\*(Does Not Include Shoulders)  
Approach Shoulder Rt. 12.0  
Lt. 6.0

**CLEARANCES**

Min. Vertical Clearance over Deck 99-99 (ft.-in.)  
Min. Vertical Under Clearance 16 (ft.-in.)  
Min. Lateral Under Clearance Rt. 10.0 (\*.\* ft.)  
Min. Lateral Under Clearance Lt. 7.0 (\*.\* ft.)

FRACTURE CRITICAL: NO  
(If Yes, Include BIR 3.9)

NBIS Bridge Length (<25 ft.) \_\_\_\_\_ (ft.-in.)

**UNDERWATER INSPECTION**

To Be Performed By: NR Date \_\_\_\_\_

Change in Structural Condition: NO Major Repairs Made: NO BRIDGE is: OPEN

**COMMENTS:**

Supervising Bridge Inspector: Tays

BRIDGE RATING: FAIR

**PERFORMANCE EVALUATION**

Time of Day Inspected        PM Weather Conditions sunny 90 F  
 Vehicles Observed ALL TYPES

**LIVE LOAD BEHAVIOR**

Substructure	Yes/No	Comments
Horiz./ Vert. Defl.	NO	
Vibration	NO	
Superstructure		
Horiz./ Vert. Defl.	No	
Vibration	NO	

**APPROACH**

	Rating	Comments
Alignment	FAIR	<i>CURVE - Merging lanes, requires speed reduction</i>
Slab	NA	
Joints	NA	
Pavement	GOOD	<i>NARROW-SMALL CRACKS</i>
Embankment	GOOD	
Drains	GOOD	

**TRAFFIC SAFETY FEATURES**

	Rating	Standard/ SubStandard	Comments
Bridgerailing	FAIR	STANDARD	<i>SIGNIFICANT COLLISION SPALLS.</i>
Transitions	GOOD	NONSTANDARD	
Guardrail	GOOD	NONSTANDARD	
Guardrail Terminal	GOOD	N/A	<i>&gt; 100' from bridge end</i>

**SIGNING**

	Yes/ No/ Needed
Paddleboards	YES
Vertical Clearance (<14'-6")	NO
Narrow Bridge Signs	NO
One Lane Bridge Signs	NO

Weight Limit Posted NO  
 Gross..... \_\_\_\_\_ Tons  
 2 Axle..... \_\_\_\_\_ Tons  
 3 or more Axles.. \_\_\_\_\_ Tons

Other Signs or Plaques:

Comments Regarding any  
 Problems with Signing:

**DECK**

	Rating	Comments
Wearing Surface	GOOD	
Deck - Structural Condition	NV	<i>PCBB - Top of deck - No visible issues</i>
Curbs	NONE	
Median	NONE	
Sidewalks	NONE	
Parapet	NA	
Railing	N/A	
Paint	NA	
Drains	NONE	
Lighting Standards	NONE	
Utilities	NONE	
Joint Leakage	FAIR	<i>MODERATE</i>
Expansion Joints	N/A	

**SUPERSTRUCTURE**

Bearing Devices	GOOD	<i>Elastomeric</i>
Girders or Beams	G-F	<i>HL-NARROW CRACKS</i>
Floor Beams	NA	
Stringers	NA	
Diaphragms	NA	
Bracing	NA	
Trusses - General	NA	
Portals	NA	
Bracing	NA	
Paint	NA	
Alignment of Members	GOOD	

**TEXTURE COAT**

Condition Rating	<u>FAIR</u>	Needs Spot Painting	<u>NO</u>
Overall Appearance	<u>FAIR</u>	Needs Repainting	<u>YES</u>
Staining Rating	<u>FAIR</u>	Comments	
Fading Rating	<u>FAIR</u>		
Scaling Rating	<u>GOOD</u>		



**SUBSTRUCTURE**

**ABUTMENTS**

	Rating	Comments
Caps	GOOD	HEAVY VEGETATION.
Breastwall	N/A	HL-NARROW CRACKS
Wings	GOOD	
Backwall	GOOD	
Plumb	GOOD	
Footing	NA	
Piles	NV	
Embankment	GOOD	Concrete
Bearing Surface	GOOD	
Slope Paving	GOOD	
Rip Rap	NA	

**PIERS**

Caps		
Columns		
Plumb		
Footings		
Piles		
Bearing Surface		

**BENTS**

Caps	GOOD	HL-NARROW CRACKS
Columns	GOOD	REBAR POPOUTS
Plumb	GOOD	
Footings	NV	
Piles	NV	
Bearing Surface	G-F	

Piles Need Replacement: NO

Piles To Be Replaced:

Inspection Team's Summary  
Bridge Location No. 33 - I0075 - 0138  
Inspection Date 7/12/2016  
Bridge Rating FAIR

Page No.\_\_\_\_

TYPE SERVICE: I 75 SBL  
OVER: I24 EB

On Tuesday, July 12, 2016, a Region Two bridge inspection team inspected this structure and found it to be in FAIR condition.

TOP OF DECK

*Traffic Safety Features*

Bridge Rail:	FAIR	STANDARD	SIGNIFICANT COLLISION SPALLS.
Transitions:	GOOD	NONSTANDARD	
Approach Rail:	GOOD	NONSTANDARD	
Terminals:	GOOD	N/A	> 100' from bridge end

*Wearing Surfaces*

Approach Pvm:	GOOD	NARROW-SMALL CRACKS
Deck - Wearing Surface:	GOOD	

BOTTOM OF DECK

Deck - Structural Condition:	NV	PCBB - Top of deck - No visible issues
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SUPERSTRUCTURE

Beams:	G-F	HL-NARROW CRACKS
Bearings:	GOOD	Elastomeric

SUBSTRUCTURE

*Abutments*

Caps:	GOOD	HEAVY VEGETATION.
Breastwall:	N/A	HL-NARROW CRACKS
Wings:	GOOD	
Backwall	GOOD	
Bearing Surface:	GOOD	

*Bents*

Caps:	GOOD	HL-NARROW CRACKS
Columns:	GOOD	REBAR POPOUTS
Bearing Surface:	G-F	

UNDERCLEARANCE

Min Vert Under Clear(ft-in): 16

SPECIAL NOTES

Items 58, 59, 60 - Visible elements are in good condition. HL-SM cracks

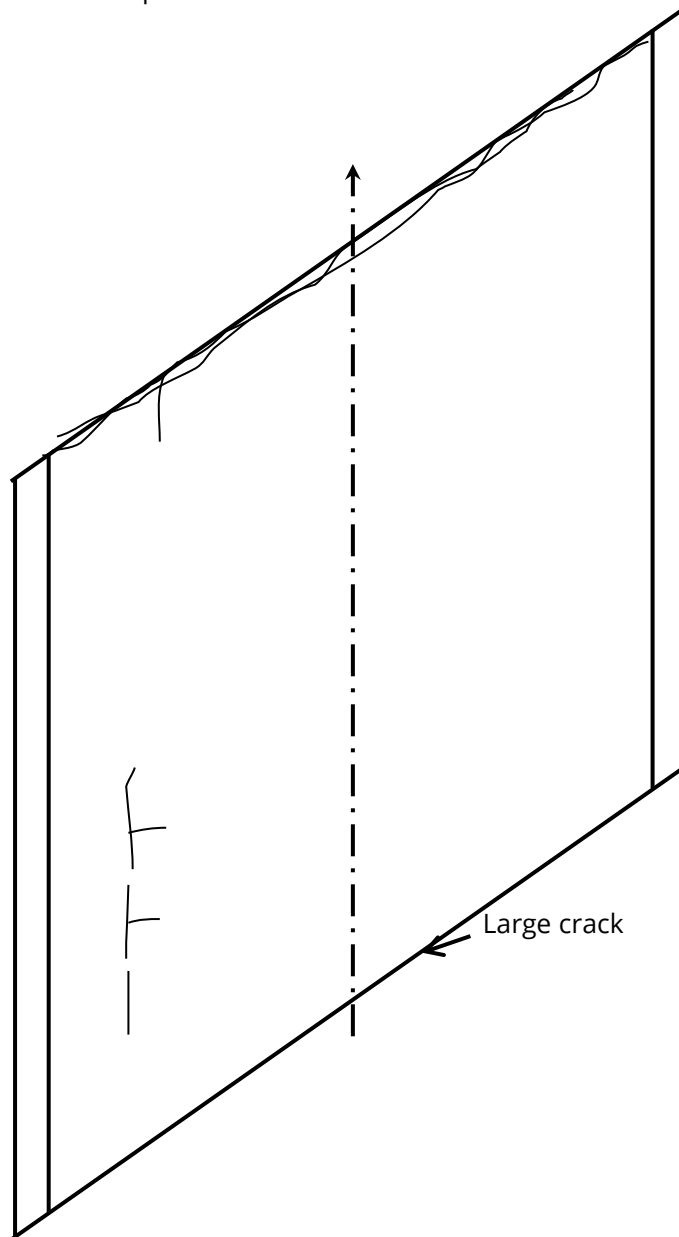


App Pvmt: G

App Rail:

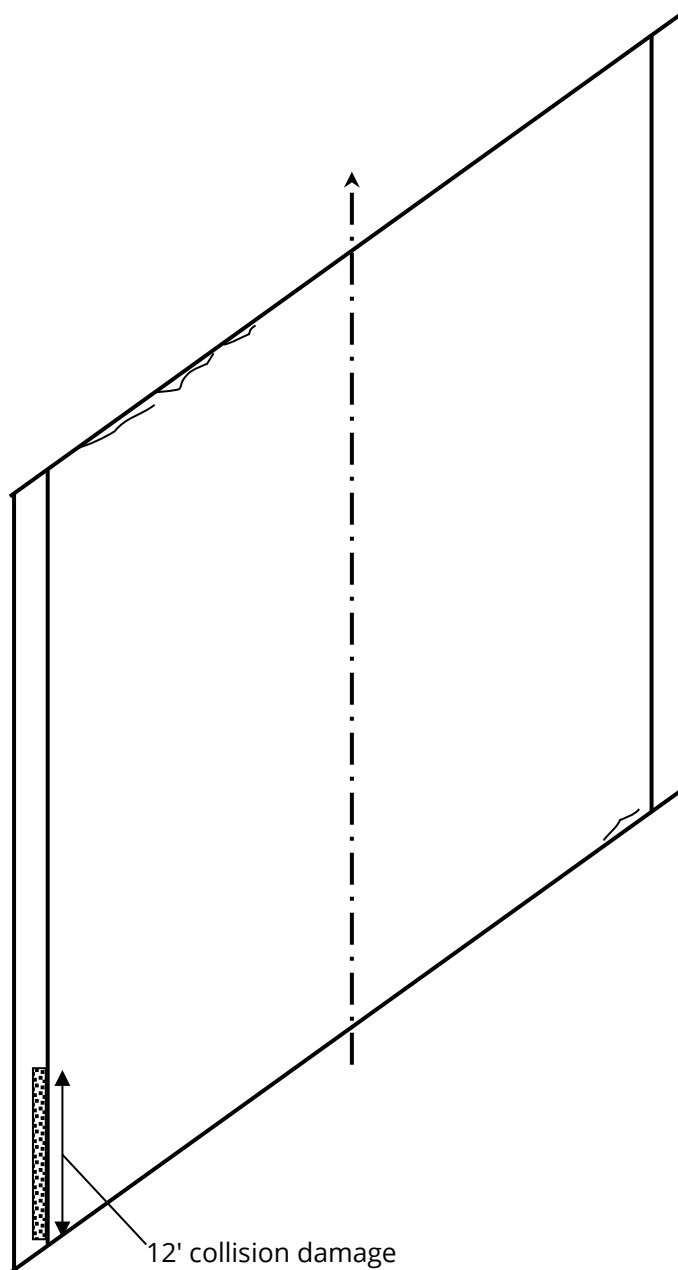
Wearing Surface: G

Bridge Rail: F collision spalls



Wearing Surface: G

Bridge Rail: F collision spalls

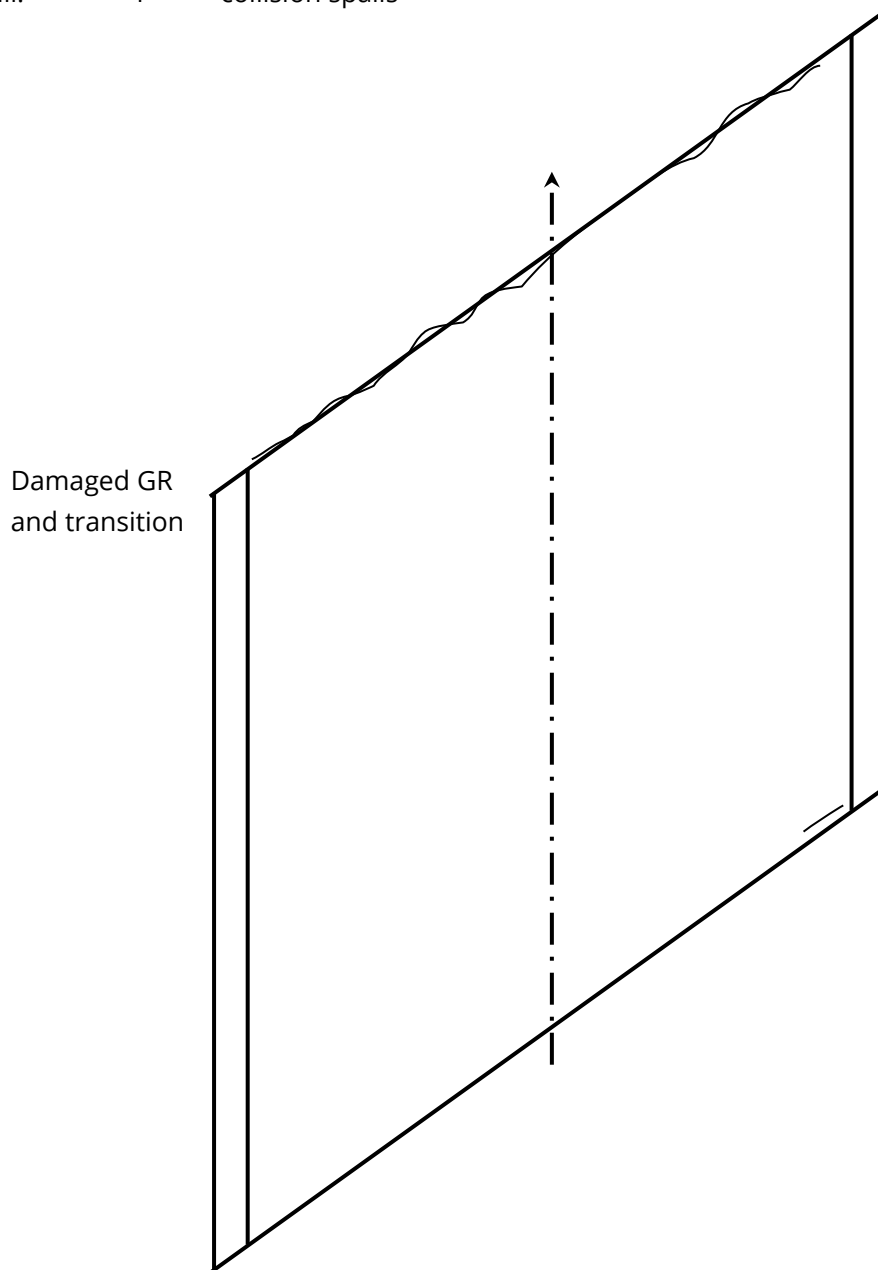


App Pvmt: G

App Rail:

Wearing Surface: G

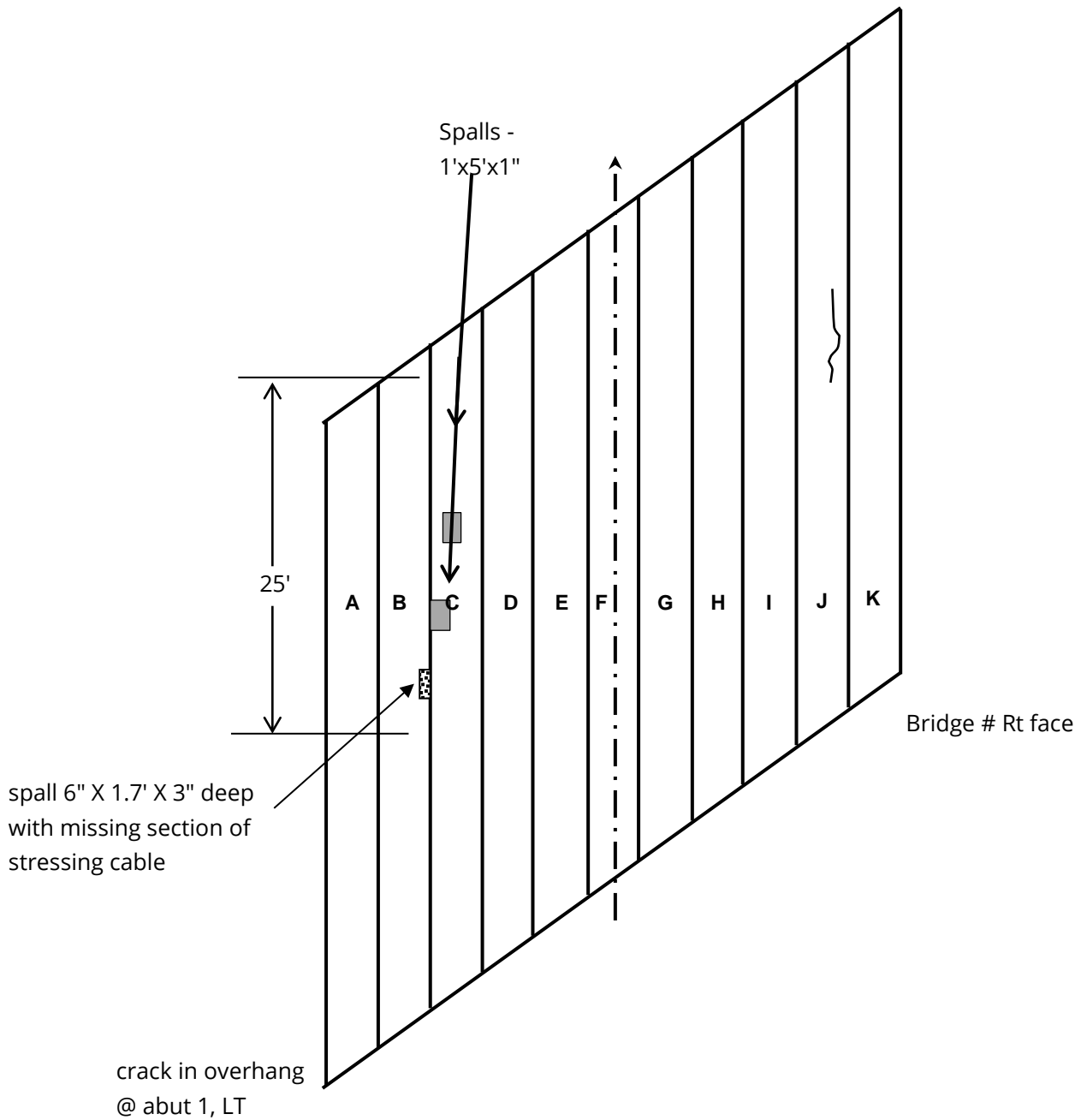
Bridge Rail: F collision spalls

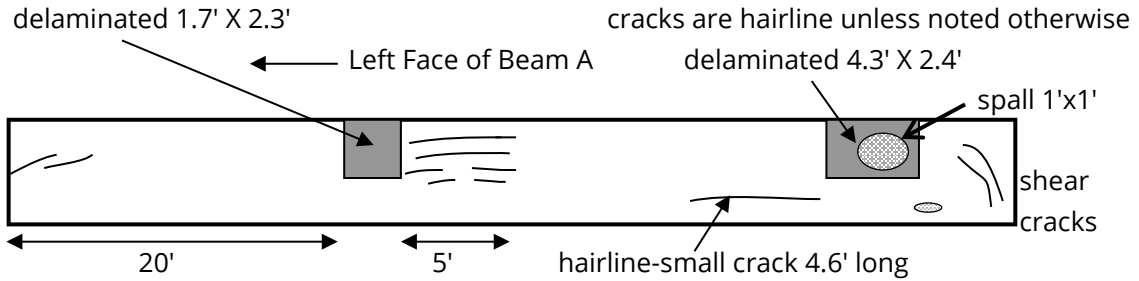


Beams: GF

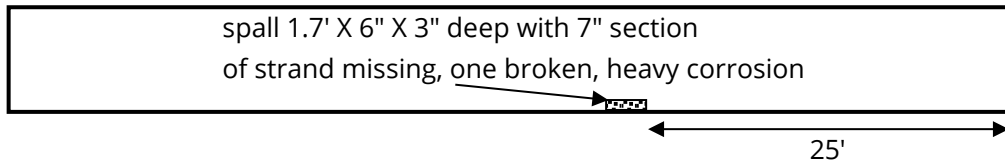
Bearings:

Eff between 'J' and 'K'

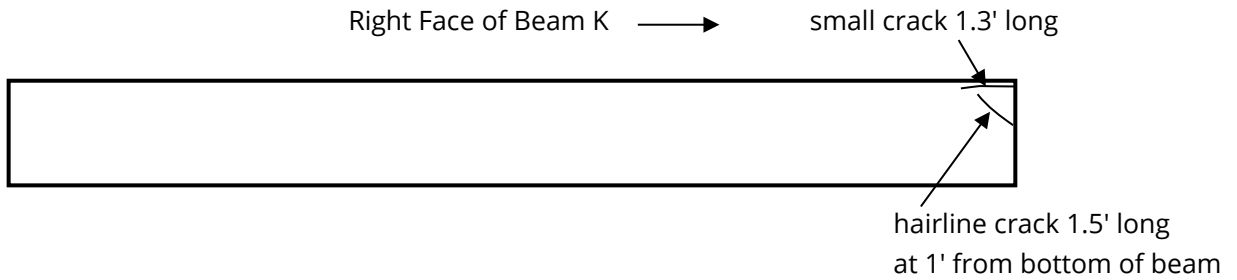




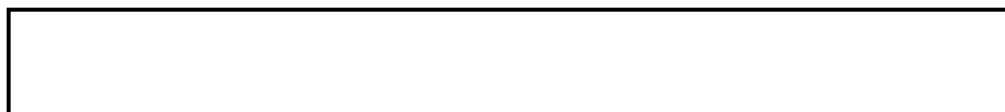
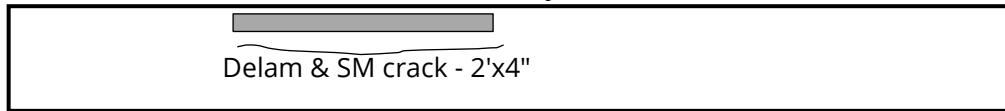
Right Face of Beam F



Right Face of Beam K



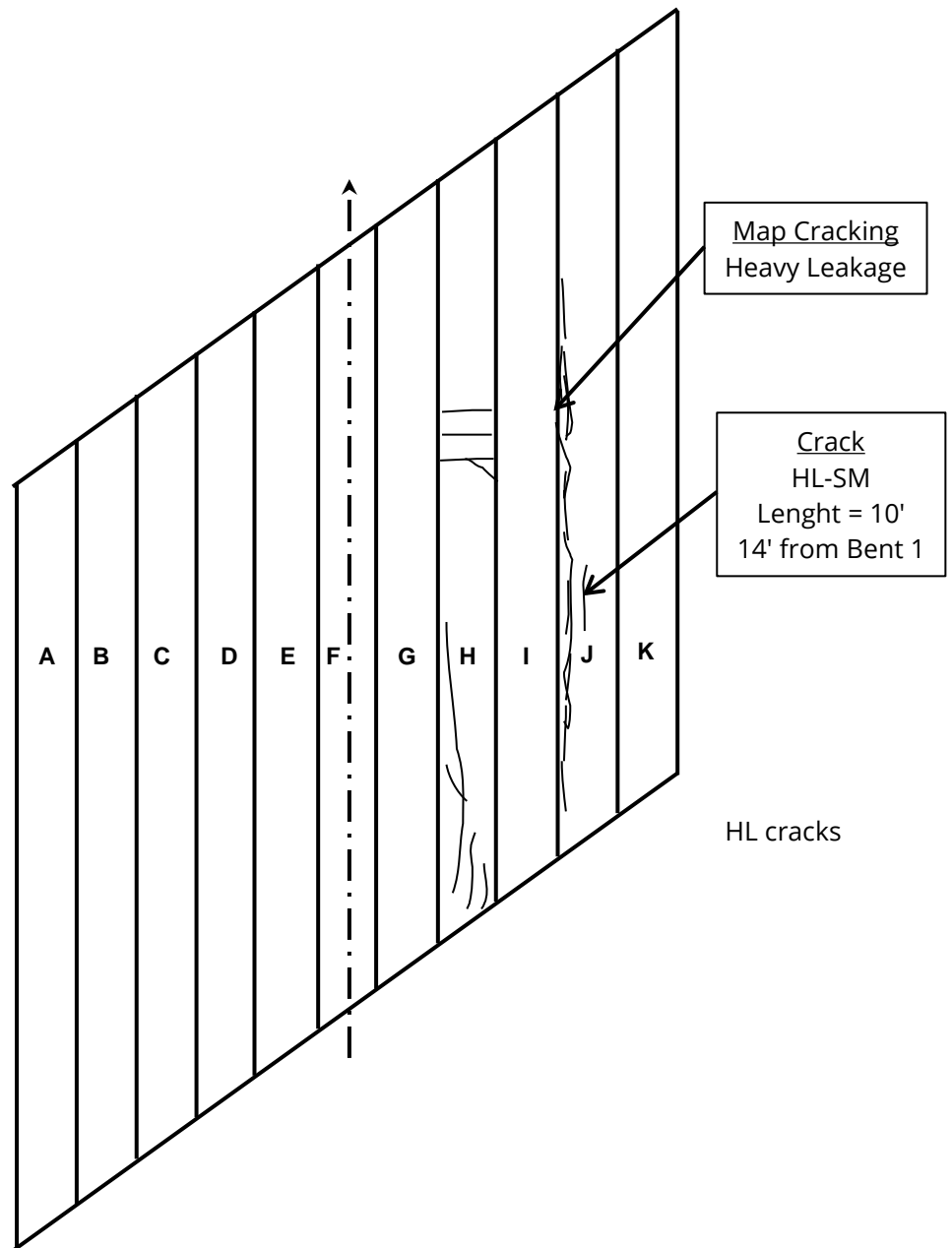
bottom face Beam 'J'



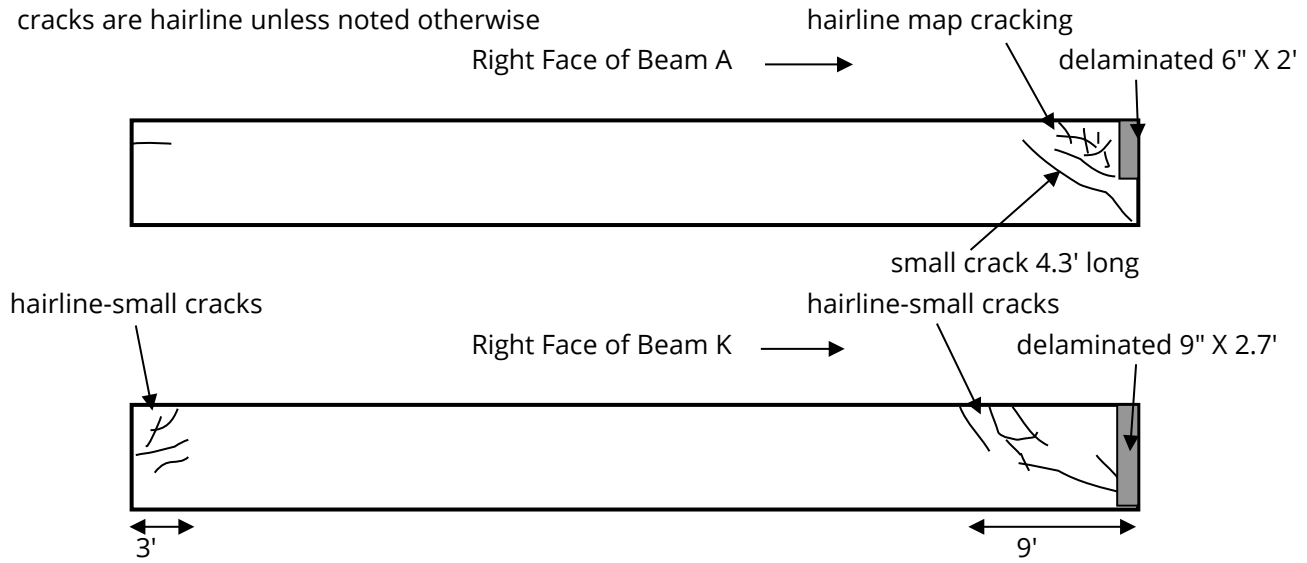


Beams: GF HL cracks

Bearings:

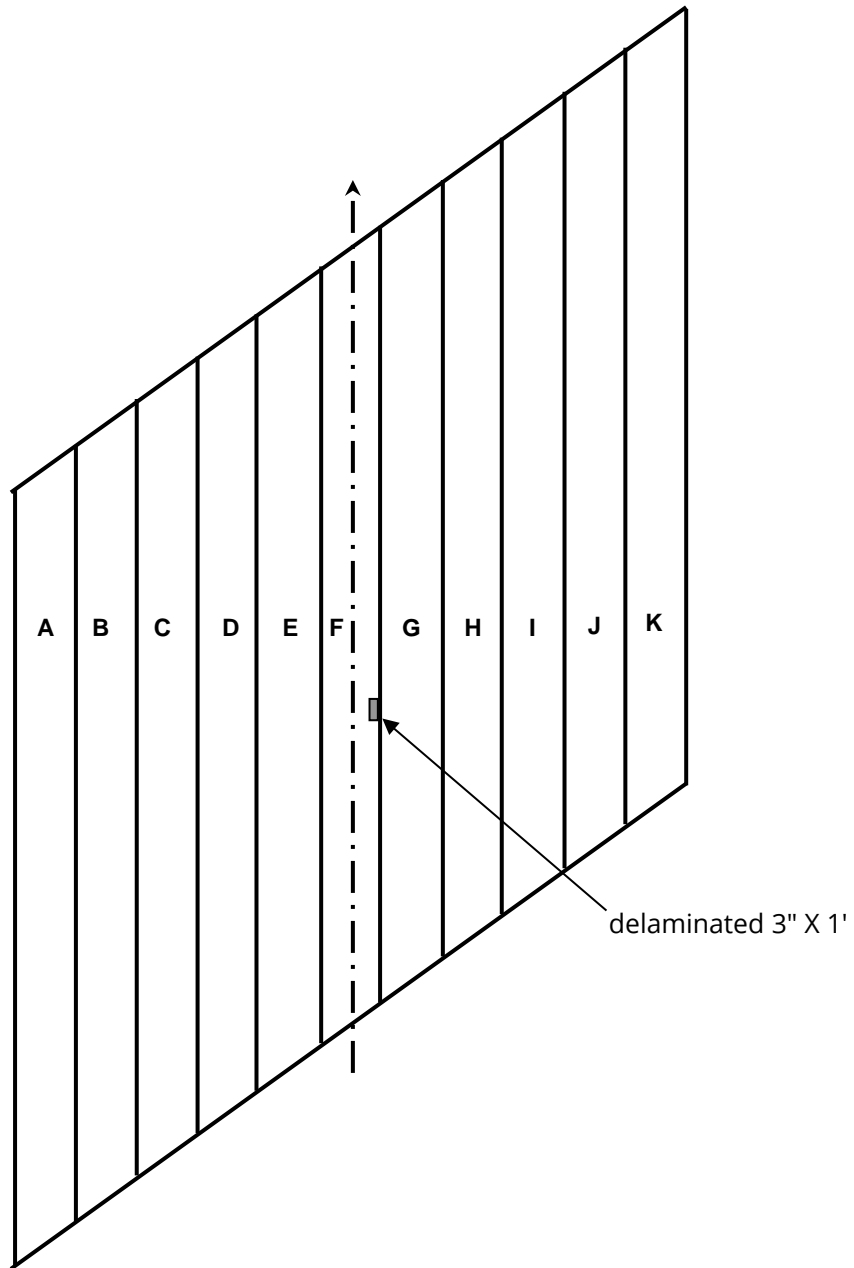


cracks are hairline unless noted otherwise



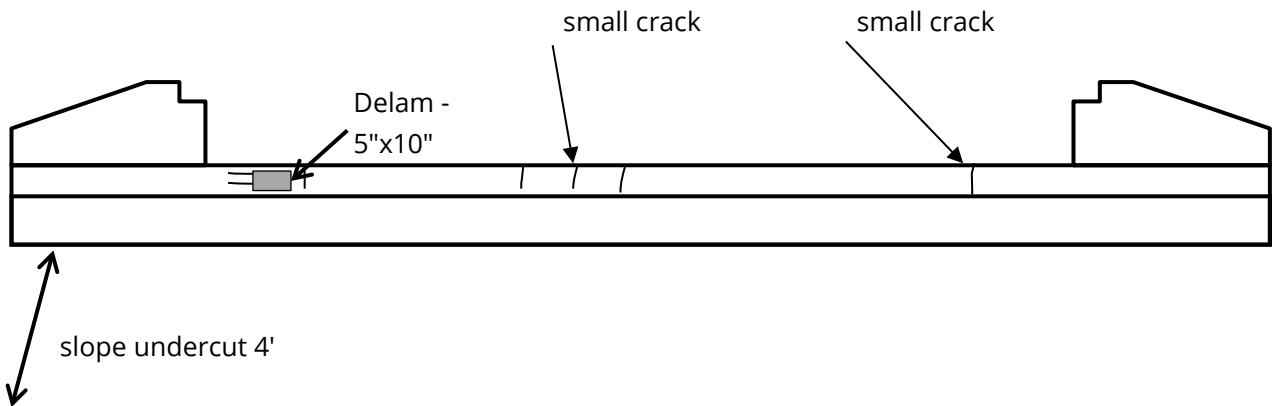
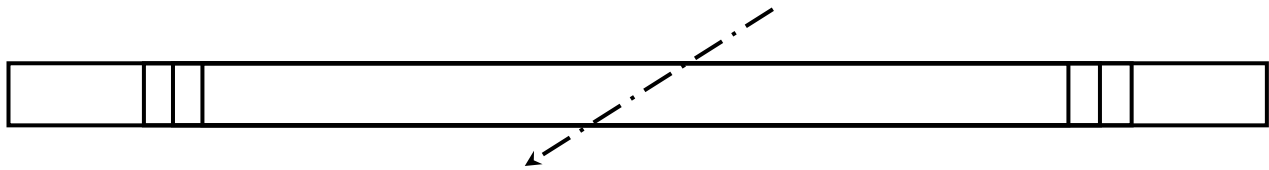
Beams: GF

Bearings:

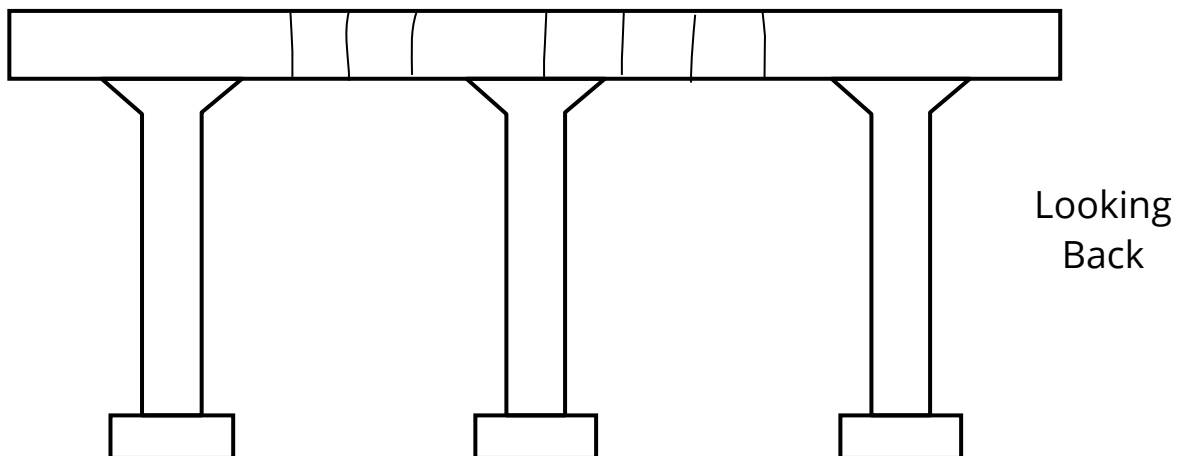
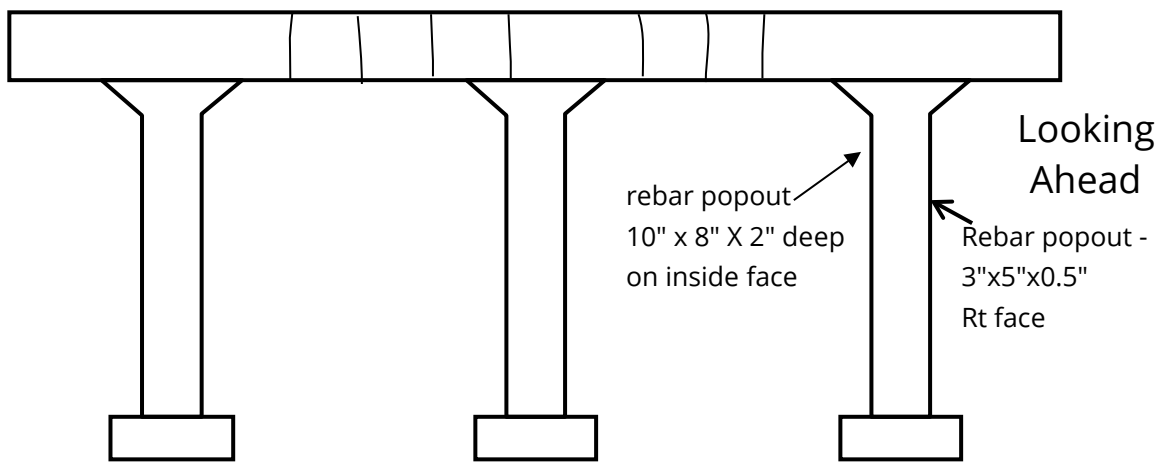


Walls: G SM cracks

Slope:

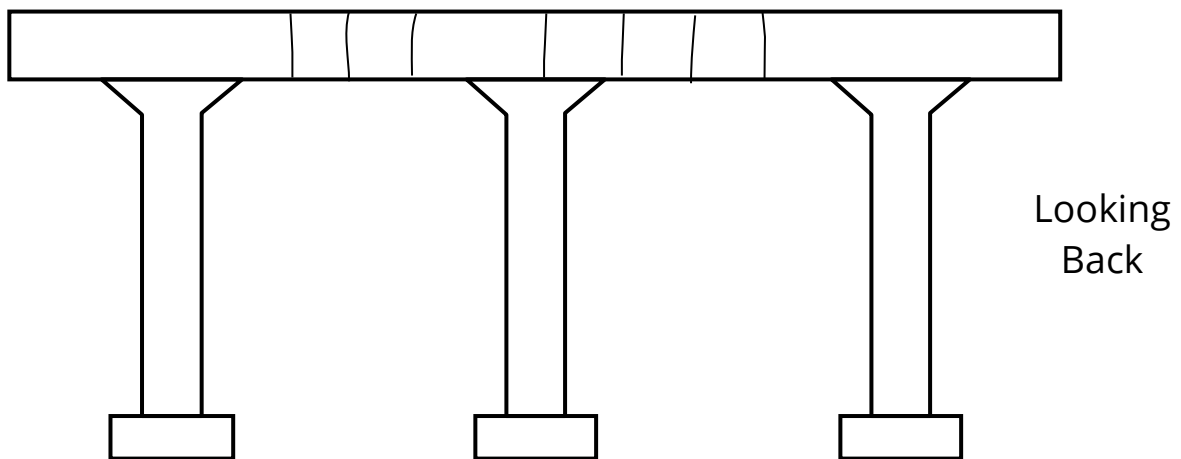
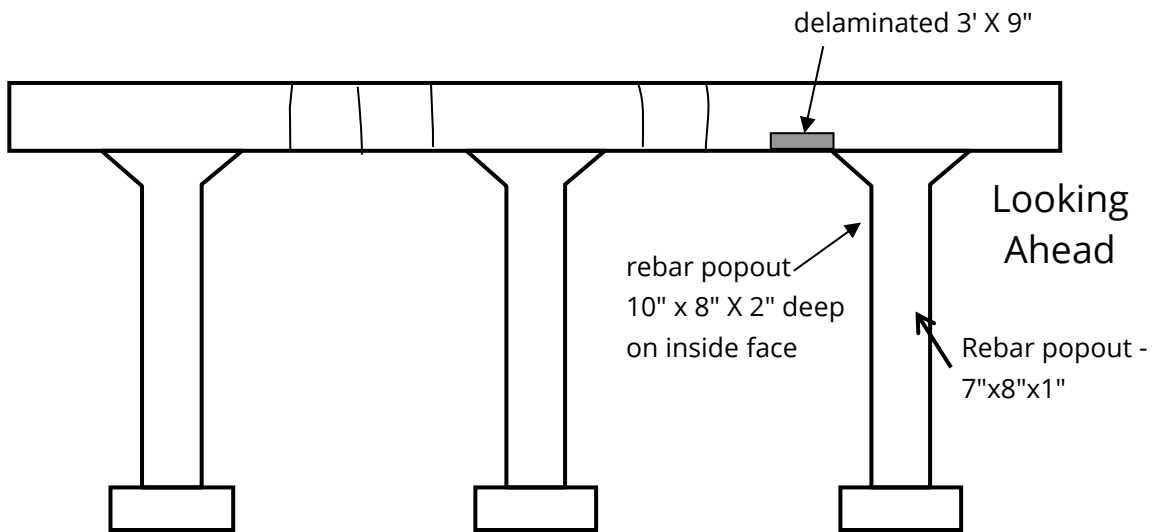


Columns: GF Heavy vegetation growth around  
base of columns  
Cap: G



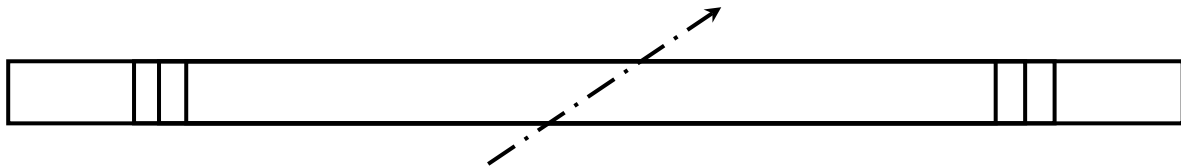
Columns: G

Cap: GF

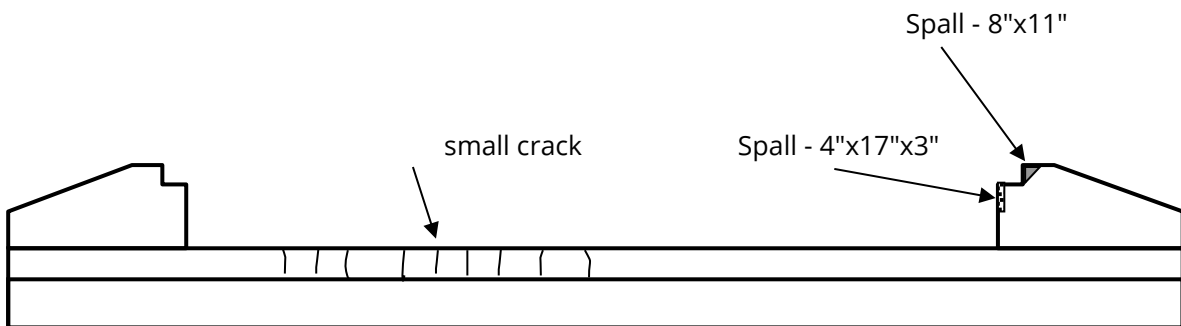


Walls: G SM cracks

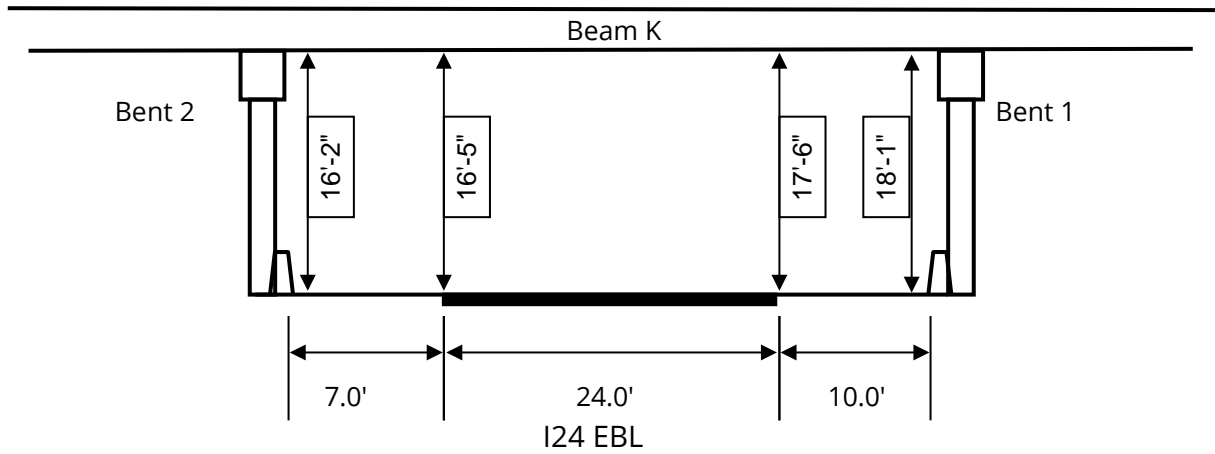
Slope:



cracks are hairline unless noted otherwise



Facility Carried: I-75 Southbound  
Inspection Route: Toward Knoxville  
Traffic: 2 Thru Lanes - Southbound



Looking Ahead on I-24 - Toward Knoxville

Underpass Facility: I-24 Eastbound  
Inspection Route: Toward Knoxville  
Traffic: 2 Thru Lanes - Eastbound



**BRIDGE MAINTENANCE RECOMMENDATIONS**



Tennessee Department  
of Transportation

COUNTY: HAMILTON

LOCATION: 33-I0024-14.52-

CO. SEQ.: 2 SPEC. CASE: 0

MILEPOST: 185.46

CROSSING: I-24 EB

FED. BRIDGE NO.: 33I00240067

MAINT. DIST.: 33

REPAIR LIST NO.: N

DATE ADDED:

REVISED: 07/30/2012

FACILITY CARRIED:	I-75 SB	NUMBER OF MAIN SPANS:	
HIGHWAY SYSTEM:	02-INTERSTATE URBAN	NUMBER OF APPROACH SPANS:	
BRIDGE WIDTH (CURB TO CURB):	N/A FT IN	BRIDGE LENGTH (FT):	169
BRIDGE WIDTH (OUT TO OUT):	N/A FT IN	MAXIMUM SPAN LENGTH (FT):	68
APPROACH ROADWAY (W/SHOULDERS):	41 FT 11 IN	SKEW ANGLE (DEGREES):	N/A
MAINTAINED BY: _____			
MAIN SPAN MATERIAL:	PRESTRESSED CONCRETE		
MAIN SPAN DESIGN TYPE:	BOX BEAM OR GIRDERS - MULTIPLE		
APPROACH SPAN MATERIAL: _____			
APPROACH SPAN DESIGN TYPE: _____			
INSPECTION DATE:	07/12/2016	GENERAL CONDITION:	GOOD
EVALUATION DATE:	08/12/2014	STRUCTURALLY DEFICIENT:	
PPRM PIN NUMBER:		SUFFICIENCY RATING:	
H TRUCK RATING @ INV.:	_____ TONS		

**GENERAL COMMENTS:**



**INSPECTION REPORT FOR UNDERPASS ROUTE**

Form BIR 3.0A  
(Rev. 9-22-98)  
DT-1443

Field Report No. 23 Date 7/12/2016  
Previous Report No. 22 Date 7/7/2014

Bridge No. 33100240067  
Eleven Digit No.

Underpass Location No. 33 - I0024 - 1452  
Co. Route Log Mile

OVERPASS or 33 - I0075 - 0138 over 33 - I0024 - 1452  
Railroad/Walkway Co. Route Log Mile Co. Route Log Mile

County \_\_\_\_\_ Structure Name (If Named) \_\_\_\_\_

Year Constructed 1959 ACTUAL

Year Widened NA NA Year Rehabilitated 1983 ACTUAL

**GEOMETRIC FEATURES UNDER BRIDGE** (\*.\* ft. unless otherwise noted)

Divided Highway NA Type of Wearing Surface ASPHALT

Width of Approach Traveled Roadway 24.0 ft. (Does Not Include Shoulders)

Width of Median if Divided Highway NA ft.

Approach Shoulder Width 10.0 ft. Right 7.0 ft. Left

\*Horizontal Clearance Under Bridge 41.0 ft.

\*Distance Between Pier Protection Guardrail and Substructure 0 ft. Right 0 ft. Left

\*Width of Sidewalk Under Bridge NA ft. Right NA ft. Left

\*Minimum Vertical Clearance: 16 ft. 2 in. (ft.-in.)

\*Show on Sketch

**TRAFFIC SAFETY FEATURES**

- Pier Protection Railing or Parapet
- Approach Guardrail Terminals
- Approach Guardrail
- Approach Guardrail Terminal

Rating	Standard/ SubStandard Non Exist
GOOD	STANDARD
GOOD	STANDARD
GOOD	STANDARD
GOOD	STANDARD

**SIGNING**

	Yes/ No/ Needed
Paddleboards	NO
Vertical Clearance (<14'-6")	NO
Narrow Passage	NO
One Lane Passage	NO
Other Underpass Signs Needed	

**TEAM LEADER**

Tays

**INSPECTORS**

Haas

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### Structure Inventory and Appraisal Sheet (English Units)

ELEMENT CONDITION STATE DATA												
Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4
0	12/1	Re Concrete Deck	sq.ft	6,105	100%	6,105	0%	0	0%	0	0%	0
0	510/1	Wearing Surfaces	sq.ft	5,775	100%	5,775	0%	0	0%	0	0%	0
0	104/1	Pre Clsd Box Girder	ft	1,815	100%	1,815	0%	0	0%	0	0%	0
0	205/1	Re Conc Column	each	6	100%	6	0%	0	0%	0	0%	0
0	215/1	Re Conc Abutment	ft	176	100%	176	0%	0	0%	0	0%	0
0	310/1	Elastomeric Bearing	each	66	100%	66	0%	0	0%	0	0%	0
0	331/1	Re Conc Bridge Railing	ft	330	100%	330	0%	0	0%	0	0%	0