



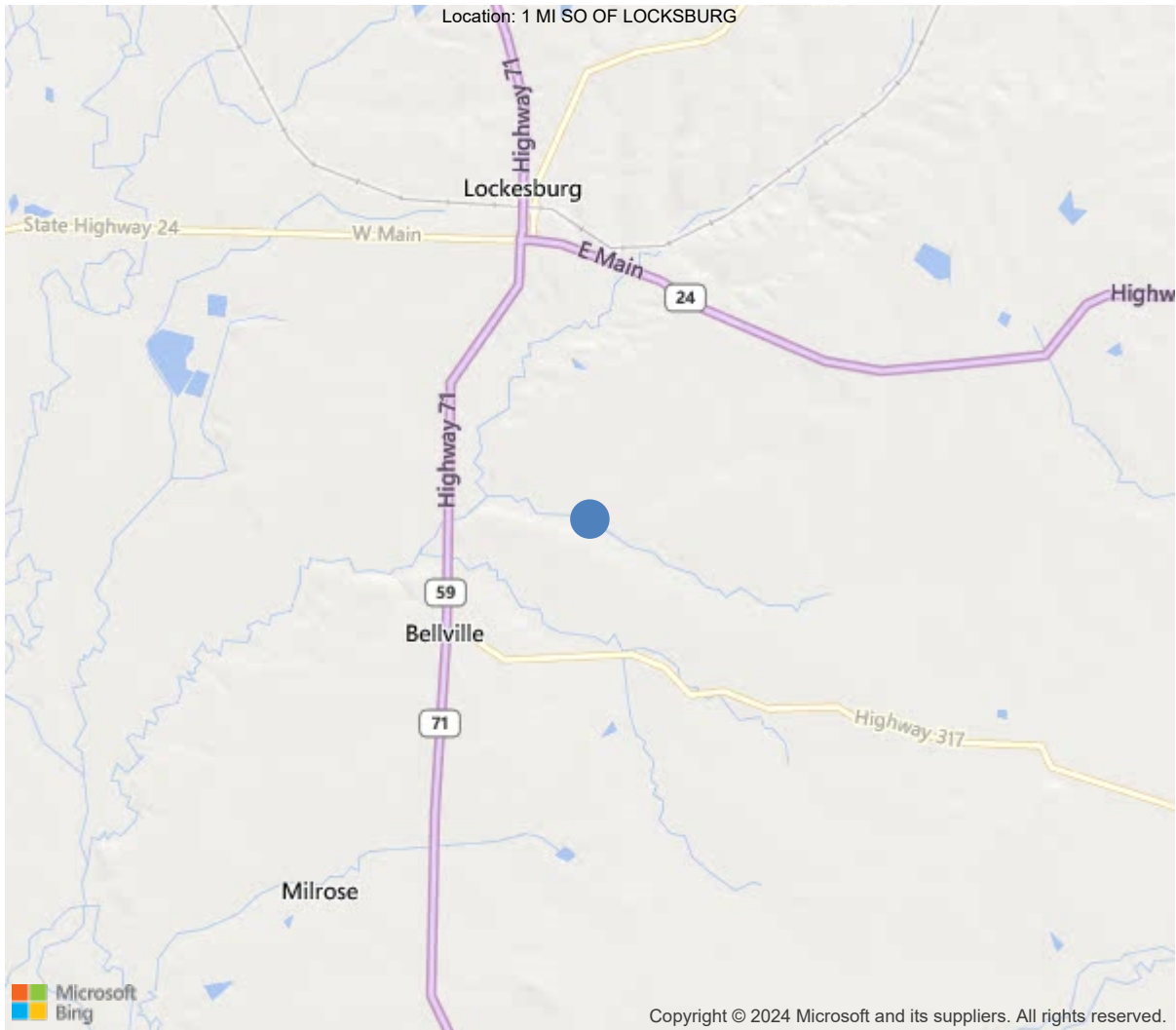
Latitude:33.94693, Longitude:-94.16226

Route:304 Section:00 Log:1.43

Arnold Road ID:66xEMAGNOLIAx0xA, Arnold Log mile:1.396

District 03, 133 - Sevier County

Owner: 2 - County Highway Agency



33.94693, -94.16226



Asset #20440(Routine, NSTM)

CR 304 E MAGNOLIA over BRANCH OF BELLVILLE CR

Location: 1 MI SO OF LOCKSBURG

Team Lead: Jared Kegley, Inspection Date: 06/26/2023

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	20440
(5) Inventory Route	1
(2) Highway Agency District	03 - District 03
(3) County Code	133 - Sevier County
(4) Place Code	0
(6) Features Intersected	BRANCH OF BELLVILLE CR
(7) Facility Carried	CR 304 E MAGNOLIA
(9) Location	1 MI SO OF LOCKSBURG
(11) Mile Point	1.43 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	33.94693
(17) Longitude	-94.16226
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	30
Material	3 - Steel
Type	0 - Other
(44) Approach Structure Type	00
Material	0 - Other
Type	0 - Other
(45) No. of Spans in Main Unit	1
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	6 - Bituminous
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1985
(106) Year Reconstructed	0
(42) Type of Service	15
On	1 - Highway
Under	5 - Waterway
(28) Lane	
On	2
Under	0
(29) Average Daily Traffic	100
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	3 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	39 ft
(49) Structure Length	42 ft
(50) Curb or Sidewalk Width	
Left	0.7 ft
Right	0.7 ft
(51) Bridge Roadway Width Curb to Curb	20.7 ft
(52) Deck Width Out to Out	22 ft
(32) Approach Roadway Width (W/Shoulders)	20 ft
(33) Bridge Median	0 - No median
(34) Skew	0 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	22 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	0 ft
Ref:	
(55) Min Lat Underclear RT	99.9 ft
Ref:	
(56) Min Lat Underclear LT	0 ft
NAVIGATION DATA	
(38) Navigation Control	0 - No navigation control on w
(111) Pier Protection	1 - Navigation protection not
(39) Navigation Vertical Clearance	0 ft
(116) Vert-Lift Bridge Nav Min Vert Clear	0 ft
(40) Navigation Horizontal Clearance	0 ft

CLASSIFICATION	
(112) NBIS Bridge Length	Y
(104) Highway System	0
(26) Functional Class	9 - Rural Local
(100) Defense Highway	0 - The inventory route is not
(101) Parallel Structure	N - No parallel structure exists
(102) Direction of Traffic	2 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0 - N/A
(110) Designated National Network	0 - The inventory route is not
(20) Toll	3 - On free road. The structure
(21) Maintain	2 - County Highway Agency
(22) Owner	2 - County Highway Agency
(37) Historical Significance	4 - Historical significance is
CONDITION	
(58) Deck	6
(59) Superstructure	4
(60) Substructure	6
(61) Channel & Channel Protection	6
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	0 - Other or Unknown
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	11
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	7
(70) Bridge Posting	0 - > 39.9% below
(41) Structure Open/Posted/Closed	P - Posted for load (may include
APPRAISAL	
(67) Structural Evaluation	
(68) Deck Geometry	5
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	6
(72) Approach Roadway Alignment	6
(36A) Bridge Railings	0 - Inspected feature does not meet
(36B) Transitions	0 - Inspected feature does not meet
(36C) Approach Guardrail	0 - Inspected feature does not meet
(36D) Approach Guardrail Ends	0 - Inspected feature does not meet
(113) Scour Critical Bridges	5 - Bridge foundations determined to
PROPOSED IMPROVEMENTS	
(75) Type of Work	35 - Bridge rehabilitation bec
(76) Length of Structure Improvement	41 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 0
(96) Total Project Cost	\$ 41
(97) Year of Improvement Cost Estimate	2003
(114) Future ADT	87
(115) Year of Future ADT	2007

INSPECTIONS *			
(90) Inspection Date	06/26/2023		
(91) Frequency	12		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	Yes	12	06/26/2023
B: Underwater Inspection	No		
C: Other Special Inspection	No		
* The inspection date and frequency information in this box contains the current NBI date and frequency information. Please refer to the report header for the date this inspection was conducted.			



41 - Structure Open/Posted/Closed (P)

Both postings signs are up and posted correctly this inspection.

58 - Deck (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Deck rating is a 6 this inspection due to deterioration to concrete deck underneath wearing surface.

59 - Superstructure (4 - POOR CONDITION - advanced section loss, deterioration, spalling or scour.)

Superstructure is rated a 4 this inspection due to both main beams 1 & 2 as well as bracing having advanced corrosion with pitting throughout various locations. Old damage to beam 1 has large vertical crack near mid span. Portion of crack has been welded on both sides of beam.

60 - Substructure (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Dropped substructure rating to a 6 due to heavy abrasion on bent 1 with spalling on bent 2 abutment.

61 - Channel/Channel Protection (6 - Bank is beginning to slump. River control devices and embankment protection have widespread minor damage. There is minor stream bed movement evident. Debris is restricting the channel slightly.)
Dropped channel rating to a 6 this inspection due to minor streambed movement and bank beginning to slump throughout various locations both up and downstream.

A-B.C.11 - B.C.11 Scour Condition Rating (New NBIS) (6 - Widespread minor or isolated moderate scour.)

Scour rating is a 6 due to isolated moderate scour around bent 1 abutment.



Deck

ELEMENTS	DESCRIPTION	UNITS	TOTAL				
				CS1	CS2	CS3	CS4

58 - Deck (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Comment: Deck rating is a 6 this inspection due to deterioration to concrete deck underneath wearing surface.



Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL				
				CS1	CS2	CS3	CS4

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Substructure

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				CS1	CS2	CS3	CS4

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Comment: Dropped channel rating to a 6 this inspection due to minor streambed movement and bank beginning to slump throughout various locations both up and downstream.



Beam 1 bolster at bent 2



Bent 2 spall



Downstream



Damage to stringer 2



Stringer 2 welded on backside



Upstream



Upstream



Corrosion on beams



Corrosion on bracing



Corrosion on beams



Bent 1 abrasion



Bent 1 scour



Bent 1 scour



Beam 1 bolster at bent 1



Beam 1



Outside bracing at beam 1



Damage to bracing on inside of beam 1



Damage to bracing on inside of beam 1



Underside of deck photo



Old damage to beam 2



Bracing on inside of beam 2



Beam 2



Bracing on outside of beam 2



Beam 2 bolster at bent 1



Beam 2 sitting on bent 1



Bent 1 abrasion



Bent 1 abutment



Elevation



Downstream



Upstream



Deck photo. Deck has chip seal overlay



Cracking in wearing surface



End of bridge posting



Beginning of bridge posting



Alignment

Maintenance Needs

Date Reported: 10/31/2011

Priority: D- Routine

Type of Work: Superstructure Repair

Status: Monitor

Component: Superstructure

Deficiency Description

LT CAR 1 AT MID SPAN

OLD DAMAGE TO MAIN BEAM CAUSING LARGE VERTICAL CRACK. PORTION OF CRACK HAS BEEN WELDED ON BOTH SIDES AND PORTION HAS PLATE WELDED OVER CRACK ON BOTH SIDES. SOME PORTION OF CRACK STILL REMAINS OPEN AT TOP OF MAIN SILL. SEE DRAWINGS AND PHOTOS DATED 6/11/2014.

Remarks



Inside of car plate over crack. Crack still visible at top of sill



Crack on main beam car 1



Crack outside of main sill. Plate welded over crack crack
still visible above plate



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Location: 1 MI SO OF LOCKSBURG

Team Lead: Jared Kegley, **Inspection Date:** 06/26/2023

Routine Maintenance

Check Box Maintenance Items

Type of Maintenance	Is recommended?
A-54 - Sealable Deck Cracks	
A-55 - Deck Washing Needed	
A-56 - Joint Cleaning/Flushing Needed	
A-57 - Beam End and Bearing Paint Needed	
A-58 - Cap Cleaning/Flushing Needed	
A-59 - Joint Repair Needed	
A-60 - Full Beam Painting Needed	
A-61 - Polymer Overlay Advised	
A-62 - Hydro and LMC Advised	
A-63 Missing/Incorrect Log Mile Signage	
A-64 - Vegetation Removal Requested	



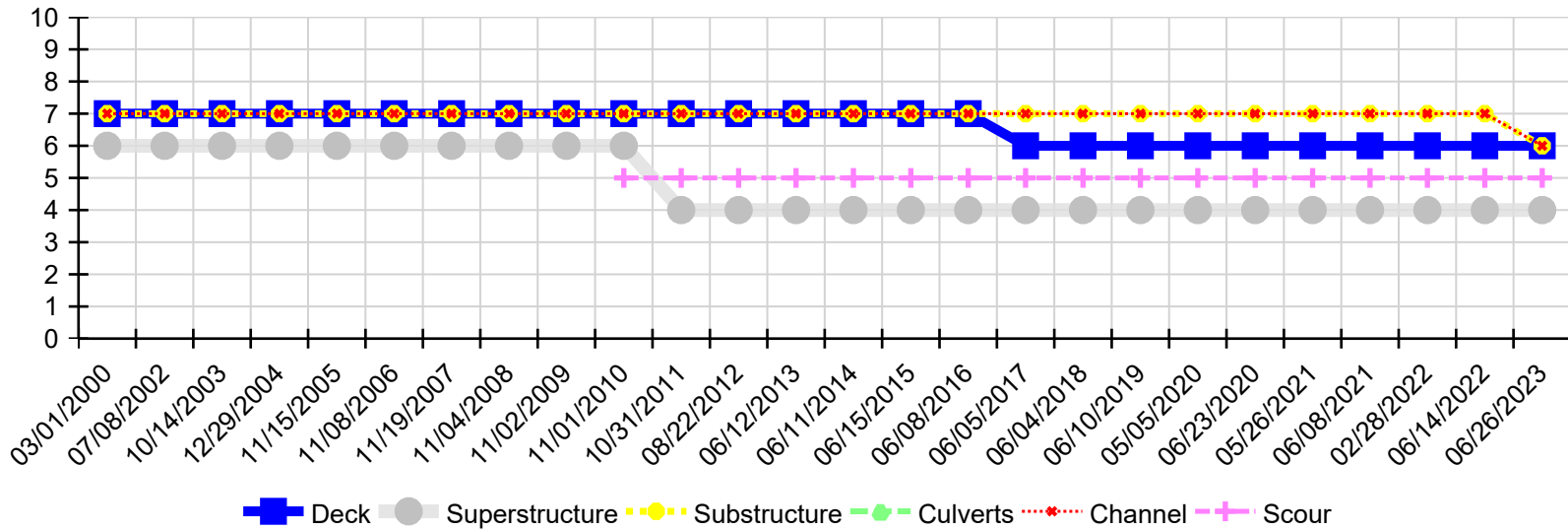
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Location: 1 MI SO OF LOCKSBURG

Team Lead: Jared Kegley, Inspection Date: 06/26/2023

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
06/26/2023	6	4	6	N	6	5
06/14/2022	6	4	7	N	7	5
02/28/2022	6	4	7	N	7	5
06/08/2021	6	4	7	N	7	5
05/26/2021	6	4	7	N	7	5
06/23/2020	6	4	7	N	7	5
05/05/2020	6	4	7	N	7	5
06/10/2019	6	4	7	N	7	5
06/04/2018	6	4	7	N	7	5
06/05/2017	6	4	7	N	7	5
06/08/2016	7	4	7	N	7	5
06/15/2015	7	4	7	N	7	5
06/11/2014	7	4	7	N	7	5
06/12/2013	7	4	7	N	7	5
08/22/2012	7	4	7	N	7	5
10/31/2011	7	4	7	N	7	5
11/01/2010	7	6	7	N	7	5
11/02/2009	7	6	7	N	7	N
11/04/2008	7	6	7	N	7	N
11/19/2007	7	6	7	N	7	N
11/08/2006	7	6	7	N	7	N
11/15/2005	7	6	7	N	7	N
12/29/2004	7	6	7	N	7	N
10/14/2003	7	6	7	N	7	N
07/08/2002	7	6	7	N	7	N
03/01/2000	7	6	7	N	7	N



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CR 304 E MAGNOLIA over BRANCH OF BELLVILLE CR

Location: 1 MI SO OF LOCKSBURG

Team Lead: Jared Kegley, Inspection Date: 06/26/2023

NSTM Inspection Report and Procedure
Bridge No. 20440 1 MI SO OF LOCKSBURG

A-128 - Description of Structure

A-129 - Range Of Dates, Personnel and Responsibilities

A-130 - Access Equipment

B.IR.02 Fatigue Prone Details

B.C.14 NSTM Inspection Condition

B.IR.04 Complex Feature



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Reference Photos:



Asset #20440(Routine, NSTM)
CR 304 E MAGNOLIA over BRANCH OF BELLVILLE CR
Location: 1 MI SO OF LOCKSBURG
Team Lead: Jared Kegley, **Inspection Date:** 06/26/2023

Bridge #20440 NSTM Member Inspection Log			
Member or Element (NSTM)	Access Equipment	Condition Rating	General Condition Notes

NSTM specific defect notes

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4



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CR 304 E MAGNOLIA over BRANCH OF BELLVILLE CR
Location: 1 MI SO OF LOCKSBURG
Team Lead: Jared Kegley, **Inspection Date:** 06/26/2023

Signatures

Signature

Printed Name

Date

Jared Kegley

(Team Lead) Jared Kegley

06/26/2023

Tanner Cook

Tanner Cook

06/26/2023

NON-REDUNDANT STEEL TENSION MEMBER INSPECTION PROCEDURE

DIST. 3

SEVIER CO. RT. 304 SECT. 00/B LM. 1.43 BR.# 20440

DESCRIPTION:

BRIDGE # 20440 IS A SINGLE SPAN ORTHOTROPIC BRIDGE THAT IS 42'-0" IN LENGTH AND CONSISTS OF TWO RAILROAD CARS THAT SIT PARALLEL TO EACHOTHER. NON-REDUNDANT STEEL TENION MEMBERS ARE THE MAIN SILLS THAT INCLUDE WEB AND BOTTOM FLANGE.

ACCESS:

ELEMENTS ARE ACCESSIBLE FROM THE GROUND. HIP BOOTS OR CHEST WADERS MAY BE NEEDED IN HIGH WATER. ELEMENTS CAN NOT BE ACCESSED DURING PERIODS OF SWIFT CURRENT.

SPECIAL ATTENTION:

MAIN SILL OF CAR #1 IS IN POOR CONDITION DUE TO OLD DAMAGE CAUSING A LARGE CRACK. A PORTION OF THE CRACK HAS BEEN WELDED UP. TOP 12" PORTION IS STILL GAPPED OPEN, RIGHT AND LEFT SIDES.
MAIN SILL OF CAR #2 IS IN SATISFACTORY CONDITION AND SHOULD BE INSPECTED FOR CRACKS IN WELDS AND CRACKS THAT ARE DUE TO STEEL FATIGUE.

TOOLS NEEDED:

BASIC TOOLS NEEDED TO INSPECT ANY BRIDGE. REFER TO AHTD BRIDGE INSPECTION MANUAL 2011 CHAPTER 1 -1.15

SPECIAL TOOLS:

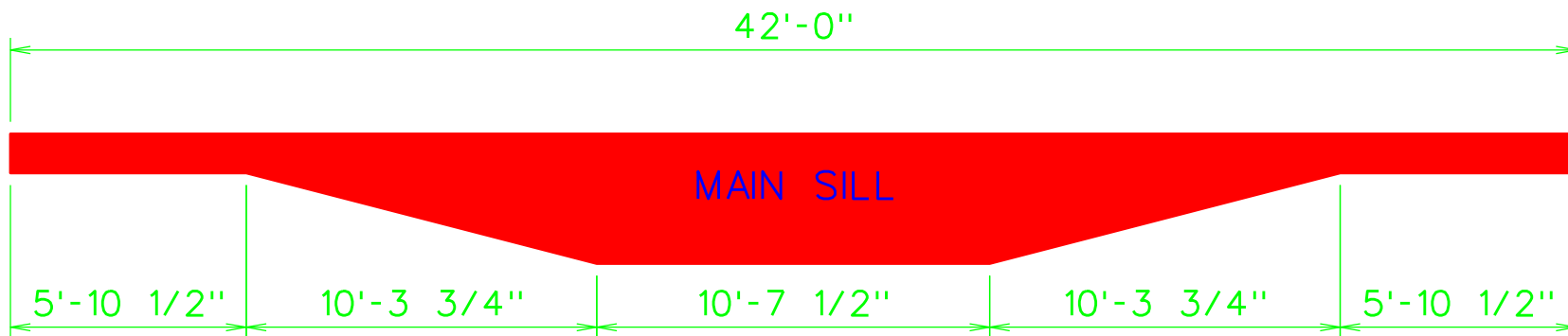
CALIPERS AND/OR ULTRA SONIC GAUGE TO MEASURE ANY SECTION LOSS. DYE PENETRANT TO DETERMINE CRACK LENGTHS IF ANY ARE FOUND.

INSPECTION METHOD:

HANDS – ON AND VISUALLY

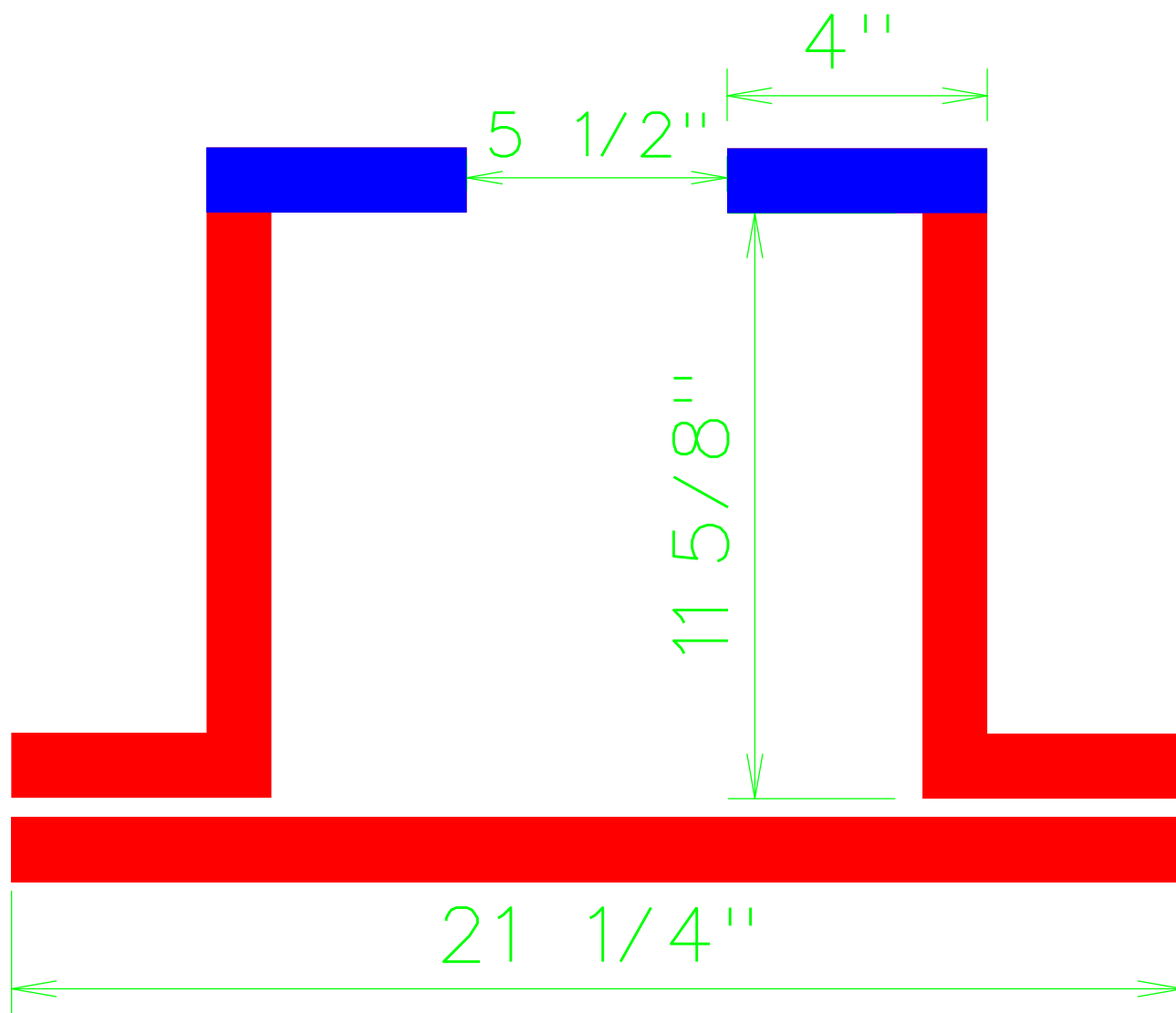
NON-REDUNDANT STEEL TENSION MEMBER INSPECTION					
SPAN NUMBER	BEAM NUMBER	ORTHOTROPIC CAR NUMBER	COMPONENTS	TYPE INSPECTION	CONDITION RATING
SPAN #1	MAIN SILL	CAR # 1	MAIN BEAM (SILL)	HANDS ON VISUAL	4-POOR
SPAN #1	MAIN SILL	CAR #2	MAIN BEAM (SILL)	HANDS ON VISUAL	4-POOR
<p align="center"><u>NSTM Inspection Notes</u></p> <p><u>SUPERSTRUCTURE IS RATED A 4 THIS INSPECTION DUE TO BOTH MAIN BEAMS 1 & 2 AS WELL AS BRACING HAVING ADVANCED CORROSION WITH PITTING THROUGHOUT VARIOUS LOCATIONS. OLD DAMAGE TO BEAM 1 HAS LARGE VERTICAL CRACK NEAR MID SPAN. PORTION OF CRACK HAS BEEN WELDED ON BOTH SIDES OF BEAM.</u></p>					
<p align="center">BRIDGE MAINTENANCE NEEDS / ACTIVITY LOG</p> <p>Inspected by: J.Kegley/T.Cook NBIS - FORM III</p> <p>Date: 06/26/2023</p> <p>Dist __03__ Co _66_/SEVIER_ Rte. __304 Sect __00/ B Log 1.43_ Bridge 20440</p>					

NON-REDUNDANT STEEL TENSION MEMBER ELEMENTS IN RED
TOP FLANGE IS NOT NSTM



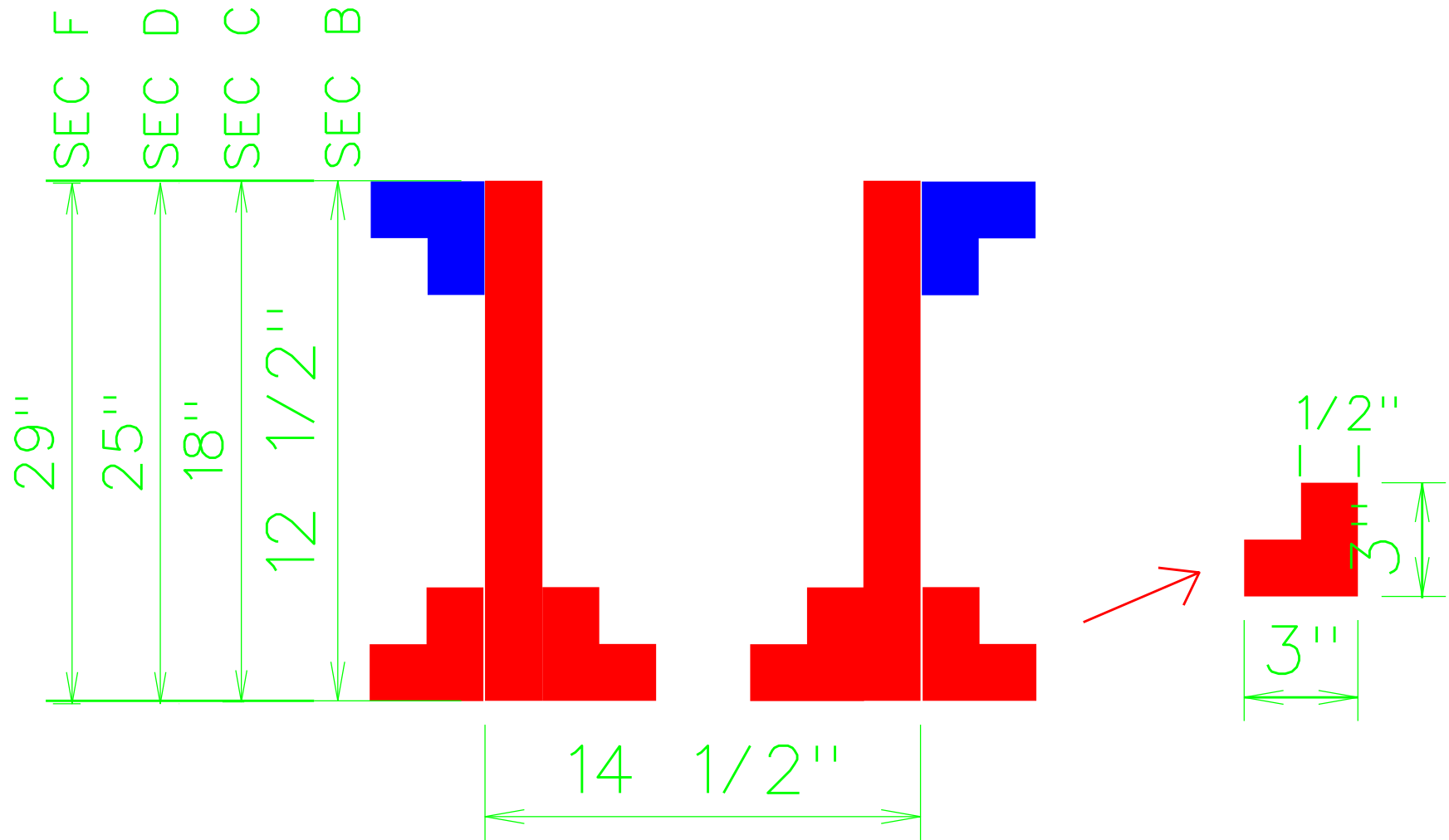
SIDE VIEW

SECTION "A"



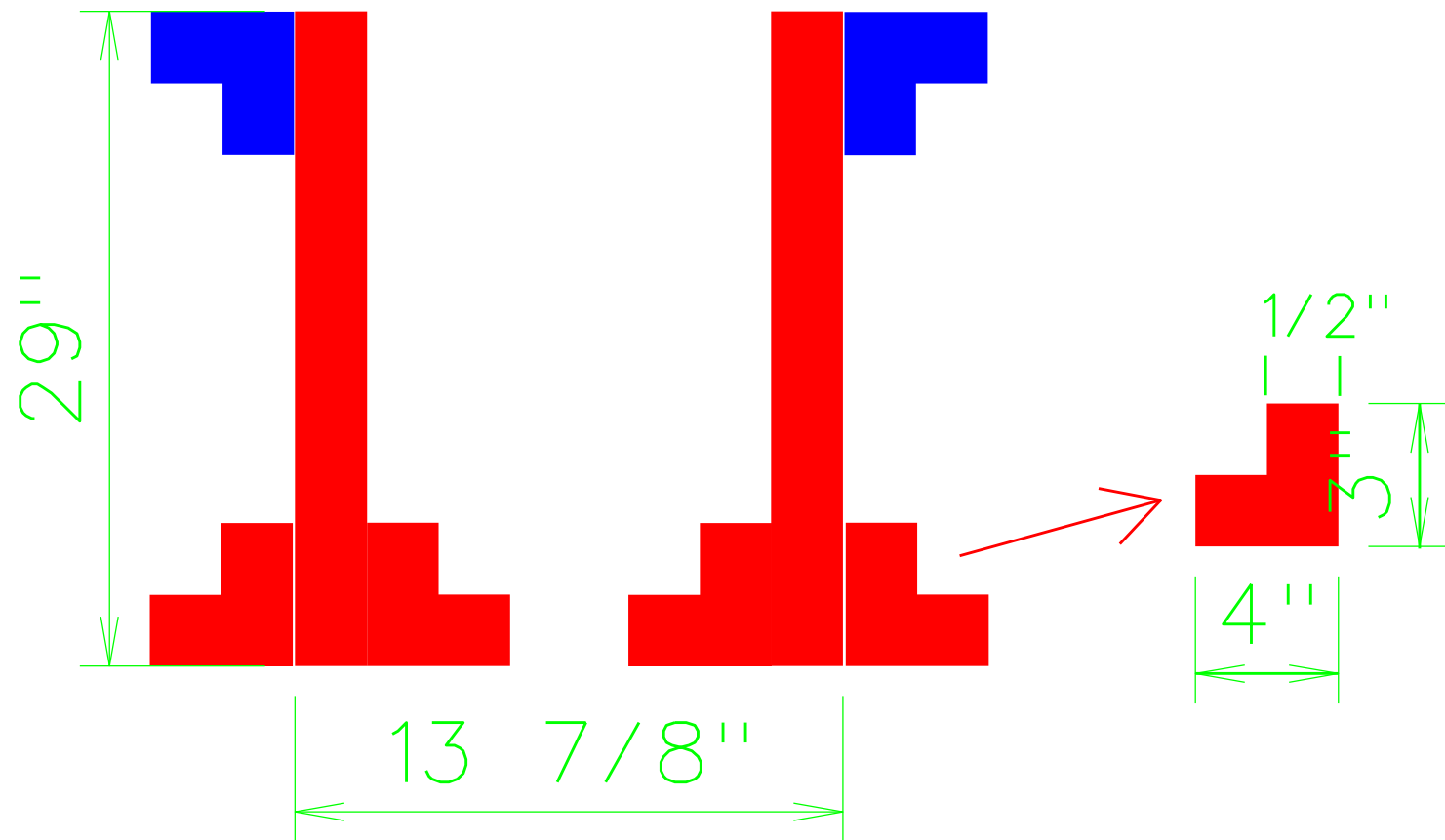
WEB AND FLANGE THICKNESS 3/8"

SECTION "B, C, D, & F"



WEB THICKNESS 5/16"

SECTION "E"

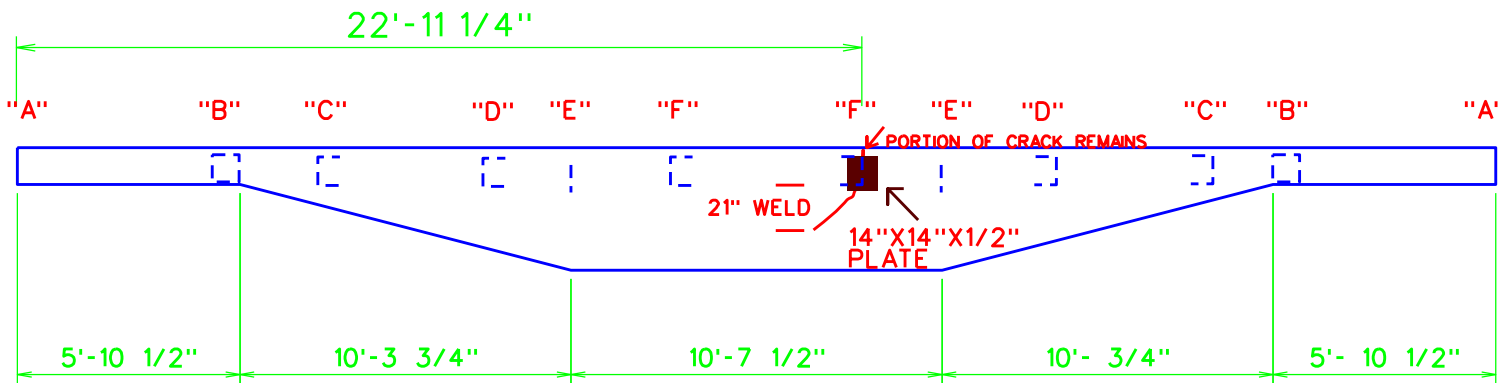


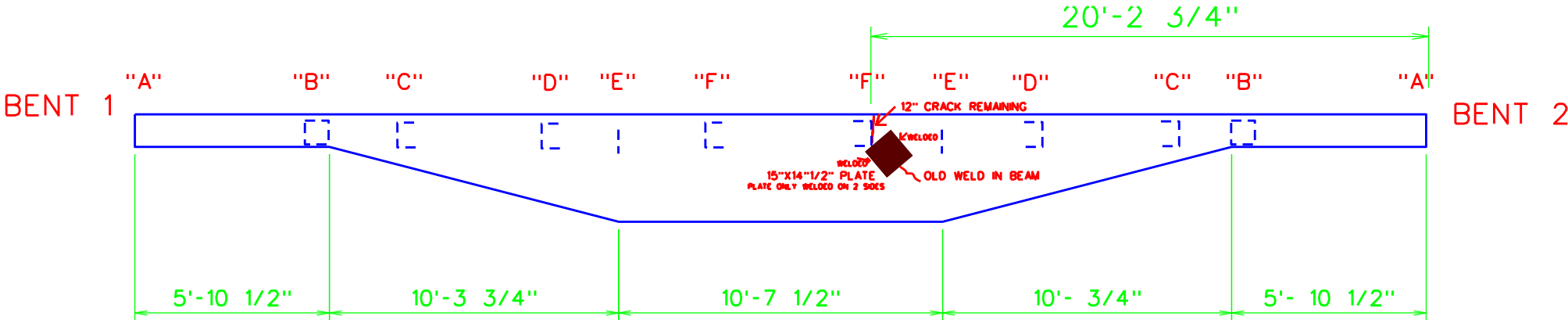
WEB THICKNESS 5/16"

BENT 2

BENT 1

OUTSIDE/LEFT SIDE CAR 1
MAIN SILL







08/22/2012

CO. 66/SEVIER RT 304 SEC B LM 1.43 BR# 20440
FC MEMBERS



08/22/2012

CO. 66/SEVIER RT 304 SEC B LM 1.43 BR# 20440
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