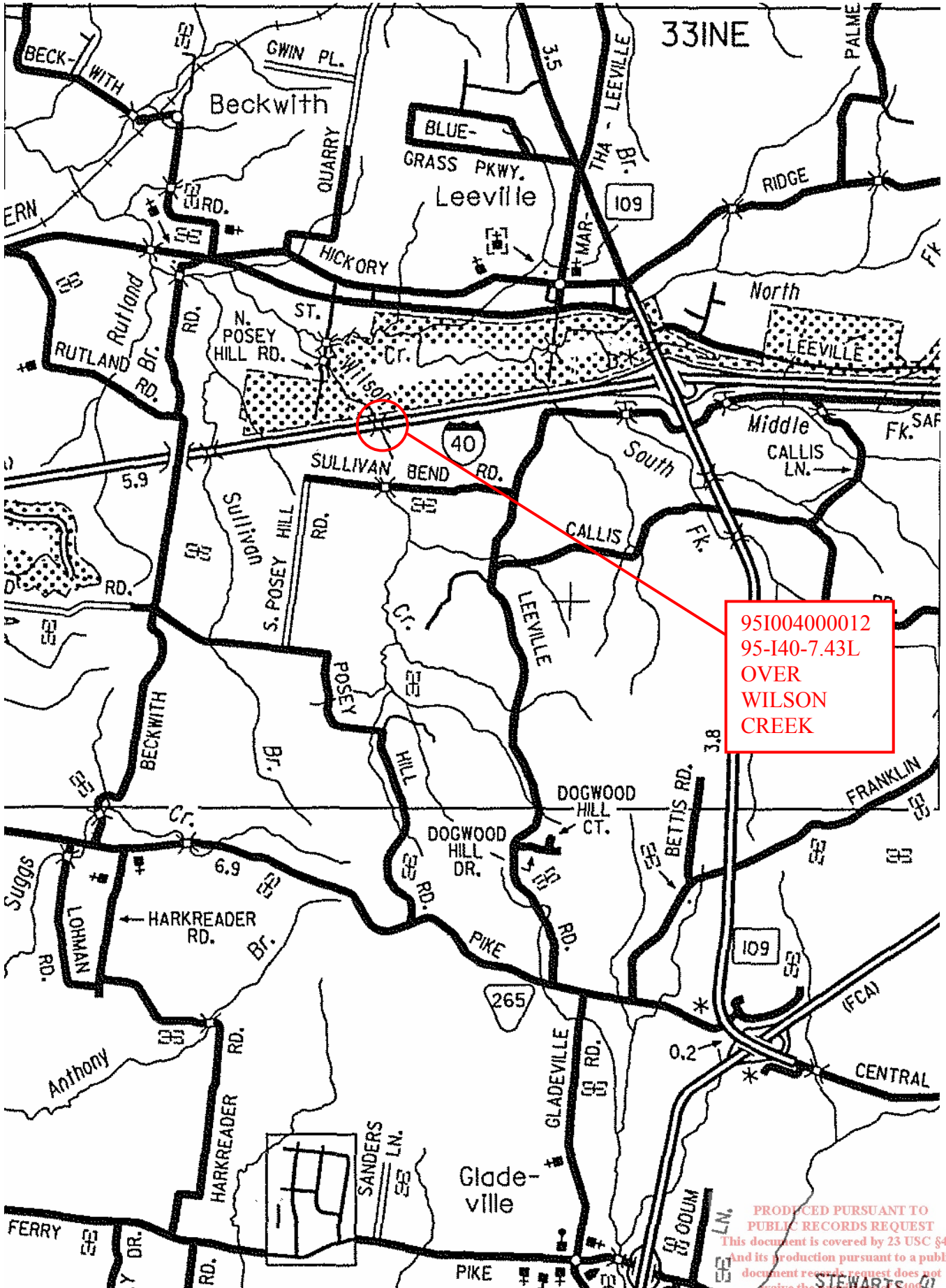


WILSON COUNTY



951004000012
95-I40-7.43L
OVER
WILSON
CREEK

BRIDGE MAINTENANCE RECOMMENDATIONS



Tennessee Department of Transportation

COUNTY: WILSON
LOCATION: 95-I0040-07.43-L
CO. SEQ.: 1 SPEC. CASE: 0
MILEPOST: 230.13

CROSSING: WILSON CREEK
FED. BRIDGE NO.: 95I00400012
MAINT. DIST.: 95

REPAIR LIST NO.: N
DATE ADDED:
REVISED: 02/26/2010

FACILITY CARRIED:	I40	NUMBER OF MAIN SPANS:	3
HIGHWAY SYSTEM:	02-INTERSTATE URBAN	NUMBER OF APPROACH SPANS:	0
BRIDGE WIDTH (CURB TO CURB):	41 FT 11 IN	BRIDGE LENGTH (FT):	155
BRIDGE WIDTH (OUT TO OUT):	43 FT 11 IN	MAXIMUM SPAN LENGTH (FT):	52
APPROACH ROADWAY (W/SHOULDERS):	36 FT 1 IN	SKEW ANGLE (DEGREES):	90
MAINTAINED BY:	STATE HIGHWAY AGENCY		
MAIN SPAN MATERIAL:	PRESTRESSED CONCRETE CONTINUOUS		
MAIN SPAN DESIGN TYPE:	STRINGER/MULTI-BEAM OR GIRDER		
APPROACH SPAN MATERIAL:	OTHER OR NOT APPLICABLE		
APPROACH SPAN DESIGN TYPE:	OTHER OR NOT APPLICABLE		
INSPECTION DATE:	02/26/2010	GENERAL CONDITION:	GOOD
EVALUATION DATE:	03/07/2008	STRUCTURALLY DEFICIENT:	NO
PPRM PIN NUMBER:		SUFFICIENCY RATING:	91.3
H TRUCK RATING @ INV.:	20 TONS		

SUGGESTED ROUTINE MAINTENANCE AND COMMENTS
REPAIR BENT CAP ON BENT #1
REPAIR APPROACH ASPHALT

GENERAL COMMENTS:
CLEAN DECK 04/19/2007

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 03/02/2010

Bridge Number: 95I004000121
 (Includes Item 5A)

Feature Intersected: WILSON CREEK

Evaluation Status: OTHER ITEM(S) HAVE BEEN CHANGED

County: 95

Route: I0040

Special Case: 0

County Sequence: 1

Log Mile: 7.43

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE	CONDITION CODING GUIDELINES
90	LAST INSPECTION DATE	02/26/2010	(Values for Coding Items 58, 59, 60 and 62)
	EARLIEST DATE OF NEXT REGULAR INSPECTION	12/28/2011	
		<u> </u> / <u> </u> / <u> </u>	
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN.	N NOT APPLICABLE
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN.	9 EXCELLENT CONDITION
36	TRAFFIC SAFETY FEATURES		8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
	Br. Rail Trans. Appr. Rail Terminal SPEED LIMIT	1 1 1 1 70	7 GOOD CONDITION - SOME MINOR PROBLEMS.
41	STRC OPEN/CLOSED/POSTED	A	6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
	A K P		5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.
58	DECK	9	4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.
59	SUPERSTRUCTURE	8	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.
60	SUBSTRUCTURE	6	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.
61	CHANL/CHANL PROTECTION	7	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.
62	CULVERT AND RETAIN WALL	N	0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.
71	WATERWAY ADEQUACY	7	
72	APPROACH RDWY ALIGNMENT	8	
521	OVERALL CONDITION	GOOD	
16	LATITUDE	17 LONGITUDE	
	N 36° 10.8670'	W 86° 26.1930'	
	<u> </u> <u> </u>	<u> </u> <u> </u>	
		<u> </u> / <u> </u> / <u> </u>	

TEAM LEADER SIGNATURE

REVIEW DATE

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Photographs

Bridge ID#: 95-140-7.43L

Date: 02/26/2010



INLET ELEVATION



UPSTREAM

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Photographs

Bridge ID#: 95-140-7.43L

Date: 02/26/2010



DOWNSTREAM



SPALL W/EXP REBAR @ BOTTOM OF CAP R.S. BENT-1

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Photographs

Bridge ID#: 95-140-7.43L

Date: 02/26/2010



BENT TYPICAL



BOTTOM DECK VIEW TYPICAL

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Photographs

Bridge ID#: 95-140-7.43L

Date: 02/26/2010



ABUTMENT TYPICAL



BRIDGE NO.

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Bridge ID#: 95-140-7.43L

Date: 02/26/2010



VIEW ACROSS DECK



A-APPROACH

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Photographs

Bridge ID#: 95-140-7.43L

Date: 02/26/2010



B-APPROACH



POTHOLES @ B-APPROACH JOINT

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BRIDGE INSPECTION REPORT

Page No. _____

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

Field Report No. 19 Date 2/26/2010
Previous Report No. 18 Date 2/21/2008
Plans: YES

Bridge No. 95I00400012
Eleven Digit No.

Bridge Location No. 95 - I0040 - 7.43 L
Co. Route Log Mile

I-40 over WILSON CREEK *
Road Name Crossing Structure Name (If Named)
Year Constructed 1962 County Wilson Maintenance District 32
Year Widened _____ Year Rehabilitated 1990 ACT

FEATURES

Wearing Surface ASPHALT Depth 2 (in.)
Flared Width _____ Median Width NONE
Navigational Control _____ Bridge Skew 90°
Structure Type (Main Span) PPCIB
Structure Type (Appr.Spans) _____
No. Main Spans 3 No. Approach Spans _____
Maximum Span Length 51 (**.* ft.)
Total Length 154.6 (**.* ft.)

INSPECTORS

1. HUNTER
2. CRUTCHER
3. DANIEL
4. HALLIBURTON
5. WHEELEY
6. WALLER
7. _____
8. _____

WIDTHS (*.* ft.)

Deck Out-to-Out 43
Roadway Curb/Curb 40
Roadway Rail/Rail 40
Sidewalk Rt. _____ Lt. _____
*Approach Roadway 24
*(Does Not Include Shoulders)
Approach Shoulder Rt. 12'
Lt. 4'

CLEARANCES

Min. Vertical Clearance over Deck _____ (ft.-in.)
Min. Vertical Under Clearance _____ (ft.-in.)
Min. Lateral Under Clearance Rt. _____ (*.* ft.)
Min. Lateral Under Clearance Lt. _____ (*.* ft.)

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

NBIS Bridge Length (<25 ft.) _____ >25 _____ (ft.-in.)

UNDERWATER INSPECTION

To Be Performed By: NONE REQUIRED Date _____

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

COMMENTS:

Supervising Bridge Inspector: WAYNE HUNTER

BRIDGE RATING: GOOD

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PERFORMANCE EVALUATION

Time of Day Inspected 11 A.M. Weather Conditions CLOUDY 40 DEGREES
 Vehicles Observed ALL TYPES

LIVE LOAD BEHAVIOR

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

APPROACH

	Rating	Comments
Alignment	GOOD	
Slab	NA	
Joints	NONE	
Pavement	GOOD	NEW ASPHALT OVERLAY
Embankment	GOOD	
Drains	GOOD	

TRAFFIC SAFETY FEATURES

	Rating	Standard/ SubStandard	Comments
Bridgerailing	GOOD	STANDARD	
Transitions	GOOD	STANDARD	
Guardrail	GOOD	STANDARD	
Guardrail Terminal	GOOD	STANDARD	

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	GOOD	
Curbs	NONE	
Median	NONE	
Sidewalks	NONE	
Parapet	GOOD	
Railing	NONE	
Paint	NONE	
Drains	GOOD	
Lighting Standards	NONE	
Utilities	NONE	
Joint Leakage	NONE	
Expansion Joints	NONE	

SUPERSTRUCTURE

Bearing Devices	GOOD	
Girders or Beams	GOOD	
Floor Beams	NONE	
Stringers	NONE	
Diaphragms	GOOD	
Bracing	NONE	
Trusses - General	NONE	
Portals	NONE	
Bracing	NONE	
Paint	NONE	
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	
Breastwall	NONE	
Wings	GOOD	
Backwall	GOOD	
Plumb	GOOD	
Footing	GOOD	
Piles	NV	
Embankment	GOOD	
Bearing Surface	GOOD	
Slope Paving	NONE	
Rip Rap	GOOD	

PIERS

Caps	NA	
Columns	NA	
Plumb	NA	
Footings	NA	
Piles	NA	
Bearing Surface	NA	

BENTS

Caps	FAIR	LARGE SPALLS ON BENT CAP (BENT #1)
Columns	GOOD	
Plumb	GOOD	
Footings	GOOD	
Piles	NA	
Bearing Surface	GOOD	

Piles Need Replacement: NO

Piles To Be Replaced:

STREAM CHANNEL DATA AND CONDITIONS

Stream Crossing: WILSON CREEK *

- I. 1. Type of bed material? BEDROCK
- 2. Has channel shifted? NO (Yes/ No/ Not Apparent)
- 3. Condition of rip-rap? NA Est. % failed %
- 4. Overall condition of channel? GOOD
- 5. Item 61 - Code values 0 thru 9 according to the recording and coding guide currently in effect: 7
- 6. Underwater diver inspection recommended? NO
If yes, why? _____

- II. Channel and bank stability conditions: (yes if applicable)
 - 1. Steep bank conditions: Failures upstream Failures downstream
 - 2. Moderate bank erosion
 - 3. Bank vegetation: a. low growth b. large timber YES c. clear banks
d. dead trees upstream NO e. dead trees downstream
 - 4. Sediment or gravel accumulation: NO (Yes/ No/ Unknown)
 - 5. Channel altered or straightened: NO (Yes/ No/ Unknown)
 - 6. Stable conditions: a. live growth YES b. bedrock YES
c. boulders d. flat slopes (<=2:1)

- III. Waterway adequacy and debris characteristics: (yes if applicable)
 - 1. Bridge deck elevations:
 - a. level with approach roadway. YES
 - b. higher than approach roadway.
 - c. roadway approach >= 2 ft. above natural ground line. . YES
 - 2. Abutment encroaches into channel.
 - 3. Large scour (blowhole) under bridge.
 - 4. Indications that flood waters overtop bridge: NO (Yes/No)
If YES, Answer: Occasionally, Frequently, or Unknown _____
 - 5. Debris characteristics:
 - a. debris/drift present NO
 - b. debris/drift likely to accumulate NO
 - c. dead trees upstream NO dead trees downstream

IV. Comments:

SPECIAL INSPECTION DATA - FOR REASONS OTHER THAN FC OR SCOUR

- I. Does this bridge need a special inspection? NO
- II. Reason for special inspection:

SUMMARY
95-I40-7.43 LT
2/26/2010

I40/Wilson Cr
3 Span/P.P.C. I-Beam

This bridge was inspected and found to be in **good** condition. The approach pavement is in good condition. The embankment and approach drains are good. All traffic safety features are in place and are standard type. There are paddleboard decals on the approach rail terminals.

The concrete wearing surface is good along with joint leakage. The superstructure elements and substructure units are in good condition. The caps are rated fair due to large spalls on bent cap #1. The channel appears adequate, and there was no scour detected at time of inspection.

Gilbert Wayne Hunter

Stream Profile

Date 2/26/2010

Bridge Location No. 95 I40 7.43 LT
County Route Logmile

Elevations:

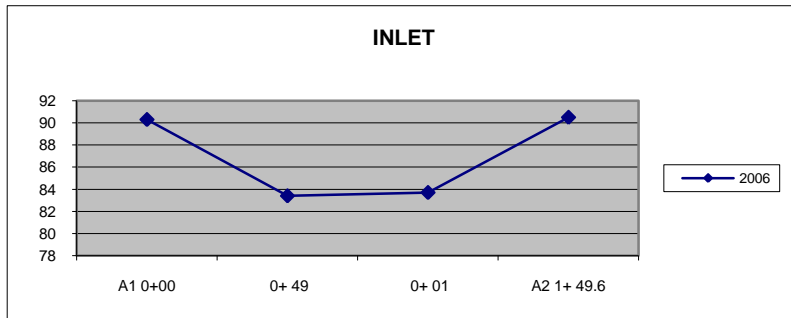
Benchmark Location: TOP OF BRIDGERAIL

Assumed elevation 100 FT

Station Elevation in:
2006

A1 0+00
0+ 49
0+ 01
A2 1+ 49.6

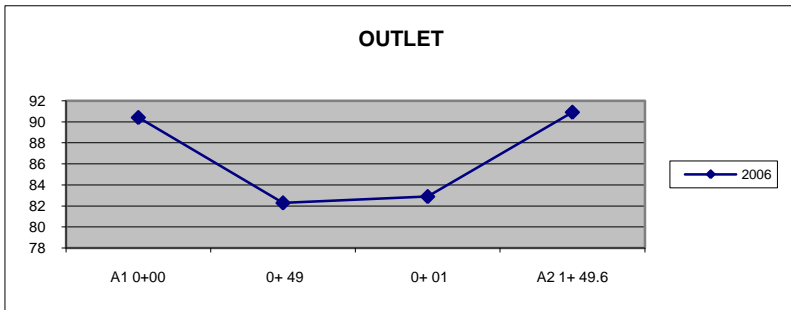
90.3
83.4
83.7
90.5



Station Elevation in:
2006

A1 0+00
0+ 49
0+ 01
A2 1+ 49.6

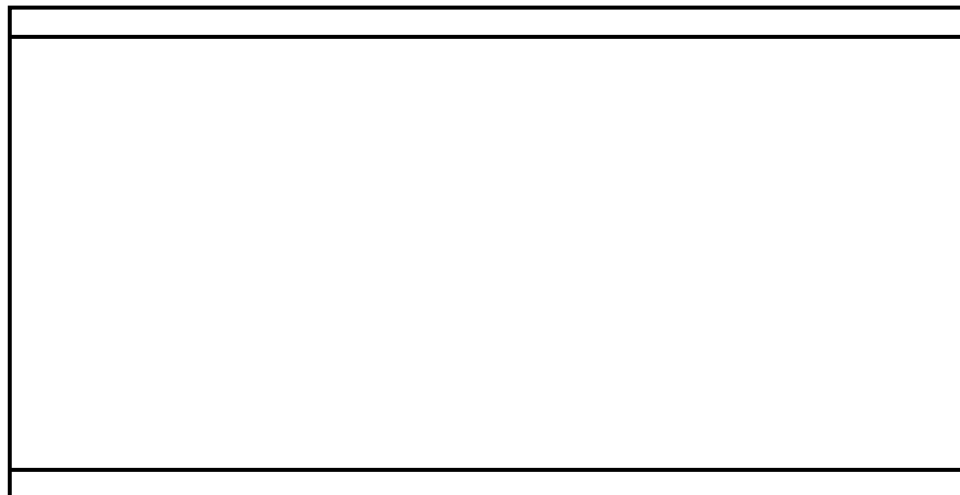
90.4
82.3
82.9
90.9



Top of Deck Span No. 1

Date 2/26/2010

Bridge Location No. 95 I40 7.43 LT
 County Route Log Mile

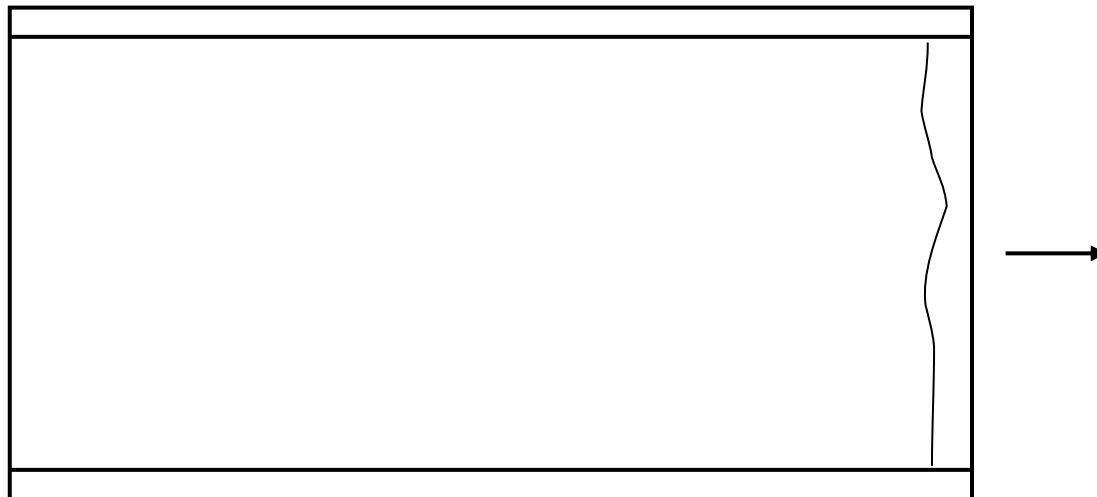


DECK	NV	ASPHALT OVERLAY
PARAPET	GOOD	
DRAINS	GOOD	

Top of Deck Span No. 2

Date 2/26/2010

Bridge Location No. 95 140 7.43 LT
 County Route Log Mile

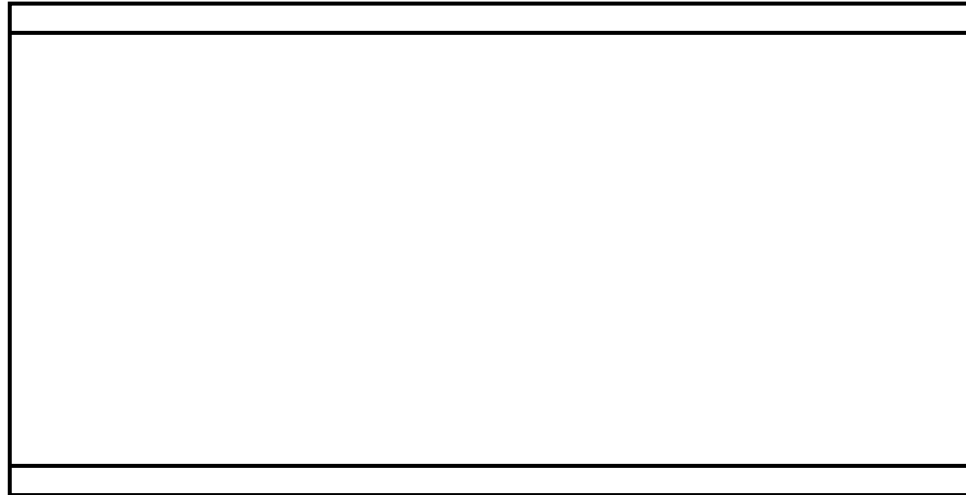


DECK	NV	ASPHALT OVERLAY
PARAPET	GOOD	
DRAINS	GOOD	

Top of Deck Span No. 3

Date 2/26/2010

Bridge Location No. 95 140 7.43 LT
 County Route Log Mile

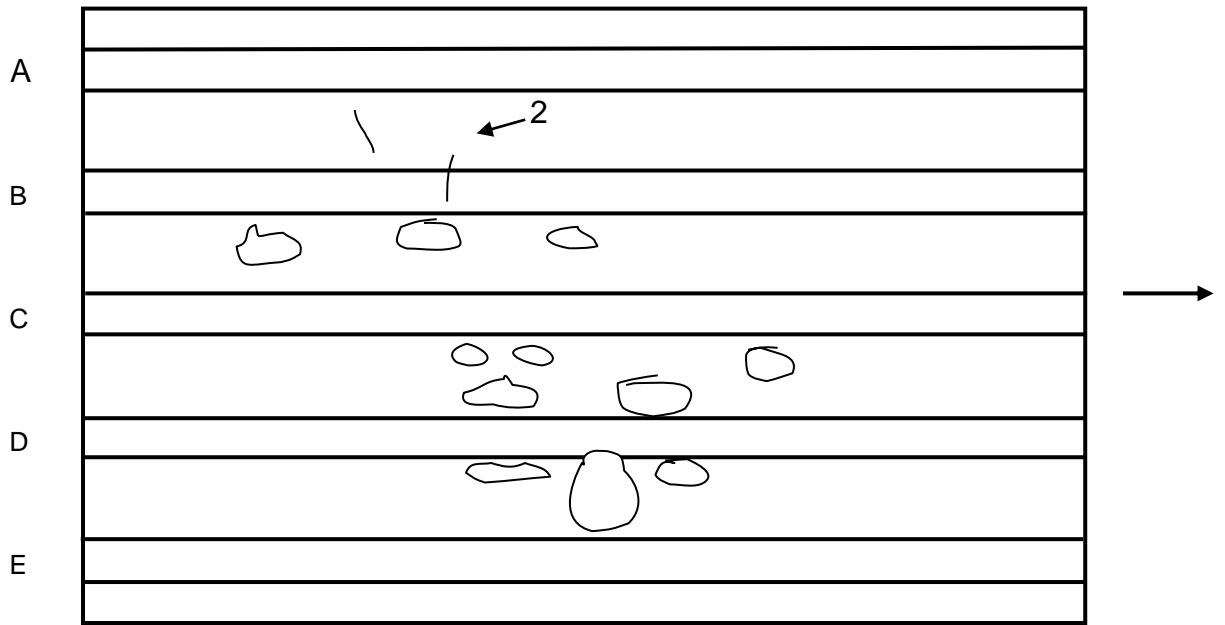


DECK	NV	ASPHALT OVERLAY
PARAPET	GOOD	
DRAINS	GOOD	

Bottom of Slab Span No. 1

Date 2/26/2010

Bridge Location No. 95 140 7.43 LT
 County Route Log Mile

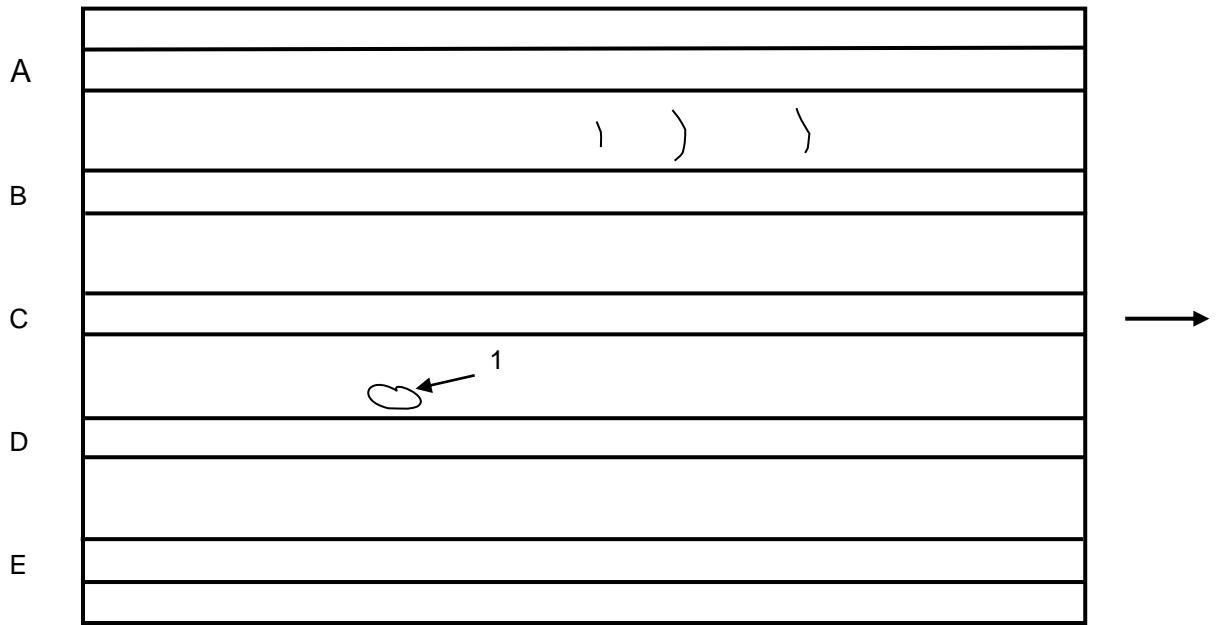


DECK	GOOD	PATCHED AREAS
		2) HAIR CRACK WITH LEACH
DIAPHRAGMS	GOOD	
BEAMS	GOOD	

Bottom of Slab Span No. 2

Date 2/26/2010

Bridge Location No. 95 140 7.43 LT
 County Route Log Mile

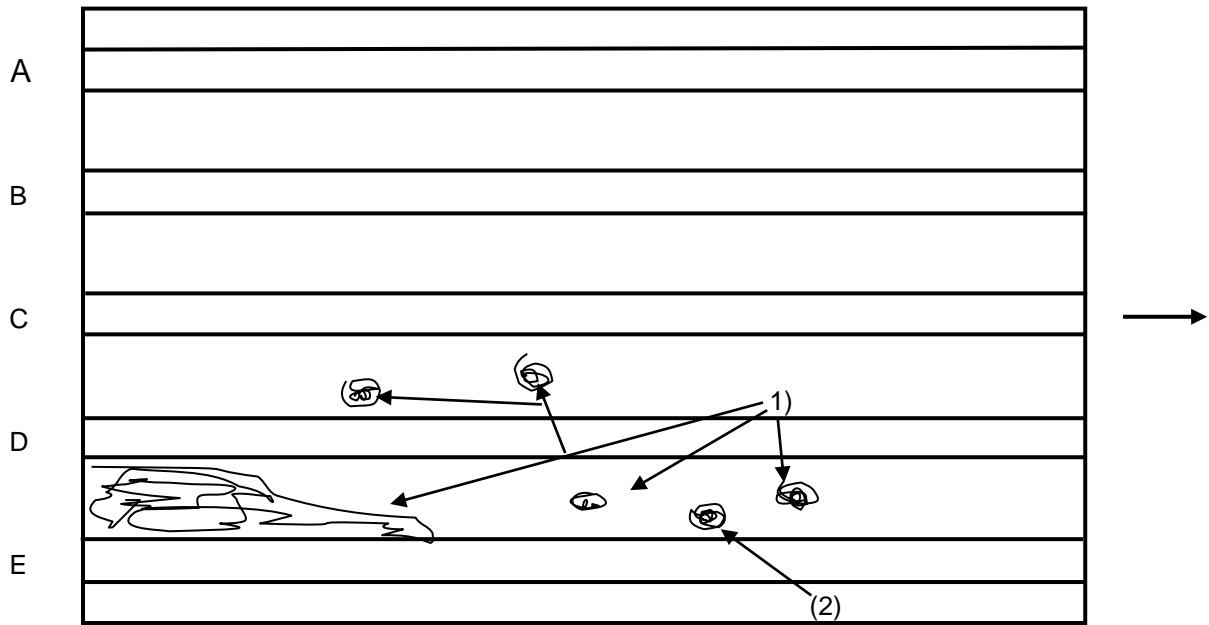


DECK	GOOD	PATCHED AREAS
		1) SPALL 1" DEEP 2' X 1'
DIAPHRAGMS	GOOD	
BEAMS	GOOD	

Bottom of Slab Span No. 3

Date 2/26/2010

Bridge Location No. 95 140 7.43 LT
 County Route Log Mile

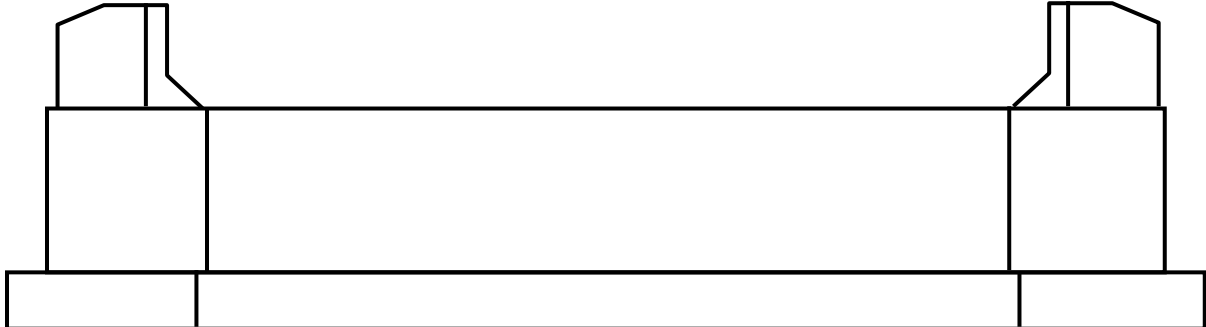


DECK	GOOD	(1) PATCHED AREA
		(2) SPALLED 1" DEEP 1' X 8"
DIAPHRAGMS	GOOD	
BEAMS	GOOD	

Abutment No. 1

Date 2/26/2010

Bridge Location No. 95 140 7.43 LT
 County Route Log Mile

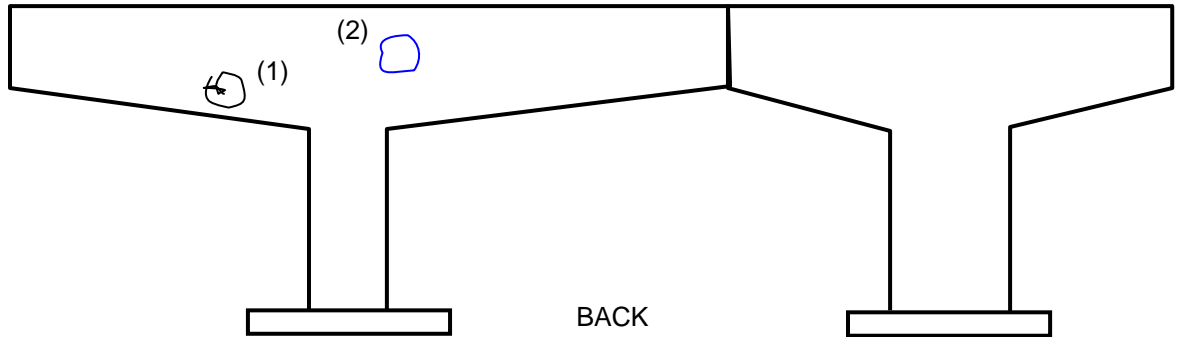
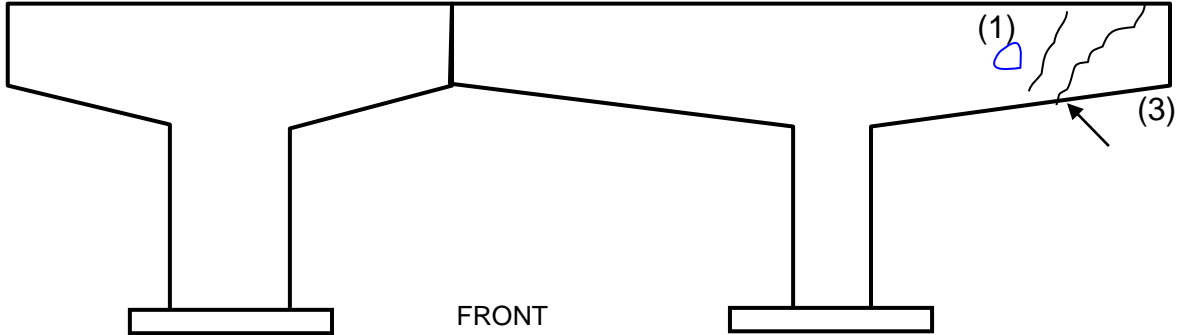


BACKWALL	GOOD	
CAP	GOOD	
WINGS	GOOD	
BEARINGS	GOOD	

BENT # 1

Date 2/26/2010

Bridge Location No. 95 140 7.43 LT
 County Route Log Mile

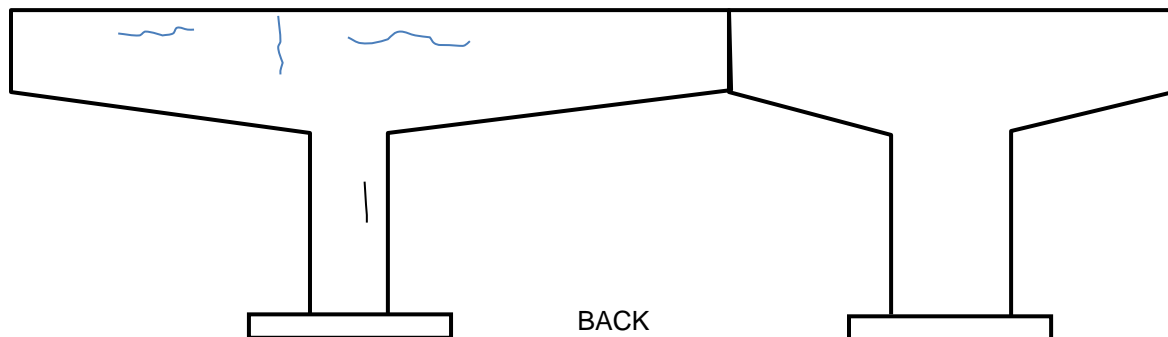
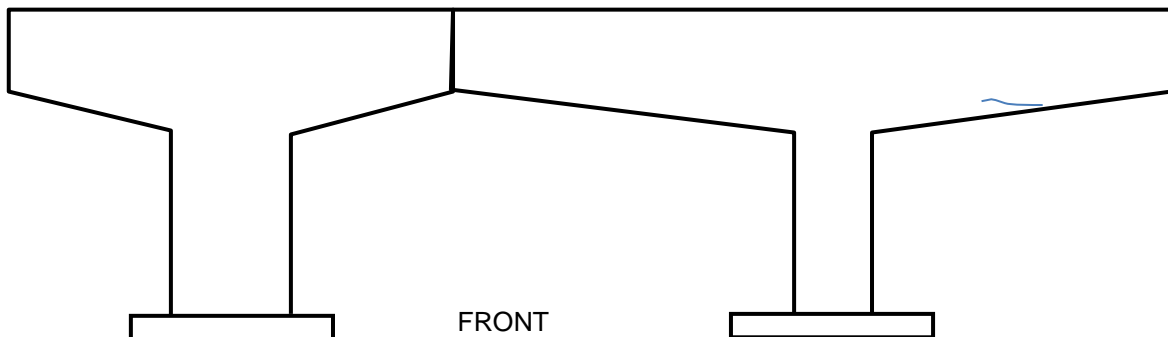


CAP	FAIR	(1) AREA OF DELAM WITH REBAR 1'H X 6"W X 1" DEEP
		(3) B.O. 3' L X WIDTH OF CAP UP TO 6" DEEP W/EXP REBAR
COLUMN	GOOD	
FOOTING	NV	
BEARING	GOOD	

BENT # 2

Date 2/26/2010

Bridge Location No. 95 140 7.43 LT
 County Route Log Mile

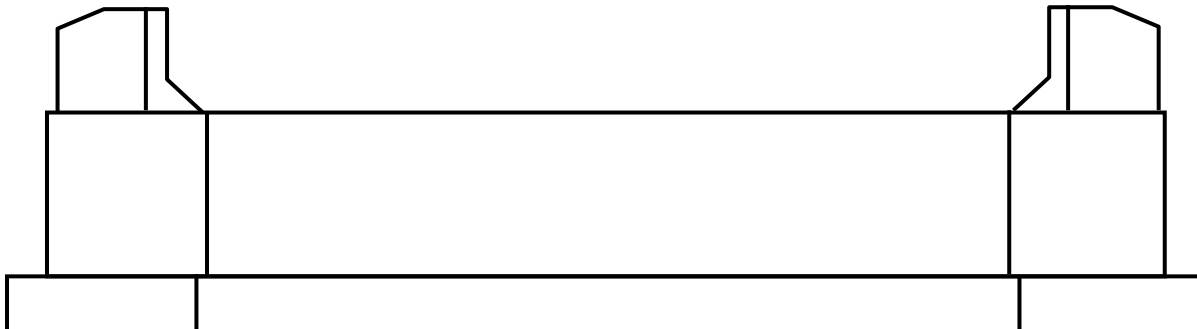


CAP	GOOD	RANDOM 1/8" OPEN CRACKS
COLUMN	GOOD	RANDOM 1/8" OPEN CRACKS
FOOTING	NV	
BEARING	GOOD	

Abutment No. 2

Date 2/26/2010

Bridge Location No. 95 140 7.43 LT
County Route Log Mile



BACKWALL	GOOD	
CAP	GOOD	
WINGS	GOOD	
BEARINGS	GOOD	