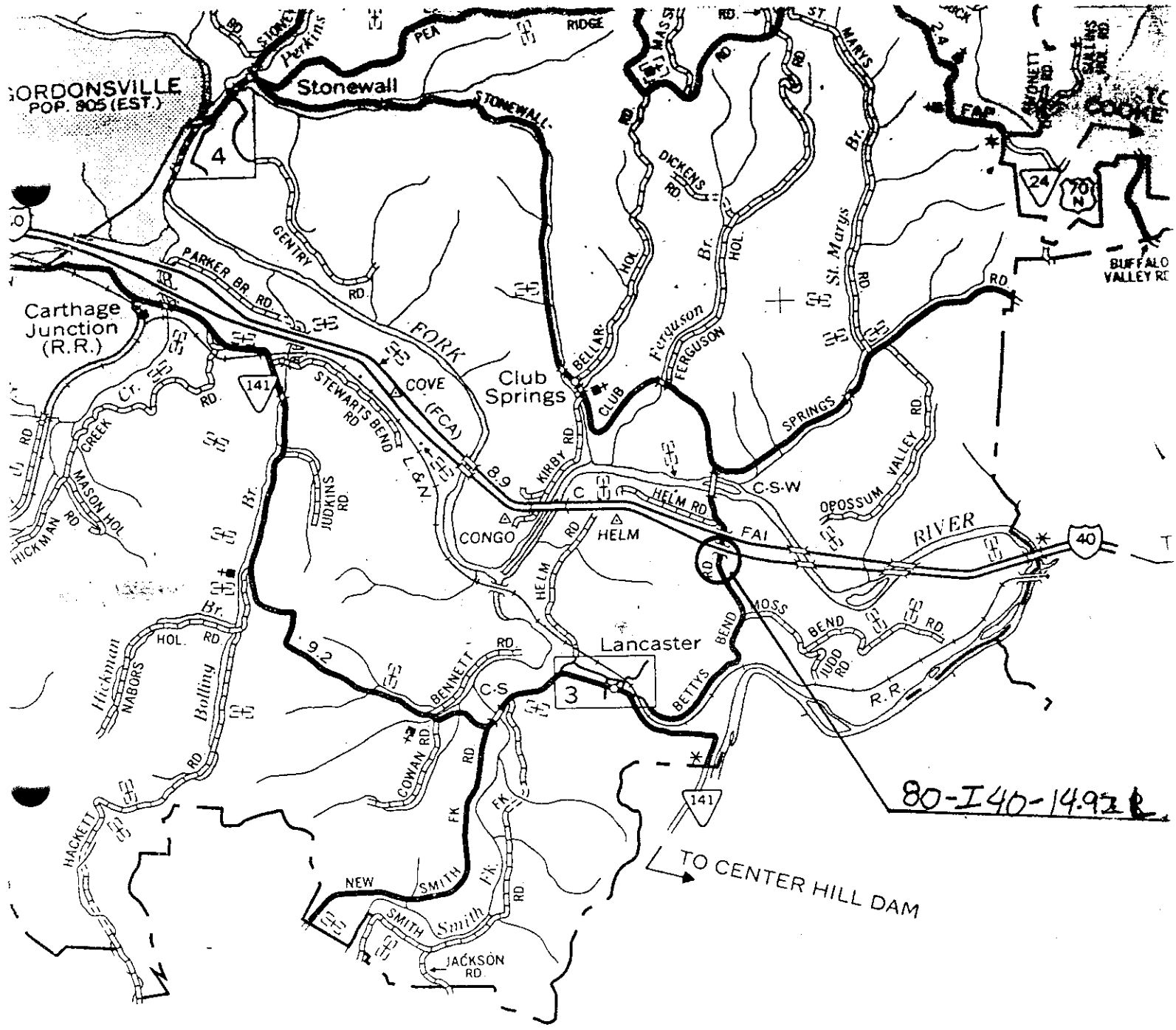




COUNTY

Bridge Maintenance Recommendations

Page No. _____

Page 1 of 1

Bridge Location No.: 80 - I0040 - 14.92 L

Co. Route Log Mile

Crossing: BETTYS BEND RD (A138)*

Bridge Rating: GOOD

Inspection Cycle: 16

Inspection Date: 4/2/2003

Comments:

Bridge Number: 80I00400030

County: Smith

Region: 03

District: 32

Maint.Resp.: 01

Spec.Case: 0

Co.Seq: 01

Maintenance Recommendations:

Maintenance Completed
By / Date

REPAIR BACKWALL RIGHT SIDE ABUTMENT #1 BREAKOUT.
REPAIR POTHOLE ABUTMENT #2 1' DIAMETER

COMPLETION NOTIFICATION: RETURN WITHIN 6 MONTHS OF INSPECTION DATE.

INITIAL AND DATE RECOMMENDATIONS WHEN COMPLETED.

MAINTENANCE ACTIVITIES ARE COMPLETED (DATE) _____ BY _____

MAINTENANCE ACTIVITIES ARE PARTIALLY COMPLETED (DATE) _____ BY _____

MAINTENANCE ACTIVITIES ARE INCOMPLETE, SCHEDULED FOR (DATE) _____

EXPLANATIONS AND COMMENTS:

CONTACT:

MR. RAY MCCLELLAND
D.O.T. BRIDGE INSPECTION
6601 CENTENNIAL BLVD.
NASHVILLE, TN 37243

MR. DON GREER
D.O.T. BRIDGE INSPECTION
6601 CENTENNIAL BLVD.
NASHVILLE, TN 37243

Page No. _____

Page 1 of 1

Bridge Location No.: 80 - I0040 - 14.92 L

Bridge Number: 80I00400030

Co.	Route	Log Mile
-----	-------	----------

County: Smith

Crossing: BETTYS BEND RD (A138)*

Region: 03

Bridge Rating: GOOD

District: 32

Inspection Cycle: 15

Maint.Resp.: 01

Inspection Date: 6/12/01

Spec.Case: 0

Co.Seq: 01

Comments: REPAIR BACKWALL RIGHT SIDE ABUTMENT #1 BREAKOUT.

Maintenance Recommendations:

Maintenance Completed

By / Date

[illegible]

COMPLETION NOTIFICATION: RETURN WITHIN 6 MONTHS OF INSPECTION DATE.

INITIAL AND DATE RECOMMENDATIONS WHEN COMPLETED.

MAINTENANCE ACTIVITIES ARE COMPLETED (DATE) _____ BY _____

MAINTENANCE ACTIVITIES ARE PARTIALLY COMPLETED (DATE) _____ BY _____

MAINTENANCE ACTIVITIES ARE INCOMPLETE, SCHEDULED FOR (DATE) _____

EXPLANATIONS AND COMMENTS:

CONTACT:

**MR. RAY MCCLELLAND
D.O.T. BRIDGE INSPECTION
6601 CENTENNIAL BLVD.
NASHVILLE, TN 37243**

**MR. DON GREER
D.O.T. BRIDGE INSPECTION
6601 CENTENNIAL BLVD.
NASHVILLE, TN 37243**

BRIDGE MAINTENANCE RECOMMENDATIONS

BRIDGE SEQ. NO. : 80I00400030

BRIDGE NO. : 80 - I0040 - 1492 - L
OVER : BETTYS BEND RD (A138)*

DATE : 06/16/99 BRIDGE RATING : GOOD COUNTY : Smith
CO. SEQ. : 01 INSPECTION CYCLE : 14 MAINT DIST : 32
SPEC. CASE : 1 INSPECTION DATE : 06/16/99 REGION : 03

007 - FACILITY CARRIED BY STRUCT : I40
021 - MAINTENANCE RESPONSIBILITY : 01
022 - OWNER : 01
042 - TYPE OF STRUCTURE : 11
043 - STRUCTURE TYPE, MAIN : 505
044 - STRUCTURE TYPE, APPROACH : 000
045 - SPANS, MAIN UNIT : 001
046 - SPANS, APPROACH : 0000
049 - STRUCTURE LENGTH : 000076
032 - APPROACH ROADWAY WIDTH : 038
034 - SKEW : 87
051 - BRDG RDWY WID, CRB-TO-CRB : 0400
052 - DECK WIDTH, OUT-TO-OUT : 0466
500 - HWY OF THE INVENTORY ROUTE : 01

: MAINTENANCE & REPAIR RECOMMENDATIONS :

: MAINTENANCE COMPLETED :

1 LEVEL APPROACH NO. _BOTH_

1 BY _____ DATE _____

: COMMENTS FOR BRIDGE SEQ. NO. : 80I00400030 :

REPAIR BACKWALL RIGHT SIDE ABUTMENT #1 BREAKOUT.

COMPLETION NOTIFICATION : RETURN WITHIN 6 MONTHS OF INSPECTION DATE

MAINTENANCE ACTIVITIES ARE

--- COMPLETED (DATE) -----
--- PARTIALLY COMPLETE (DATE) -----
--- INCOMPLETE SCHEDULED FOR (DATE) -----

EXPLANATIONS AND COMMENTS:



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 06/15/2000

Bridge Number: 80I004000301
(Includes Item 5A)

Feature Intersected: BETTYS BEND RD (A138)

County: 80

Route: 10040

Special Case: 0

County Sequence: 01

Log Mile: 14.92

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE	CONDITION CODING GUIDELINES (Values for Coding Items 58, 59, 60 and 62)
90	INSPECTION DATE	<u>06/12/2001</u> <u>4125103</u>	N NOT APPLICABLE
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN. _____ FT. _____ IN.	9 EXCELLENT CONDITION
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN. _____ FT. _____ IN.	8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
36	TRAFFIC SAFETY FEATURES		7 GOOD CONDITION - SOME MINOR PROBLEMS.
	Br. Rail Trans. Appr. Rail Appr. Rail Ends		6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
	1 1 1 1		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	7	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.
59	SUPERSTRUCTURE	7	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.
60	SUBSTRUCTURE	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 BACK IN LIGHT SERVICE.
61	CHANL/CHANL PROTECTION	N	0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.
62	CULVERT AND RETAIN WALL	N	
71	WATERWAY ADEQUACY	N	
72	APPROACH RDWY ALIGNMENT (USE VALUES OF 3, 6, OR 8)	8	
521	OVERALL CONDITION (Circle One)		
	<u>GOOD</u> FAIR POOR CRITICAL		
	<u>Hilbert Wayne Hunter</u>	<u>4125103</u>	
	TEAM LEADER SIGNATURE	REVIEW DATE	



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Underpass Condition Coding Form

Revised 06/15/2000

Bridge Number: 80I004000302
(Includes Item 5A)

Feature Intersected: I40/A138 BETTYS BEND RD.

County: 80
Route: 0A138
Special Case: 0
County Sequence: 01
Log Mile: 0.54

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE	UNDERPASS SAFETY FEATURES
90	INSPECTION DATE	<u>06/12/2001</u> <u>4125103</u>	515 (A) TYPE UNDERPASS BARRIER None Exists but Needed
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	14 FT. 9 IN. ____ FT. ____ IN.	Revised Barrier Type
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	14 FT. 9 IN. ____ FT. ____ IN.	(B) ADEQUACY OF BARRIER OR RAIL 0
47	TOTAL HORIZONTAL UNDERCLEARANCE	27 FT. 10 IN. ____ FT. ____ IN.	(C) ADEQUACY OF TRANSITIONS 0
54	MINIMUM VERTICAL UNDERCLEARANCE (EXCLUDES SHOULDERS)	Circle One: <u>H</u> R <u>14</u> FT. <u>10</u> IN.	(D) ADEQUACY OF TERMINALS 0
55	MINIMUM LATERAL UNDERCLEARANCE ON RIGHT SIDE	Circle One: <u>H</u> R <u>3</u> FT. <u>0</u> IN.	554 VERTICAL CLEARANCE LISTED ON HEIGHT POSTING 99 FT. 99 IN.
56	MINIMUM LATERAL UNDERCLEARANCE ON LEFT SIDE	<u>0</u> FT. <u>0</u> IN.	____ FT. ____ IN.
521	OVERALL CONDITION (Circle One)	<u>GOOD</u> FAIR POOR CRITICAL	HEIGHT POSTED AT BOTH APPROACHES? YES [☒] NO [] N/A []

555 COMMENTS _____

Gilbert Wayne Hunter
TEAM LEADER SIGNATURE

4125103
REVIEW DATE



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 06/15/2000

Bridge Number: 80I004000301
(Includes Item 5A)

Feature Intersected: BETTYS BEND RD (A138)

County: 80
Route: 10040
Special Case: 0
County Sequence: 01
Log Mile: 14.92

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE	CONDITION CODING GUIDELINES (Values for Coding Items 58, 59, 60 and 62)
90	INSPECTION DATE	<u>06/16/1999</u> <u>6/12/01</u>	N NOT APPLICABLE
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN. ____ FT. ____ IN.	9 EXCELLENT CONDITION
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN. ____ FT. ____ IN.	8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
36	TRAFFIC SAFETY FEATURES		7 GOOD CONDITION - SOME MINOR PROBLEMS.
	Br. Rail Trans. Appr. Rail Appr. Rail Ends		6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
	1 1 1 1		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	7	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.
59	SUPERSTRUCTURE	7	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.
60	SUBSTRUCTURE	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 BACK IN LIGHT SERVICE.
61	CHANL/CHANL PROTECTION	N	0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.
62	CULVERT AND RETAIN WALL	N	
71	WATERWAY ADEQUACY	N	
72	APPROACH RDWY ALIGNMENT (USE VALUES OF 3, 6, OR 8)	8	
521	OVERALL CONDITION (Circle One)		
	GOOD FAIR POOR CRITICAL		
	<u>GOOD</u>		
	<u>Silbert Wayne Hunter</u>	<u>6/12/01</u>	
	TEAM LEADER SIGNATURE	REVIEW DATE	



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Underpass Condition Coding Form

Revised 06/15/2000

Bridge Number: 801004000302
(Includes Item 5A)

Feature Intersected: I40/A138 BETTYS BEND RD.

County: 80

Route: 0A138

Special Case: 0

County Sequence: 01

Log Mile: 0.54

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE	UNDERPASS SAFETY FEATURES
90	INSPECTION DATE	<u>06/16/1999</u> <u>6/1/21/01</u>	515 (A) TYPE UNDERPASS BARRIER None Exists but Needed
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	<u>14</u> FT. <u>9</u> IN. ____ FT. ____ IN.	Revised Barrier Type
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	<u>14</u> FT. <u>9</u> IN. ____ FT. ____ IN.	(B) ADEQUACY OF BARRIER OR RAIL <u>0</u>
47	TOTAL HORIZONTAL UNDERCLEARANCE	<u>27</u> FT. <u>10</u> IN. ____ FT. ____ IN.	(C) ADEQUACY OF TRANSITIONS <u>0</u>
54	MINIMUM VERTICAL UNDERCLEARANCE (EXCLUDES SHOULDERS)	<u>14</u> FT. <u>9</u> IN.	(D) ADEQUACY OF TERMINALS <u>0</u>
	Circle One: <u>(H)</u> R		
55	MINIMUM LATERAL UNDERCLEARANCE ON RIGHT SIDE	<u>7</u> FT. <u>0</u> IN.	554 VERTICAL CLEARANCE LISTED ON HEIGHT POSTING
	Circle One: <u>(H)</u> R		<u>99</u> FT. <u>99</u> IN.
56	MINIMUM LATERAL UNDERCLEARANCE ON LEFT SIDE	<u>0</u> FT. <u>0</u> IN.	____ FT. ____ IN.
521	OVERALL CONDITION (Circle One)	<u>GOOD</u> FAIR POOR CRITICAL	HEIGHT POSTED AT BOTH APPROACHES? YES [] NO [] N/A [X]

555 COMMENTS

Gilbert Wayne Hunter
TEAM LEADER SIGNATURE

6/1/21/01
REVIEW DATE



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

County: 80

Route: 10040

Special Case: 0

County Sequence: 1

Log Mile: 14.92

Bridge Number:
(Includes Item 5A)

80I004000301

Feature Intersected:

BETTYS BEND RD (A138)

CODE ONLY THOSE NUMBERS WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE	COMMENTS
90	INSPECTION DATE	5/1/97	RATINGS FOR CODING ITEMS 58, 59, 60 AND 62
		6/1/6/99	N NOT APPLICABLE
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN.	9 EXCELLENT CONDITION
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN.	8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
54	MINIMUM VERTICAL UNDERCLEARANCE	H 14 FT. 9 IN.	7 GOOD CONDITION - SOME MINOR PROBLEMS.
	Circle One: H R N	14 FT. 10 IN.	6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
36	TRAFFIC SAFETY FEATURES		5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.
	Br. Rail Trans. Appr. Rail Appr. Rail Ends	1 1 1 1	4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.
41	STRC OPEN/CLOSED/POSTED	A	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.
58	DECK	7	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.
59	SUPERSTRUCTURE	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 BACK IN LIGHT SERVICE.
60	SUBSTRUCTURE	7	0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.
61	CHANL/CHANL PROTECTION	N	
62	CULVERT AND RETAIN WALL	N	
72	APPROACH RDWY ALIGNMENT (USE VALUES OF 3, 6, OR 8)	8	
OVERALL CONDITION (Circle One)			
GOOD FAIR POOR CRITICAL			
SIGNATURE		DATE	
6/1/6/99			



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Underpass Condition Coding Form

County: 80

Route: 0A138

Special Case: 0

County Sequence: 1

Log Mile: 0.54

Bridge Number: 80I004000302
(Includes Item 5A)

Feature Intersected: I40/A138 BETTYS BEND RD.

CODE ONLY THOSE NUMBERS WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE	UNDERPASS SAFETY FEATURES
90	INSPECTION DATE	5/1/97 <u>6/1/6/99</u>	(A) TYPE UNDERPASS BARRIER None Exists but Needed
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	14 FT. 9 IN.	
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	14 FT. 10 IN.	Revised Barrier Type
47	TOTAL HORIZONTAL UNDERCLEARANCE	27 FT. 10 IN.	(B) ADEQUACY OF BARRIER OR RAIL 0
55	MINIMUM LATERAL UNDERCLEARANCE ON RIGHT SIDE	7 FT. 6 IN.	(C) ADEQUACY OF TRANSITIONS 0
	Circle One: H R N	FT. IN.	(D) ADEQUACY OF TERMINALS 0
56	MINIMUM LATERAL UNDERCLEARANCE ON LEFT SIDE	0 FT. 0 IN.	VERTICAL CLEARANCE LISTED ON HEIGHT POSTING SIGNS
		FT. IN.	99 FT. 99 IN.
		FT. IN.	

OVERALL CONDITION (Circle One)

GOOD FAIR POOR CRITICAL

HEIGHT POSTED AT BOTH APPROACHES? YES [] NO [] N/A [X]

NOTE: DESCRIBE ANY PROBLEMS ON BRIDGES THAT THE STATE DOES NOT INSPECT (SUCH AS RAILROAD OR PRIVATE BRIDGES) THAT WOULD AFFECT THE ROADWAY SUCH AS LOOSE MEMBERS, SEVERELY SPALLED OR CRACKED CONCRETE, EXCESSIVE SECTION LOSS ON STEEL, EXCESSIVE TIMBER DECAY, ETC. ALSO, DESCRIBE ANY UNSAFE ITEMS.

COMMENTS

Robert Wayne Hunter
SIGNATURE

6/1/6/99
DATE

TENNESSEE BRIDGE INSPECTION PROGRAM

SUMMARY OF EVALUATION

REV. 03-05-2003

BRIDGE ID NO: 80I00400030

LOCATION NO: 80 - I0040 - 14.94 L

(6A) CROSSING: BETTYS BEND RD (A138)

(505) METHOD OF ANALYSIS: LOAD FACTOR
METHOD

(548) RATING BASED ON: AASHTOWARE BRIDGE
RATING (3" OF ASPHALT)

LOAD RATINGS IN TONS

INVENTORY (503) H 20	(518B) HS 36
OPERATING (504) H 61	(519) HS 99

(549) EVALUATOR: DCD

(522) EVAL. DATE: 6/18/2015

LAST UPDATED BY: DOMM

(29) ADT: 42,640 **(30) ADT YR:** 2016

(100) STRAHNET ROUTE: YES

(19) DETOUR LENGTH: 2 **KM**

(520) VC OVER RDWY: 99.99 **METERS**

CONDITION RATINGS

(58) DECK RATING: 7

(59) SUPERSTRUCTURE RATING: 7

(60) SUBSTRUCTURE RATING: 7

(61) CHANNEL PROTECTION: N

(62) CULVERT RATING: N

(113A) NBIS SCOUR CODE: N

(113B) TDOT SCOUR CODE:

OTHER RATING ITEMS

(521) OVERALL CONDITION: G

(513) TEXTURE COAT RATING: G 10

(514) PAINT CONDITION RATING: N

(41) WEIGHT POSTING CODE: A

APPRAISAL RATINGS

(67) STRUCTURAL EVALUATION: 7

(68) DECK GEOMETRY: 7

(69) UNDER CLEARANCE: 4

(70) BRIDGE POSTING: 5

(71) WATERWAY ADEQUACY: N

(72) APPROACH RDWY ALIGNMENT: 8

(36) TRAFFIC SAFETY

FEATURES: 1 0 0 N

(525) REPAIR LIST NO: N

CODE VALUES

N - NOT APPLICABLE

9 - EXCELLENT CONDITION

8 - VERY GOOD CONDITION

7 - GOOD CONDITION

6 - SATISFACTORY

5 - FAIR CONDITION

4 - POOR CONDITION

3 - SERIOUS CONDITION

2 - CRITICAL CONDITION

1 - FAILURE IS IMMINENT

0 - FAILED CONDITION

COMMENTS

NO COMMENTS AT THIS TIME.

(502) SUFF. RATING:	90.9
(528) STR. DEFICIENT:	NO
(529) FUNC. OBSOLETE:	NO

Bridge Name: I-40 OVER BETTY'S BEND RD
NBI Structure ID: 80I00400030
Bridge ID: 80I00400030

Analyzed By: bridgeware
Analyze Date: Monday, May 15, 2017 11:40:49
Analysis Engine: AASHTO LFR Engine Version 6.8.0.3001
Analysis Preference Setting: None

Report By: bridgeware
Report Date: Monday, May 15, 2017 13:42:50

Structure Definition Name: GSS
Member Name: G1
Member Alternative Name: EXT

Load Factor Rating Summary

		Girder Summary							
		Rating		Capacity	Location				
Live Load		Factor	Controls	(Ton)	Span	(ft)	Percent	Impact	Lane
Annual Permit 1	Inventory	1.013	PS Tensile Stress - Concrete	83.54	1	37.25	50.0	As Requested	As Requested
Annual Permit 1	Operating	1.811	Design Flexure - Concrete	149.44	1	37.25	50.0	As Requested	As Requested
Annual Permit 2	Inventory	0.772	PS Tensile Stress - Concrete	63.70	1	37.25	50.0	As Requested	As Requested
Annual Permit 2	Operating	1.381	Design Flexure - Concrete	113.95	1	37.25	50.0	As Requested	As Requested
EV2	Operating	2.675	Design Flexure - Concrete	76.89	1	37.25	50.0	As Requested	As Requested
EV3	Operating	1.722	Design Flexure - Concrete	74.05	1	37.25	50.0	As Requested	As Requested
Gravel Truck	Inventory	1.152	PS Tensile Stress - Concrete	42.61	1	37.25	50.0	As Requested	As Requested
Gravel Truck	Operating	2.060	Design Flexure - Concrete	76.21	1	37.25	50.0	As Requested	As Requested
H 15-44	Inventory	2.279	PS Tensile Stress - Concrete	34.19	1	37.25	50.0	As Requested	As Requested
H 15-44	Operating	4.077	Design Flexure - Concrete	61.16	1	37.25	50.0	As Requested	As Requested
HS 20-44	Inventory	1.256	PS Tensile Stress - Concrete	45.20	1	37.25	50.0	As Requested	As Requested
HS 20-44	Operating	2.246	Design Flexure - Concrete	80.85	1	37.25	50.0	As Requested	As Requested
Overweight Permit	Inventory	0.755	PS Tensile Stress - Concrete	96.26	1	37.25	50.0	As Requested	As Requested
	Operating	1.351		172.19	1	37.25	50.0		

Overweight Permit				Design Flexure - Concrete				As Requested	As Requested
SU6 LFR	Operating	2.213	Design Flexure - Concrete	76.89	1	37.25	50.0	As Requested	As Requested
SU7 LFR	Operating	2.023	Design Flexure - Concrete	78.39	1	37.25	50.0	As Requested	As Requested
Type 3S2	Inventory	1.544	PS Tensile Stress - Concrete	55.57	1	37.25	50.0	As Requested	As Requested
Type 3S2	Operating	2.761	Design Flexure - Concrete	99.40	1	37.25	50.0	As Requested	As Requested

Note:

"N/A" indicates not applicable

***" indicates not available

Bridge Name: I-40 OVER BETTY'S BEND RD
NBI Structure ID: 80I00400030
Bridge ID: 80I00400030

Analyzed By: bridgeware
Analyze Date: Monday, May 15, 2017 11:40:49
Analysis Engine: AASHTO LFR Engine Version 6.8.0.3001
Analysis Preference Setting: None

Report By: bridgeware
Report Date: Monday, May 15, 2017 13:42:50

Structure Definition Name: GSS
Member Name: G2
Member Alternative Name: INT

Load Factor Rating Summary

		Girder Summary							
		Rating		Capacity	Location				
Live Load		Factor	Controls	(Ton)	Span	(ft)	Percent	Impact	Lane
Annual Permit 1	Inventory	1.097	PS Tensile Stress - Concrete	90.47	1	37.25	50.0	As Requested	As Requested
Annual Permit 1	Operating	1.889	Design Flexure - Concrete	155.87	1	37.25	50.0	As Requested	As Requested
Annual Permit 2	Inventory	0.836	PS Tensile Stress - Concrete	68.99	1	37.25	50.0	As Requested	As Requested
Annual Permit 2	Operating	1.441	Design Flexure - Concrete	118.86	1	37.25	50.0	As Requested	As Requested
EV2	Operating	2.790	Design Flexure - Concrete	80.21	1	37.25	50.0	As Requested	As Requested
EV3	Operating	1.796	Design Flexure - Concrete	77.24	1	37.25	50.0	As Requested	As Requested
Gravel Truck	Inventory	1.247	PS Tensile Stress - Concrete	46.14	1	37.25	50.0	As Requested	As Requested
Gravel Truck	Operating	2.149	Design Flexure - Concrete	79.50	1	37.25	50.0	As Requested	As Requested
H 15-44	Inventory	2.468	PS Tensile Stress - Concrete	37.02	1	37.25	50.0	As Requested	As Requested
H 15-44	Operating	4.253	Design Flexure - Concrete	63.79	1	37.25	50.0	As Requested	As Requested
HS 20-44	Inventory	1.360	PS Tensile Stress - Concrete	48.95	1	37.25	50.0	As Requested	As Requested
HS 20-44	Operating	2.343	Design Flexure - Concrete	84.33	1	37.25	50.0	As Requested	As Requested
Overweight Permit	Inventory	0.818	PS Tensile Stress - Concrete	104.24	1	37.25	50.0	As Requested	As Requested
	Operating	1.409		179.61	1	37.25	50.0		

Overweight Permit							As Requested		As Requested
SU6 LFR	Operating	2.308	Design Flexure - Concrete	80.20	1	37.25	50.0	As Requested	As Requested
			Design Flexure - Concrete						
SU7 LFR	Operating	2.110	Design Flexure - Concrete	81.76	1	37.25	50.0	As Requested	As Requested
			Design Flexure - Concrete						
Type 3S2	Inventory	1.672	PS Tensile Stress - Concrete	60.18	1	37.25	50.0	As Requested	As Requested
			PS Tensile Stress - Concrete						
Type 3S2	Operating	2.880	Design Flexure - Concrete	103.68	1	37.25	50.0	As Requested	As Requested
			Design Flexure - Concrete						

Note:

"N/A" indicates not applicable

***" indicates not available

P R E S T R E S S E D B E A M D E S I G N

\$\$\$EGAD424098003120504 H WHITWORTH 80-I-40-265.36

.04

INPUT

1 1 1 3 6 0 75.000 74.000 74.000 48.00 4.00 3000. 5000. 4000. 0.0 155.10 0.5000 0 1 0
48.00 42.00 4.500 2.000 4.500 1 1.70 1.50 0 29. 9. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.

STRAND TYPE IS ASTM

BEAM SECTION PROPERTIES (ALL DIMENSIONS IN INCHES)

YT= 23.63 YB= 18.37
MOMENT OF INERTIA= 149382.
SECTION MODULUS TOP= 6322.
SECTION MODULUS BOTTOM= 8132.
AREA OF CONCRETE= 649.50

COMPOSITE SECTION PROPERTIES (ALL DIMENSIONS IN INCHES)

EFFECTIVE SLAB WIDTH= 48.00
YT SLAB= 22.85 YT BEAM= 18.85 YB= 23.15
MOMENT OF INERTIA= 229073.
SECTION MODULUS TOP OF SLAB= 10023.
SECTION MODULUS TOP OF BEAM= 12149.
SECTION MODULUS BOTTOM= 9897.

APPLIED STRESSES CENTER	TOP	BOTTOM
WEIGHT OF BEAM	879.07	683.40
WEIGHT OF SLAB	259.86	202.02
WEIGHT OF DIAPHRAGMS	0.0	0.0
UNIFORM LD. ON NON-COMP. SECT.	0.0	0.0
UNIFORM LD. ON COMP. SECT.	104.86	128.72
LIVE LOAD	178.68	219.34
TOTAL STRESS	1422.48	1233.48

STRAND PLACEMENT

PLACE 29. STRAND IN ROW 1.
PLACE 9. STRAND IN ROW 2.

PRESTRESS LOSSES

INITIAL LOSS (INITIAL STRAND RELAXATION + ELASTIC SHORTENING) =
9450.00 + 8584.10 = 18034.10PSI

FINAL LOSS = 39414.03 PSI

ELASTIC SHORTENING = 8584.10 PSI
SHRINKAGE = 6500.00 PSI
CREEP = 11329.47 PSI
RELAXATION OF PRESTRESSING STEEL = 13000.47 PSI

CONDITIONS AT THE CENTER

INITIAL PRESTRESS + D.L. GIRDER IN THE TOP = $-540.42 + 879.07 = 338.65$ PSI
INITIAL PRESTRESS + D.L. GIRDER IN THE BOTTOM = $1840.65 - 683.40 = 1157.25$ PSI
PRESTRESS + FINAL STRESS IN THE TOP = $-472.84 + 1422.48 = 949.64$ PSI
PRESTRESS + FINAL STRESS IN THE BOTTOM = $1610.47 + -1233.48 = 376.99$ PSI

***** RATING FOR H15 *****
* MEMBER CAPACITY = 2034.73 PSI *
* DEAD LOAD EFFECT = 1014.14 PSI *
* LIVE LOAD + IMPACT CAPACITY = 1020.59 PSI *
* ACTUAL LIVE LOAD + IMPACT STRESS = 219.34 PSI *
* INVENTORY AND OPERATING RATING = 69.79 TONS *

BOND BREAKS ARE NOT NEEDED TO SATISFY CONDITIONS AT THE END OF THE BEAM

CONDITIONS AT THE END OF THE BEAM

INITIAL PRESTRESS + D.L. GIRDER IN THE TOP = $-540.42 + 73.68 = -466.74$ PSI
INITIAL PRESTRESS + D.L. GIRDER IN THE BOTTOM = $1840.65 - 57.28 = 1783.37$ PSI
PRESTRESS + FINAL STRESS IN THE TOP = $-472.84 + 113.65 = -359.19$ PSI
PRESTRESS + FINAL STRESS IN THE BOTTOM = $1610.47 + -96.68 = 1513.79$ PSI

EMBEDMENT LENGTH = 4.90 FT.

ULTIMATE STRENGTH DESIGN AT L/2
ACTUAL = 1310.6 FT. KIPS
ALLOWABLE = 2725.1 FT. KIPS

DEFLECTIONS

DEAD LOAD CENTER = 0.923543 INCHES 1/4 POINT = 0.658024 INCHES
PRESTRESS CENTER = 1.339004 INCHES
SLAB + DIAPH. CENTER = 0.210719 IN. 1/4 POINT = 0.150137 IN.

SHEAR DESIGN (DIMENSIONS IN SQUARE INCHES)
REQUIRED AREA OF REINFORCEMENT = 0.14
MINIMUM AREA OF REINFORCEMENT = 0.36
VC = 67999. LBS VU = 97894. LBS
BASED ON 24 IN. SPACING AND 60000 PSI STEEL

END OF PROBLEM

IF THESE DEPENDENT
TRANSPORTATION

STRAND TYPE IS ASTM

BEAM SECTION PROPERTIES (ALL DIMENSIONS IN INCHES)

YT= 23.63 YB= 18.37
MOMENT OF INERTIA= 149382.
SECTION MODULUS TOP= 6322.
SECTION MODULUS BOTTOM= 8132.
AREA OF CONCRETE= 649.50

COMPOSITE SECTION PROPERTIES (ALL DIMENSIONS IN INCHES)

EFFECTIVE SLAB WIDTH= 48.00
YT SLAB= 22.85 YT BEAM= 18.85 YB= 23.15
MOMENT OF INERTIA= 229073.
SECTION MODULUS TOP OF SLAB= 10023.
SECTION MODULUS TOP OF BEAM= 12149.
SECTION MODULUS BOTTOM= 9897.

APPLIED STRESSES CENTER	TOP	BOTTOM
WEIGHT OF BEAM	879.07	683.40
WEIGHT OF SLAB	259.86	202.02
WEIGHT OF DIAPHRAGMS	0.0	0.0
UNIFORM LD. ON NON-COMP. SECT.	0.0	0.0
UNIFORM LD. ON COMP. SECT.	104.86	128.72
LIVE LOAD	326.67	401.01
TOTAL STRESS	1570.47	1415.15

STRAND PLACEMENT

PLACE 29. STRAND IN ROW 1.
PLACE 9. STRAND IN ROW 2.

PRESTRESS LOSSES

INITIAL LOSS (INITIAL STRAND RELAXATION + ELASTIC SHORTENING) =
9450.00 + 8584.10 = 18034.10PSI

FINAL LOSS = 38757.19 PSI

ELASTIC SHORTENING = 8584.10 PSI
SHRINKAGE = 6500.00 PSI
CREEP = 10508.42 PSI
RELAXATION OF PRESTRESSING STEEL = 13164.68 PSI

CONDITIONS AT THE CENTER

INITIAL PRESTRESS + D.L. GIRDER IN THE TOP = -540.42 + 879.07 = 338.65 PSI
INITIAL PRESTRESS + D.L. GIRDER IN THE BOTTOM = 1840.65 - 683.40 = 1157.25 PSI
PRESTRESS + FINAL STRESS IN THE TOP = -474.92 + 1570.47 = 1095.55 PSI
PRESTRESS + FINAL STRESS IN THE BOTTOM = 1617.54 + -1415.15 = 202.39 PSI

***** RATING FOR HS20*****

* MEMBER CAPACITY = 2041.80 PSI *
* DEAD LOAD EFFECT = 1014.14 PSI *
* LIVE LOAD + IMPACT CAPACITY = 1027.66 PSI *
* ACTUAL LIVE LOAD + IMPACT STRESS = 401.01 PSI *

* INVENTORY AND OPERATING RATING = 92.26 TONS *

STRESSES EXCEED ALLOWABLE UNDER INITIAL CONDITIONS TOP
ALLOWABLE = 474. PSI T
ACTUAL = ***** PSI

DISTANCE FROM END = ***** FT.
STRESSES EXCEED ALLOWABLE UNDER INITIAL CONDITIONS BOTTOM
ALLOWABLE = 2400. PSI C
ACTUAL = ***** PSI
DISTANCE FROM END = ***** FT.

CONDITIONS AT ***** FT. FROM THE END OF THE BEAM
INITIAL PRESTRESS + D.L. GIRDER IN THE TOP = -540.42 + ***** = ***** PSI
INITIAL PRESTRESS + D.L. GIRDER IN THE BOTTOM = 1840.65 - ***** = ***** PSI
PRESTRESS + FINAL STRESS IN THE TOP = -474.92 + ***** = ***** PSI
PRESTRESS + FINAL STRESS IN THE BOTTOM = 1617.54 + ***** = ***** PSI

CONDITIONS AT THE END OF THE BEAM
INITIAL PRESTRESS + D.L. GIRDER IN THE TOP = -540.42 + 73.68 = -466.74 PSI
INITIAL PRESTRESS + D.L. GIRDER IN THE BOTTOM = 1840.65 - 57.28 = 1783.37 PSI
PRESTRESS + FINAL STRESS IN THE TOP = -474.92 + 199.80 = -275.12 PSI
PRESTRESS + FINAL STRESS IN THE BOTTOM = 1617.54 + -202.43 = 1415.11 PSI

EMBEDMENT LENGTH = 4.88 FT.

ALLOWABLE ULTIMATE MOMENTS
BREAK NO. STRANDS ALLOWABLE MOMENT (FT KIPS)
1 38. 0.

CUT OFF LENGTH + TWICE THE EMBEDMENT LENGTH***** FT. IS GREATER THAN L/2 FOR BREAK NO. 1

ULTIMATE STRENGTH DESIGN AT L/2
ACTUAL= 1635.7 FT. KIPS
ALLOWABLE= 2725.1 FT. KIPS

DEFLECTIONS
DEAD LOAD CENTER = 0.923543 INCHES 1/4 POINT = 0.658024 INCHES
PRESTRESS CENTER = 0.0 INCHES
SLAB + DIAPH. CENTER = 0.210719 IN. 1/4 POINT = 0.150137 IN.

*** WARNING NET DEFLECTION IS DOWNWARD ***

SHEAR DESIGN (DIMENSIONS IN SQUARE INCHES)
REQUIRED AREA OF REINFORCEMENT= 0.43
MINIMUM AREA OF REINFORCEMENT= 0.36
VC = 67999. LBS VU = 159121. LBS
BASED ON 24 IN. SPACING AND 60000 PSI STEEL

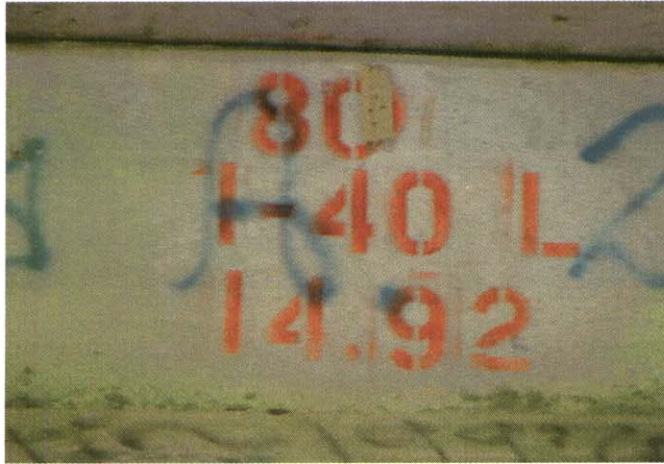
END OF PROBLEM

Bridge No.: 80 — 10040 — 1492
Crossing: BETTYS BEND RD (A138)*
Federal No.: 80I00400030

Date:

April 25, 2003

PIC1



BRIDGE NO. AT ABUTMENT # 1

Bridge No.: 80 — I0040 — 1492
Crossing:: BETTYS BEND RD (A138)*
Federal Nc 80I00400030

Date:

April 25, 2003

PIC2



LEFT SIDE VIEW W/CLEARANCE SIGN 14'2"

PIC3



POTHOLE @ B-APPR JOINT

Bridge No.: 80 — I0040 — 1492
Crossing:: BETTYS BEND RD (A138)*
Federal No.: 80I00400030

Date:

April 25, 2003

PIC4



VIEW ACROSS DECK FROM A-APPR

Bridge No.: 80 — 10040 — 1492

Crossing:: BETTYS BEND RD (A138)*

Federal No.: 80100400030

Date:

June 12, 2001

PIC1



BRIDGE NO. AT ABUTMENT #1

Bridge No.: 80 — 10040 — 1492
Crossing:: BETTYS BEND RD (A138)*
Federal No 80I00400030

Date:

June 12, 2001

PIC2



VIEW ACROSS DECK

PIC3



RIGHT SIDE VIEW

Bridge No.: 80 — 10040 — 1492

Crossing:: BETTYS BEND RD (A138)*

Federal No.: 80100400030

Date:

June 16, 1999

PIC1



BRIDGE NO. AT ABUTMENT # 1

Bridge No.: 80 — I0040 — 1492
Crossing:: BETTYS BEND RD (A138)*
Federal No 80I00400030

Date:

June 16, 1999

PIC2



ABUTMENT TYPICAL

PIC3



BOTTOM OF DECK

Bridge No.: 80 — I0040 — 1492
Crossing:: BETTYS BEND RD (A138)*
Federal No.: 80I00400030

Date:

June 16, 1999

PIC4



LEFT SIDE ELEVATION

PIC5



ACROSS TOP OF DECK

Bridge No.: 80 — I0040 — 1492
Crossing:: BETTYS BEND RD (A138)*
Federal No.: 80I00400030

Date: June 16, 1999

PIC6



APPROACH #1

PIC7



APPROACH #2

Bridge No.: 80 — 10040 — 1492
Crossing:: BETTYS BEND RD (A138)*
Federal No.: 80I00400030

Date: June 16, 1999

PIC8



SETTLEMENT ABUTMENT #2 & SEPARATION OF SLOPE PAVEMENT

PIC9



CRACK AT BACKWALL ABUTMENT #2 WITH MISALIGNMENT

Bridge No.: 80 — I0040 — 1492
Crossing:: BETTYS BEND RD (A138)*
Federal No.: 80I00400030

Date: June 16, 1999

PIC10



APPROACH 'B' SETTLEMENT

PIC11



CRACK AT BACKWALL ABUTMENT #1 WITH MISALIGNMENT

Bridge No.: 80 — 10040 — 1492
Crossing:: BETTYS BEND RD (A138)*
Federal No.: 80100400030

Date: June 16, 1999

PIC12



APPROACH 'A' SETTLEMENT

PIC13



CRACK AT BACKWALL ABUTMENT #1 RIGHT SIDE WITH MISALIGNMENT

Bridge No.: 80 — I0040 — 1492
Crossing:: BETTYS BEND RD (A138)*
Federal No.: 80I00400030

Date:

June 16, 1999

PIC14



BREAKOUT ABUTMENT #1 BACKWALL RIGHT SIDE

ROUTINE BRIDGE INSPECTION REPORT

Page No. _____

Form BIR 3.0C
(Rev. 9-22-98)
DT-1537

Field Report No. 16 Date 4-25-03
Previous Report No. 15 Date 6/12/2003
Plans: yes

Bridge No. 80I00400030
Eleven Digit No.

Bridge Location No. 80 - I0040 - 14.92 L
Co. Route Log Mile

I 40 over BETTYS BEND RD (A138)*
Road Name Crossing

Indepth Insp. Req'd: No
(If yes itemize limits under comment)

Structure Type HBB

FRACTURE CRITICAL: No

FEATURE CHANGES:

Wearing Surface _____ Type _____ Depth _____ (in.)
Bridge Rail _____ Describe changes: _____
Approach Rail _____

CLEARANCE CHANGES: (If yes make changes below)

Vertical Clearance over deck _____ (ft.-in.)
Vertical Under Clearance _____ (ft.-in.)
Horizontal Under Clearance _____ (*. * ft.)
Deck Width Curb/Curb _____ (*. * ft.)
Deck Width Rail/Rail _____ (*. * ft.)
Sidewalk Width Rt. _____ Lt. _____

INSPECTORS

Hunter _____
Crutcher _____
Waller _____
Thompson _____

Condition: **GOOD** (If change describe in comments)

Comments

Approaches	<u>G</u>	
Deck Condition (Item 58)	<u>G</u>	
Superstructure (Item 59)		
a. Beams	<u>G</u>	
b. Bearings	<u>G</u>	
c. Diaphragms	<u>NA</u>	
Substructure (Item 60)		
a. Caps/Bridge Seats	<u>G</u>	
b. Columns/Piles	<u>NA</u>	
c. Footings	<u>NV</u>	
d. Wing W./Breast W.	<u>G</u>	
Scour/Erosion	<u>G</u>	
Channel (Item 61)	<u>NA</u>	

UNDERWATER INSPECTION

To Be Performed By: N/A
Date Underwater Insp. _____
BRIDGE is: _____

Weight Limit Posted No
Gross..... Tons
2 Axle..... Tons
3 or more Axles.. Tons

COMMENTS:

Supervising Bridge Inspector: Silbert Wayne Hunter

BRIDGE RATING: **GOOD**

SUMMARY
80-I40-14.92 LT
4/25/2003

I40/Betty's Bend Rd.
1 Span/H.B.B.

This bridge was inspected and found to be in **good** condition. The approach alignment and embankment are good. The approach pavement is good. The approach guardrail and parapet are standard type and good. There are no paddleboards.

A.C. wearing surface is fair with a 1' diameter pot hole. Bearing devices, beams, and alignment of beams are good. Bottom deck and sub-structure elements are in good condition. There is a breakout in end of backwall at abutment #1 3'-3"L x 9"W x up to 4" deep right side.

Gilbert Hunter

ROUTINE BRIDGE INSPECTION REPORT

Page No.

Form BIR 3.0C
(Rev. 9-22-98)
DT-1537

Field Report No. 14 Date 6/16/99
Previous Report No. 15 Date 6-12-01
Plans: Yes

Bridge No. 80I00400030
Eleven Digit No.

Bridge Location No. 80 - I0040 - 14.92 L
Co. Route Log Mile

I 40 over BETTYS BEND RD (A138)*
Road Name Crossing

Indepth Insp. Req'd: NO
(If yes itemize limits under comment)

Structure Type HBB

FRACTURE CRITICAL: NO

FEATURE CHANGES:

Wearing Surface Type Depth (in.)

Bridge Rail Describe changes:

Approach Rail

CLEARANCE CHANGES:

(If yes make changes below)

Vertical Clearance over deck (ft.-in.)

Vertical Under Clearance (ft.-in.)

Horizontal Under Clearance (*. ft.)

Deck Width Curb/Curb (*. ft.)

Deck Width Rail/Rail (*. ft.)

Sidewalk Width Rt. Lt.

INSPECTORS

Hunter

Daniel

Waller

Thompson

Condition: GOOD (If change describe in comments)

Comments

Approaches

Deck Condition (Item 58)

Superstructure (Item 59)

a. Beams

b. Bearings

c. Diaphragms

Substructure (Item 60)

a. Caps/Bridge Seats

b. Columns/Piles

c. Footings

d. Wing W./Breast W.

Scour/Erosion

Channel (Item 61)

<u>G</u>	
<u>G</u>	<u>A.C. overlay (good)</u>
<u>G</u>	
<u>G</u>	
<u>NA</u>	
<u>G</u>	
<u>NA</u>	
<u>NA</u>	
<u>G</u>	
<u>NA</u>	
<u>G</u>	
<u>G</u>	
<u>NA</u>	

UNDERWATER INSPECTION

To Be Performed By: NA

Date Underwater Insp.

BRIDGE is:

COMMENTS:

Weight Limit Posted NO

Gross..... Tons

2 Axle..... Tons

3 or more Axles.. Tons

Supervising Bridge Inspector: Gilbert Wayne Hunter

BRIDGE RATING: GOOD

SUMMARY
80-I40-14.92 LT
6-12-01

I40/Betty's Bend Rd.
1 Span/H.B.B.

This bridge was inspected and found to be in **good** condition. The approach alignment and embankment are good. The approach pavement is good. The approach guardrail and parapet are standard type and good. There are no paddleboards.

A.C. wearing surface is good. Bearing devices, beams, and alignment of beams are good. Bottom deck and sub-structure elements are in good condition. There is a breakout in end of backwall at abutment #1 3'-3"L x 9"W x up to 4" deep right side.

Gilbert Hunter

BRIDGE INSPECTION REPORT

FORM BIR 3.0
Rev. 09/24/98
DT-0069

FIELD REPORT NO. 14 DATE 6-16-99
REVIOUS REPORT NO. 13 DATE 5-7-97
PLANS ---- YES ☒ NO ☐

BRIDGE NO. 80I00400030
ELEVEN DIGIT NO.

BRIDGE LOC. NO. 80 - I40 - 14.92 Lt.
CO. ROUTE LOG MILE

I40 OVER Nettys Bend Rd.
ROAD NAME FEATURE INTERSECTED

YEAR CONSTRUCTED 1959 COUNTY Smith MAINTENANCE DISTRICT NO. 32
(ESTIMATED OR ACTUAL)
[] ☒

YEAR WIDENED _____ YEAR REHABILITATED _____
ESTIMATED OR ACTUAL ESTIMATED OR ACTUAL
[] [] [] []

FEATURES

WEARING SURFACE-- CONCRETE [] TIMBER [] ASPHALT [] (DEPTH=_____)
FLARED WIDTH ----- YES [] NO ☒
NAVIGATIONAL CONTROL-- YES [] NO ☒
MEDIAN WIDTH ----- OPEN ☒ NONE [] CLOSED []

BRIDGE SKEW 87° LT ☒ RT []

INSPECTORS

STRUCTURE TYPE HBB NO. SPANS 1
Main Span Main Span

STRUCTURE TYPE — NO. SPANS —
Approach Spans Approach Spans

MAXIMUM SPAN LENGTH 74' TOTAL LENGTH 75.5'

1. Hunter
2. Daniel
3. Crytcher
4. Walker
5. _____
6. _____
7. _____
8. _____
9. _____

WIDTHS CLEARANCES
DECK OUT-TO-OUT 46.6' MIN. VERTICAL OVER DECK —
ROADWAY CURB/CURB 40' MIN. VERTICAL UNDER CL 14'-10"
SIDEWALK — RT — LT MIN. LATERAL UNDER CL 7.5' RT — LT
*APPROACH ROADWAY 24'
APPR. SHLD. 10 RT 4 LT
*DOES NOT INCLUDE SHOULDER

UNDERWATER INSPECTION

INSPECTION PERFORMED BY:
DOT FIELD TEAM [] DATE _____
CONTRACT DIVERS [] DATE _____
NONE REQUIRED ☒

(<25')
NBIS BRIDGE
LENGTH Over 25'
(ft) (in)

CHANGE IN STRUCTURAL CONDITION YES [] NO ☒
MAJOR REPAIRS MADE YES [] NO ☒

FRACTURE CRITICAL
DETAILS: YES [] NO ☒
IF YES, INCLUDE BIR 3.9

COMMENTS: _____

William Wayne Hunter
SUPERVISING BRIDGE INSPECTOR

BRIDGE RATING [] [] [] []
GOOD FAIR POOR CRITICAL

BRIDGE LOC. NO. 80 - I40 - 14.92 ^{47.}
CO. ROUTE L.M.

DATE: 6-16-99

PERFORMANCE EVALUATION

Time of day inspected 10:00 Weather conditions 70° Partly cloudy

Vehicles observed Tractor trailer & passenger type.

LIVE LOAD BEHAVIOR

	YES	NO	COMMENTS
Substructure			
Horiz. & Vert. Defl. - - -	[]	[X]	
Vibration - - - - -	[]	[X]	
Superstructure			
Horiz. & Vert. Defl. - - -	[X]	[]	
Vibration - - - - -	[X]	[]	

APPROACH

	G	F	P	C	
Alignment	(G)				
Slab	G	F	P	C	<u>NA</u>
Joints	G	F	P	C	<u>NA</u>
Pavement	G	(F)	P	C	<u>Heavy settlement at both Abutts 2"</u>
Embankment	(G)	F	P	C	
Drains	G	F	(P)	C	<u>PAVED over</u>

TRAFFIC SAFETY FEATURES

	G	F	P	C	STANDARD	SUB-STANDARD
Bridgerailing	(G)				[X]	[]
Transitions	(G)	F	P	C	[X]	[]
Guardrail	(G)	F	P	C	[X]	[]
Guardrail Terminal	(G)	F	P	C	[X]	[]

SIGNING

	YES	NO	NEEDED	
Paddleboard - - - - -	[]	[X]	[]	WEIGHT LIMIT POSTED YES [] NO [X]
Vertical Clearance (< 14') - - - -	[]	[]	[]	
Narrow [] One Lane Bridge [] - []	[X]	[]	[]	GROSS _____ TONS 2 AXLE _____ TONS 3 OR MORE AXLES _____ TONS

Other Signs or Plaques _____

Comments Regarding Any Problems With Signing _____

Other Recommendations _____

FORM BIR 3.2
Rev. 09/24/98
DT-0081

BRIDGE LOC. NO. 80 - 740 - 14.92 ^{Lt.}
CO. ROUTE L.M.

DATE: 6-16-98

DECK

COMMENTS

WEARING SURFACE	G	(F)	P	C
DECK - STRUCTURAL	G	F	P	C
CONDITION				
CURBS	G	F	P	C
MEDIAN	G	F	P	C
SIDEWALKS	G	F	P	C
PARAPET	(G)	F	P	C
RAILING	G	F	P	C
PAINT	G	F	P	C
DRAINS	G	F	P	C
LIGHTING STD'S	G	F	P	C
UTILITIES	G	F	P	C
JOINT LEAKAGE	G	F	P	C
EXPANSION JOINTS	G	F	P	C

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

NA

SUPERSTRUCTURE

COMMENTS

BEARING DEVICES	(G)	F	P	C
GIRDERS OR BEAMS	(G)	F	P	C
FLOOR BEAMS	G	F	P	C
STRINGERS	G	F	P	C
DIAPHRAGMS	G	F	P	C
BRACING	G	F	P	C
TRUSSES - GENERAL	G	F	P	C
- PORTALS	G	F	P	C
- BRACING	G	F	P	C
PAINT	G	F	P	C
ALIGNMENT OF	(G)	F	P	C
MEMBERS				

NA

NA

NA

NA

NA

TEXTURE COAT

CONDITION RATING	G	F	P	C
OVERALL APPEARANCE	G	F	P	C
STAINING	G	F	P	C
SCALING	G	F	P	C
FADING	G	F	P	C

NEEDS SPOT PAINTING? YES [] NO []

NEEDS REPAINTING? YES [] NO []

COMMENTS: _____

RECOMMENDATIONS _____

FORM BIR 3.3
Rev. 09/24/98
DT-0082

BRIDGE LOC. NO. 80 - I 40 - 14.92⁴
CO. ROUTE L.M.

DATE: 6-16-99

SUBSTRUCTURE

ABUTMENTS

COMMENTS

CAPS	(G)	F	P	C	
BREASTWALL	G	F	P	C	NA
WINGS	(G)	F	P	C	
BACKWALL	G	(F)	P	C	1/2" open sep. CRACK with 1/2" mis alignment both ways
PLUMB	(G)	F	P	C	W. BREAKOUT 39" L X 9" W X up to 4" D RT. Abut
FOOTING	G	F	P	C	NV
PILES	G	F	P	C	NV
EMBANKMENT	(G)	F	P	C	
BEARING SURFACE	(G)	F	P	C	
BEARINGS	(G)	F	P	C	

SLOPE PAVING (G) F P C

PIERS

CAPS	G	F	P	C	
COLUMNS	G	F	P	C	
PLUMB	G	F	P	C	
FOOTINGS	G	F	P	C	
PILES	G	F	P	C	
BEARING SURFACE	G	F	P	C	
BEARINGS	G	F	P	C	
BENTS					

CAPS	G	F	P	C	
COLUMNS	G	F	P	C	
PLUMB	G	F	P	C	
FOOTINGS	G	F	P	C	
PILES	G	F	P	C	
BEARING SURFACE	G	F	P	C	
BEARINGS	G	F	P	C	

SCOUR CONDITION NONE [Y]

RECOMMENDATIONS:

SUMMARY
80-I40-14.92 LT
6-16-99

I40/Betty's Bend Rd.
1 Span/H.B.B.

This bridge was inspected and found to be in good condition. The approach alignment and embankment are good. The approach pavement has major settlement up to 2" at each end of bridge. The approach guardrail and parapet are standard type and good. There are no paddleboards.

A.C. wearing surface is good. Bearing devices, beams, and alignment of beams are good. Bottom deck and sub-structure elements are in good condition. There is a breakout in end of backwall at abutment #1 3'-3"L x 9"W x up to 4" deep right side.

Gilbert Hunter

FORM BIR 3.0A
Rev. 6-9-92
DT-1443

CURRENT FIELD REPORT NO. 14
PREVIOUS FIELD REPORT NO. 13

DATE 6-16-99
DATE 5-7-97

INSPECTION REPORT FOR UNDERPASS ROUTE

BRIDGE NO. 80I00400030
ELEVEN DIGIT NUMBER

UNDERPASS LOC. NO. 80 - A138 - 0.54
CO. RTE. L.M.

80 - 140 ^{Lt.} -14.92 OVER 80 - A138 - 0.54
CO. RTE. L.M. CO. RTE. L.M.

STRUCTURE NAME (IF NAMED)

COUNTY Smith

YEAR CONSTRUCTED 1959 YEAR WIDENED _____ YEAR REHABILITATED _____
ESTIMATED [] ACTUAL [☒]

GEOMETRIC FEATURES UNDER BRIDGE

DIVIDED HIGHWAY - - - - LEFT RDWY [] RIGHT RDWY [] N.A. [☒]
TYPE OF WEARING SURFACE - - - - CONCRETE [] ASPHALT [☒] GRAVEL []
WIDTH OF APPROACH TRAVELED ROADWAY 12 FT. (DOES NOT INCLUDE SHOULDERS)
WIDTH OF MEDIAN IF DIVIDED HIGHWAY FT.
APPROACH SHOULDER WIDTH 6 FT. (RT.) 0 FT. (LT.)
*HORIZONTAL CLEARANCE UNDER BRIDGE FT. IN.
*DISTANCE BETWEEN PIER PROTECTION GUARDRAIL AND
SUBSTRUCTURE FT. (RT.) FT. (LT.)
*WIDTH OF SIDEWALK UNDER BRIDGE FT. (RT.) FT. (LT.)
*MINIMUM VERTICAL CLEARANCE 14 FT. 10 IN.

*SHOW ON SKETCH

TRAFFIC SAFETY FEATURES FOR UNDERPASS ROUTE STANDARD SUB-STANDARD

PIER PROTECTION RAILING OR PARAPET	G	F	P	C	[]	[]	NON EXIST [☒]
APPROACH GUARDRAIL TRANSITIONS	G	F	P	C	[]	[]	NON EXIST [☒]
APPROACH GUARDRAIL	G	F	P	C	[]	[]	NON EXIST [☒]
APPROACH GUARDRAIL TERMINAL	G	F	P	C	[]	[]	NON EXIST [☒]

SIGNING FOR UNDERPASS ROUTE

PADDLEBOARD	YES []	NO [☒]	NEEDED []
VERTICAL CLEARANCE (< 14'6")	YES []	NO [☒]	NEEDED []
NARROW PASSAGE	YES []	NO [☒]	NEEDED []
ONE LANE PASSAGE	YES []	NO [☒]	NEEDED []
CURVE	YES []	NO [☒]	NEEDED []
SPEED LIMIT	YES []	NO [☒]	NEEDED []

INSPECTORS

1.	<u>Hunter</u>
2.	<u>Daniel</u>
3.	<u>Crutcher</u>
4.	<u>Waller</u>
5.	_____
6.	_____

FORM BIR 3.0A (CONTINUED)
 Rev. 6-9-92
 DT-1443

UNDERPASS LOC. NO. 80 - A138 - 0.54
 CO. RTE. L.M.

OTHER SIGNS OR PLAQUES _____

COMMENTS REGARDING ANY PROBLEM WITH SIGNING _____

BRIDGE FEATURES

BRIDGE SKEW _____
 STRUCTURE TYPE _____

NO. SPANS _____
 MAIN TYPE _____

STRUCTURE TYPE _____
 APPROACH SPAN _____

NO. SPANS _____
 APPROACH TYPE _____

MAXIMUM SPAN LENGTH _____ FT.

TOTAL LENGTH _____ FT.

WIDTH OF BRIDGE OUT-TO-OUT _____

FT. (RT. < TO L OF BRIDGE)

WIDTH OF BRIDGE ALONG SKEW _____

FT. (IF UNABLE TO MEASURE AT RT. $\div$ TO L OF BRIDGE)

NUMBER OF LANES/TRACKS ON BRIDGE 2

BRIDGE CONDITION

G F P C

DOES POTENTIAL EXIST FOR ELEMENTS FROM BRIDGE FALLING ON ROADWAY
 BENEATH? YES [] NO [☒]

DOES POTENTIAL EXIST BECAUSE OF DETERIORATED CONDITION FOR FAILURE
 OF MAJOR MEMBERS? YES [] NO [☒]

COMMENT ON ANY CONDITIONS OF BRIDGE THAT WOULD EFFECT ROADWAY BENEATH _____

NOTE: IF UNDERPASS ROUTE IS DIVIDED HIGHWAY, USE TWO (2) OF
 THESE FORMS, ONE FOR EACH ROADWAY.

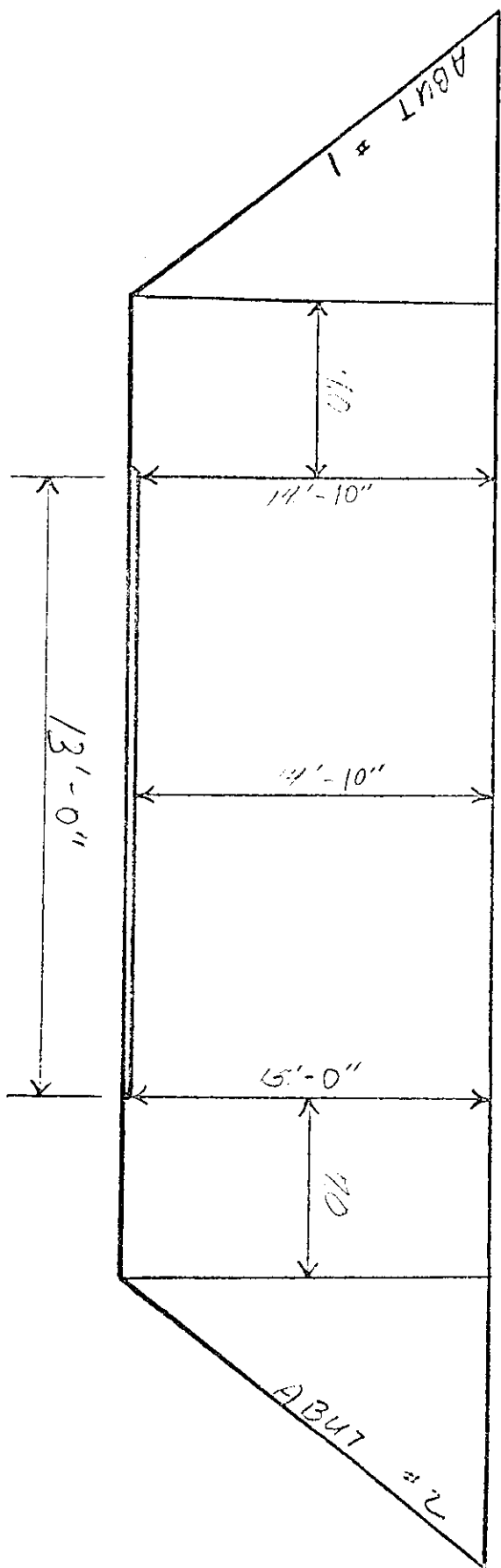
MINIMUM PICTURES REQUIRED

1. ELEVATION VIEW OF BRIDGE ON BOTH SIDES SHOWING UNDERPASS
2. VIEW SHOWING BOTH APPROACHES TO BRIDGE
3. VIEW SHOWING SAFETY FEATURES
4. VIEW SHOWING ANY PROBLEMS

6-16-99MD

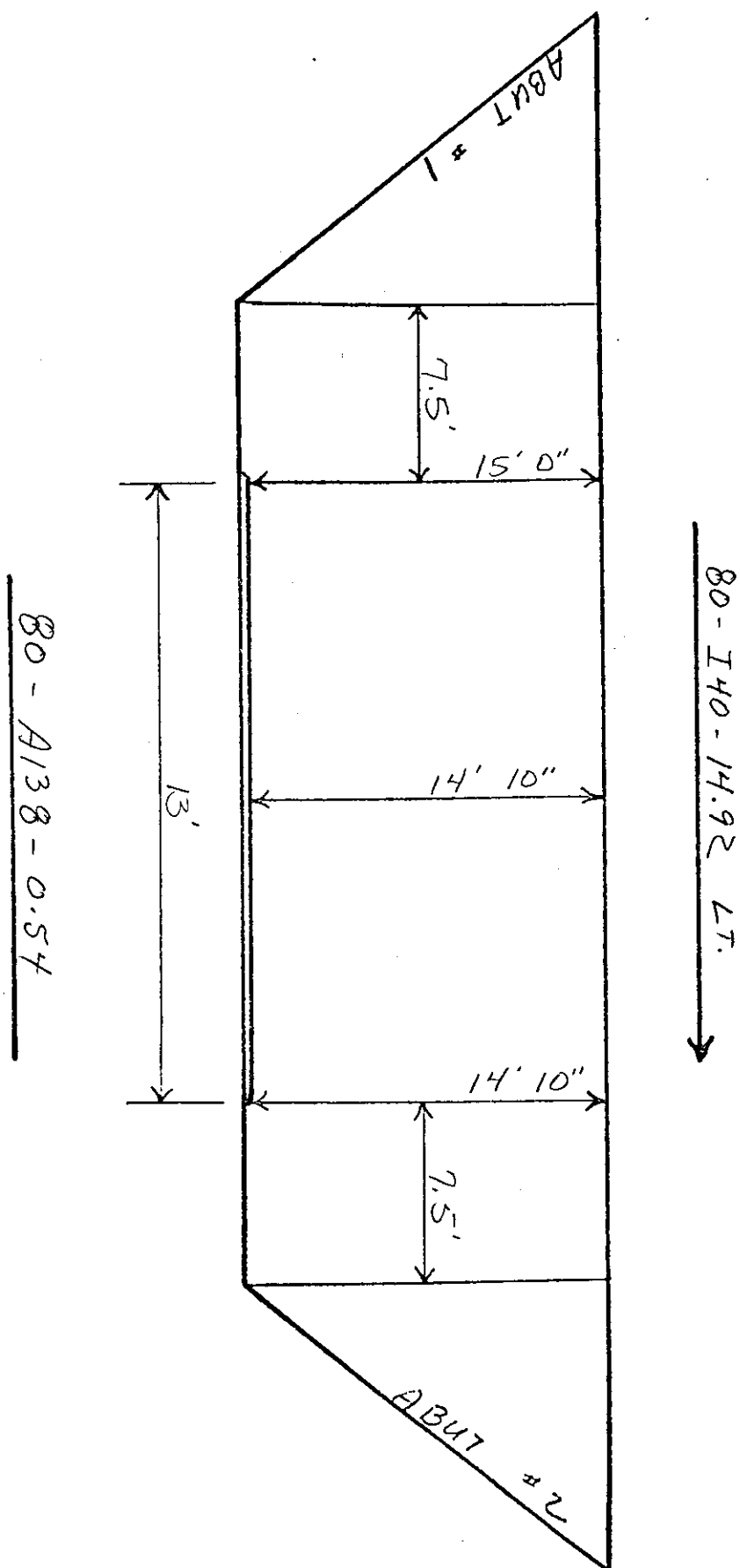
Clearance Sketch

80-140-14.92 LT. →



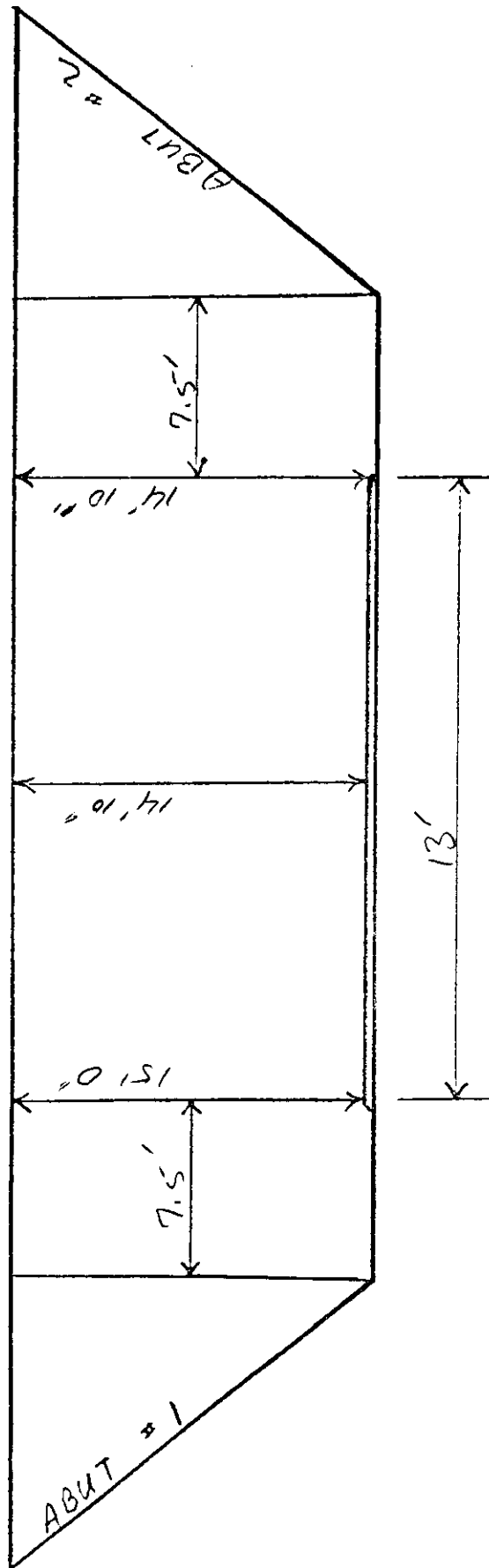
80-A138-0.54

MAR 24 1992



FEB 05 1990

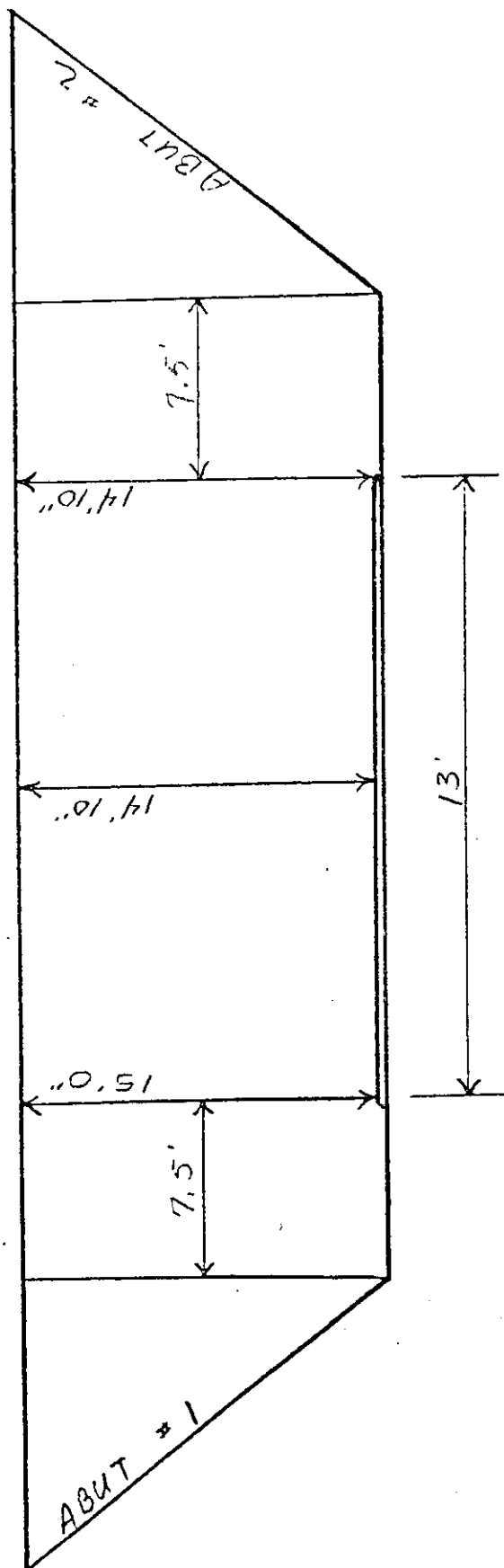
80 - I 40 - 14.92 LT.



80 - A138 - 0.54

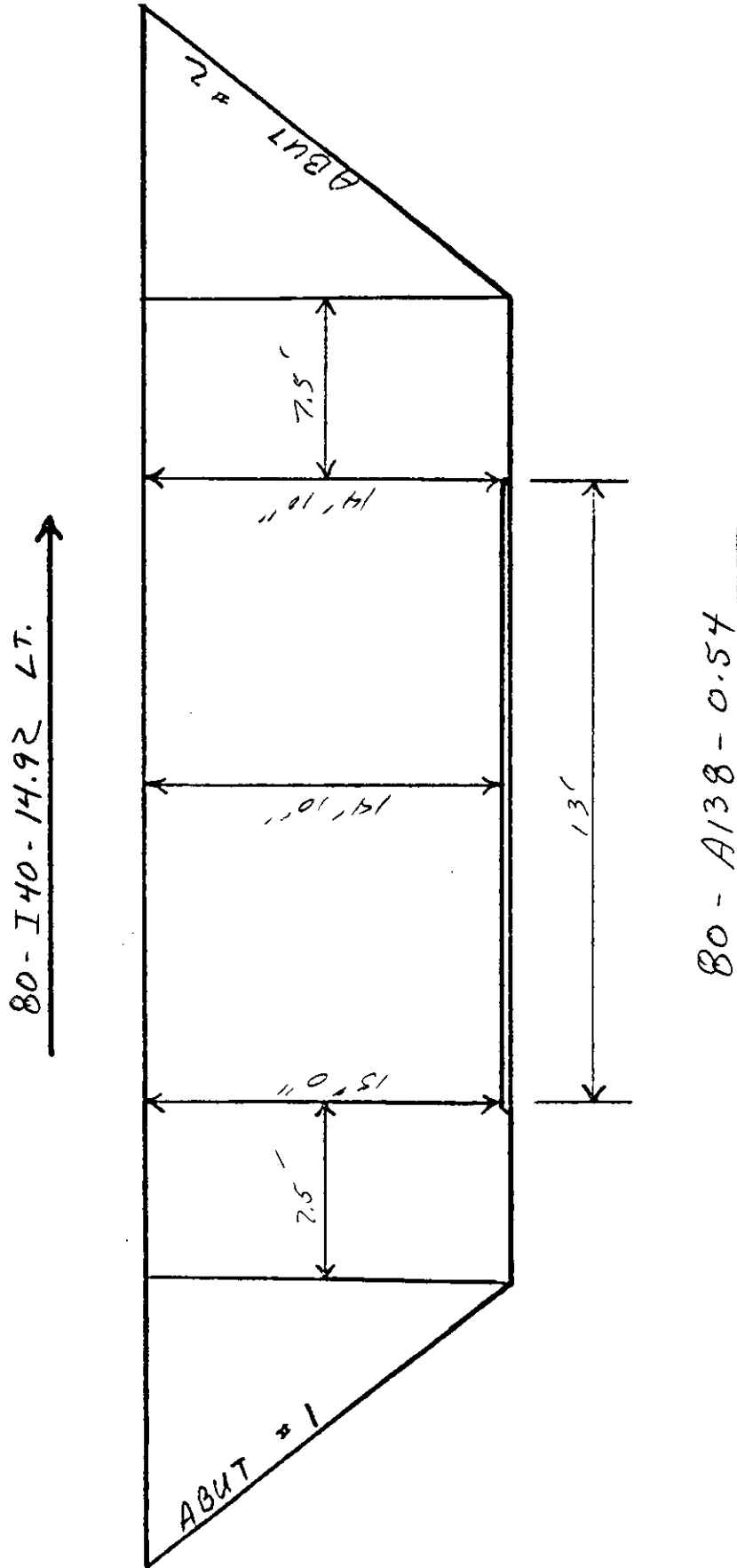
JAN 29 1988

80 - I40 - 14.92 LT. →

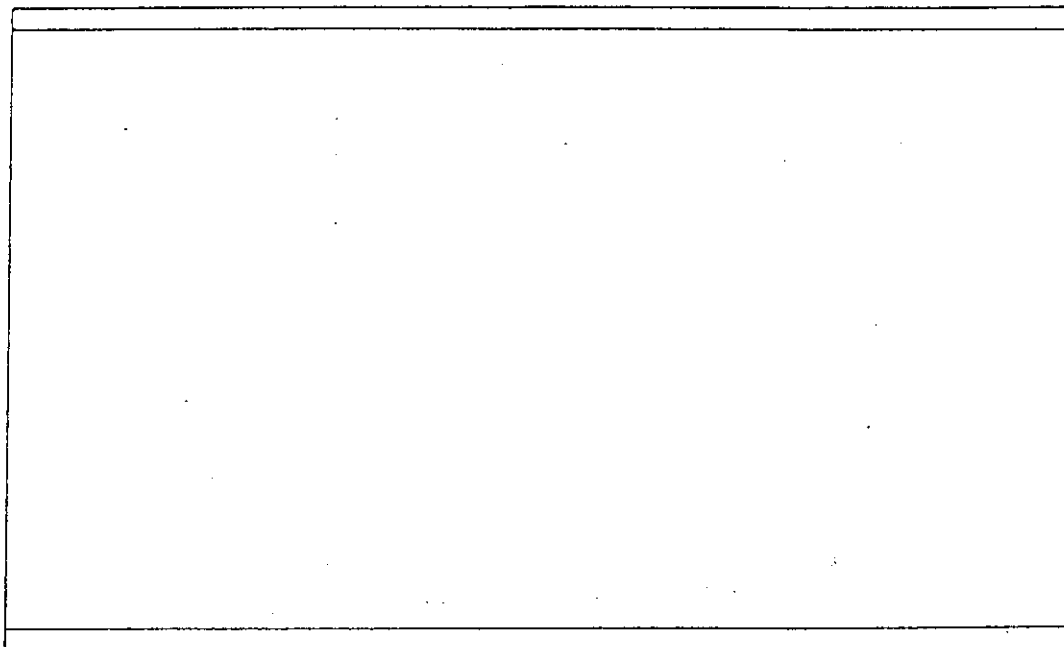


80 - A138 - 0.54

JUL 23 1986



6-16-77
LWH

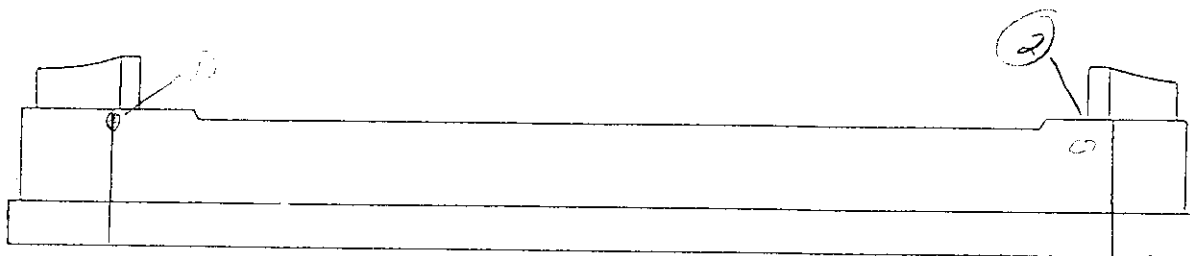


Top Slab #

Br. # 80-140-14.92

Deck	NV	A.C. overlay
Parapet	G	
Drains	NA	
Joints	NA	

6.16.17



ABUT #1

Br. = 80 - 140 - 14.92 LT.

BACK	G	BRUSH ① 4" Y6" X 3' DEEP ② HIGH STILL MOUNT 3" Y6" X 2' DEEP
WALL		
CAP	G	
WINGS	G	
Bearings	G	

6-5-



ABUT #2

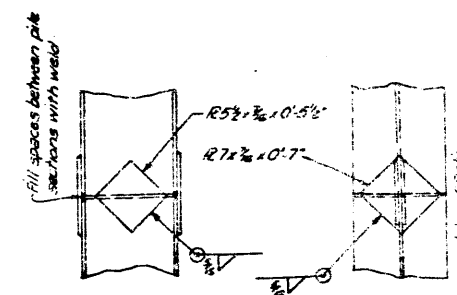
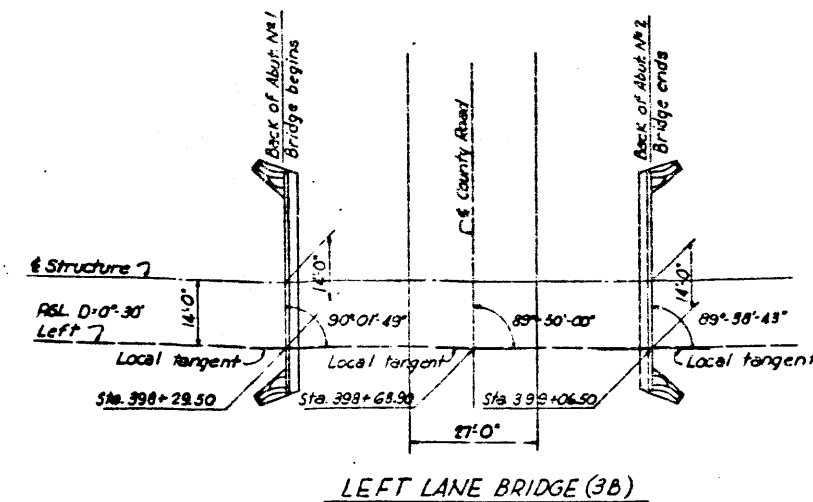
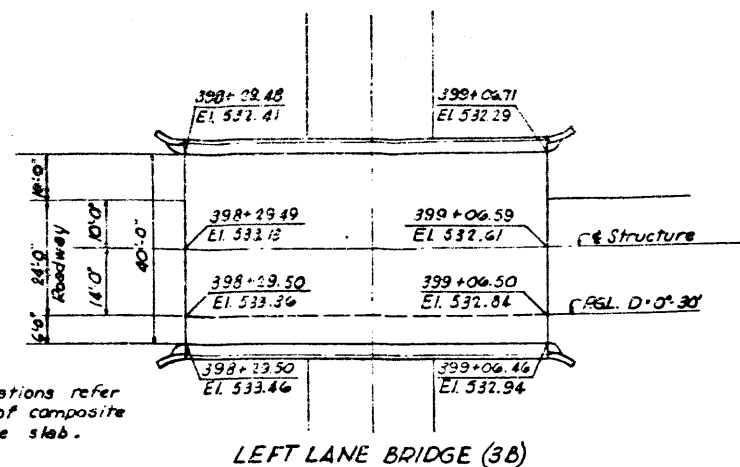
$$Br. = 80 - 140 - 14.92 \text{ LT.}$$

BACK	G
Wall	

CAP | G

WINGS	G
-------	---

Bearings	G
----------	---



GENERAL NOTES:

GENERAL SPECIFICATIONS: Standard Road and Bridge Specification of the Tennessee Department of Highways and Public Works.

DESIGN SPECIFICATIONS: Standard Specifications for Highway Bridges AASHTO, 1957 and tentative AASHTO Specifications covering prestressed concrete design and construction (with subsequent revisions).

DESIGN LOADING: H20-S16-44 and for alternate loading as per Section 4C of PDMA 20-4.

CONCRETE: All concrete shall be Class 'A' and shall be air entrained.

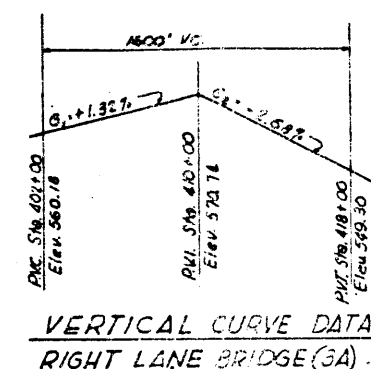
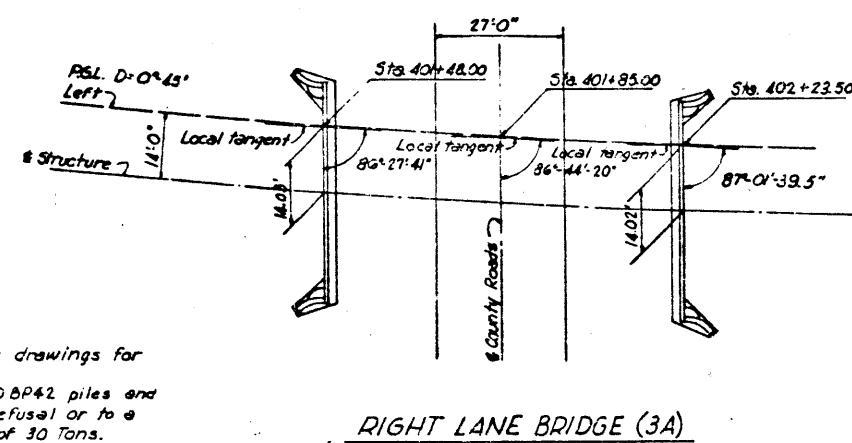
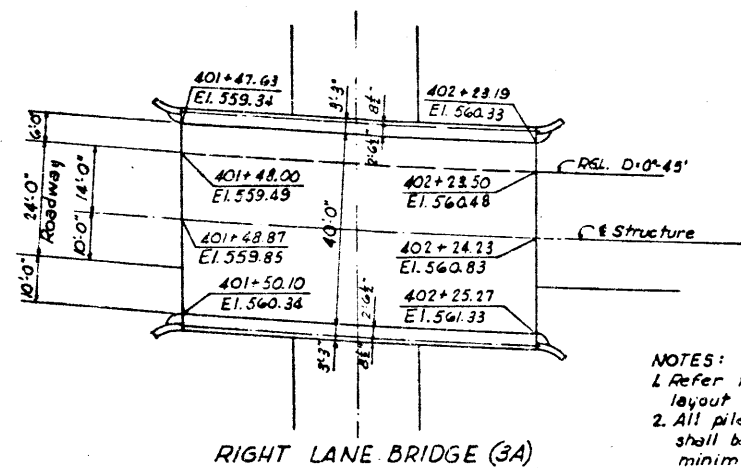
REINFORCING STEEL: See Specifications.

FORMS and FINISH: See Specifications.

HAND RAILS: Standard 2-rail steelhandrail, Tennessee Highway Department Standard.

PRECAST PRESTRESSED CONCRETE BOX GIRDERS: See special provisions.

BEARING PADS: See special provisions.



- NOTES:
1. Refer to Abutment drawings for layout of piles.
 2. All piles shall be 10BP42 piles and shall be driven to refusal or to a minimum bearing of 30 Tons.
 3. End fills shall be in place and compacted before driving piles.

PLANS

Scale: 1" = 20'

FOUNDATION PLANS AND LAYOUT OF BRIDGES

Scale: 1" = 20'

265.36 R+L

80-40-(265.97)

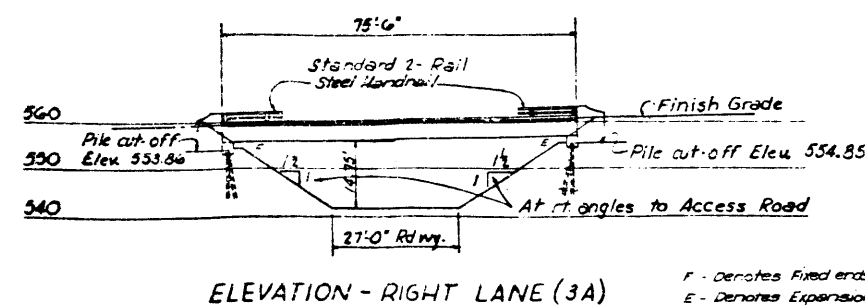
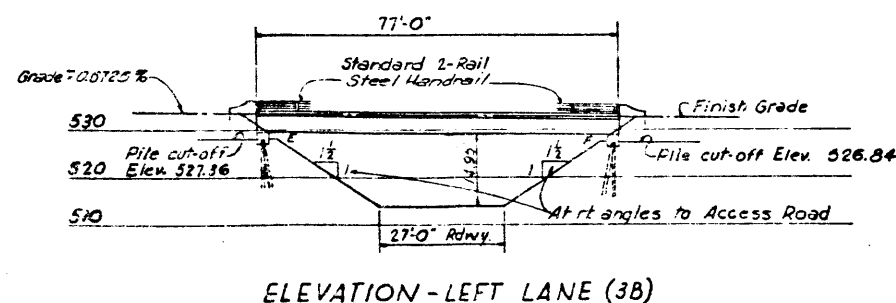
LIST OF DRAWINGS

Layout of Bridges	DRWG. NO.
Layout of Bridges	G-15-76
Abutments Nos 1 & 2 Right Lane	G-15-77
Abutments Nos 1 & 2 Left Lane	G-15-78
Box Girder Layout and Details	G-15-79
Slab & Safety Curb Layout and Details	G-15-80
Reinforcing Steel Schedule	G-15-81
Steel Handrailing	G-10-99

2-40'-0" Roadways with Safety Curbs
SMITH COUNTY

Scale: As noted

MID-SOUTH ENGINEERING CO., INC. 820 BROADWAY, N.E. KNOXVILLE, TENNESSEE	
GRADE SEPARATION - INTERSTATE OVER COUNTY ROAD RIGHT LANE (3A) STA. 401+48.00 LEFT LANE (3B) STA. 398+29.50	
LAYOUT OF BRIDGES 3A & 3B	
STATE OF TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS NASHVILLE	
DR. WRS.	DATE
CHKD. RAN	11-14-57
APPD. MZ	G-15-76



ESTIMATED QUANTITIES						
ITEM NO.	55-4	135-12	702	137-3	154-1K	154-L
ITEMS	EXCAVATION WET DRY	CONC. CLASS A	REIN. STEEL	STEEL HANDRAIL 2-BAR	PILES 10BP42	Precast Prestressed Box Girders, Composite 11'-11 1/2" x 48'-11 1/2"
(3A) RIGHT LANE	Cu. Yds.	Cu. Yds.	Lbs.	Lin. Ft.	Lin. Ft.	Each
SUPERSTRUCTURE		60.1	10,933	150		
GIRDERS						11
ABUTMENT #1		25.4	3,695		754	
ABUTMENT #2		25.5	3,695		768	
TOTALS		111.0	18,378	150	1522	11
(3B) LEFT LANE						
SUPERSTRUCTURE		61.3	11,253	152		
GIRDERS						11
ABUTMENT #1		25.2	3,485		495	
ABUTMENT #2		25.2	3,485		488	
TOTALS		111.7	18,253	152	983	11

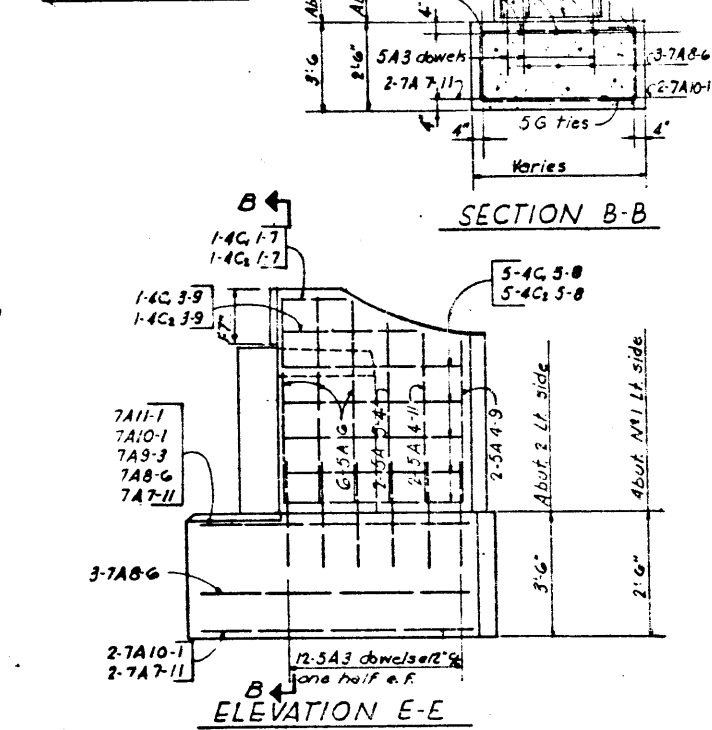
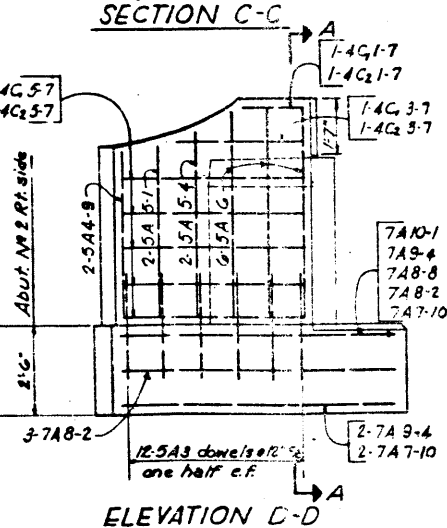
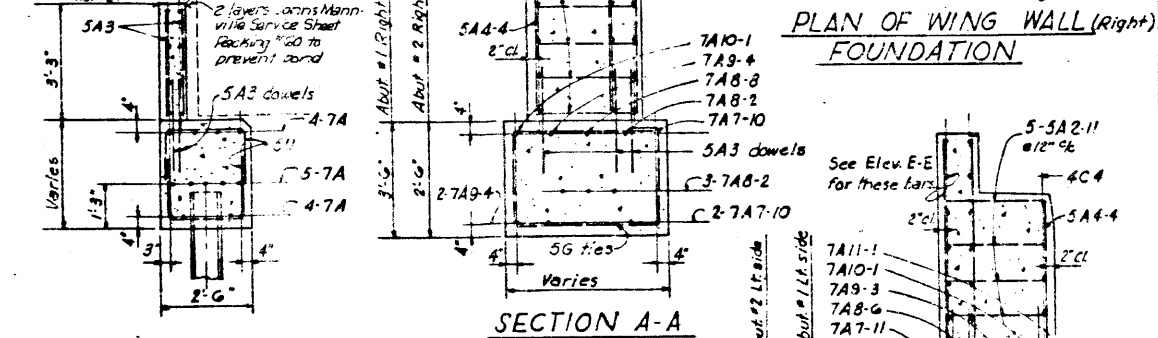
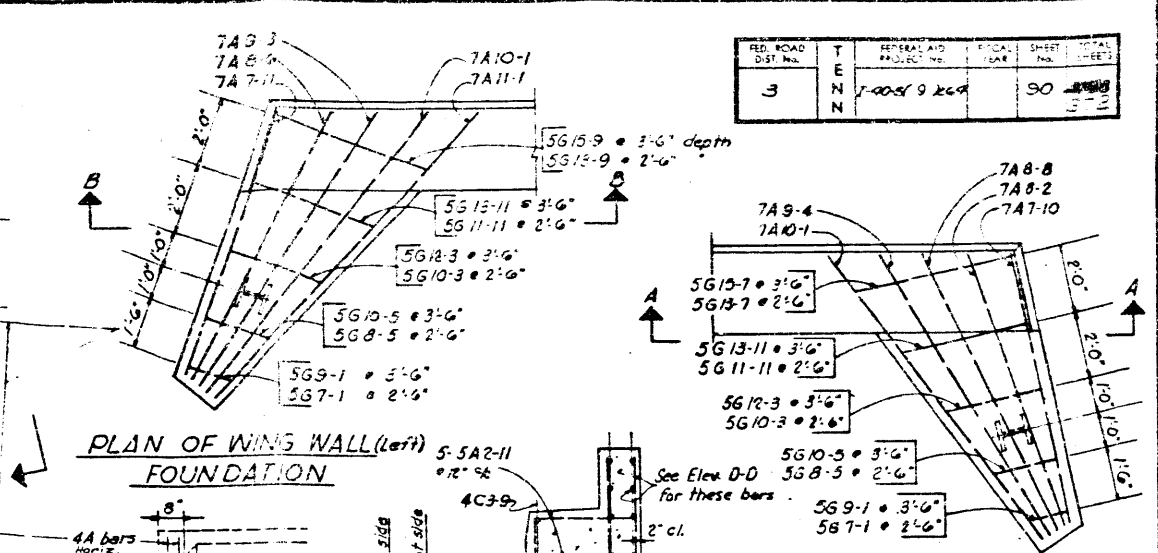
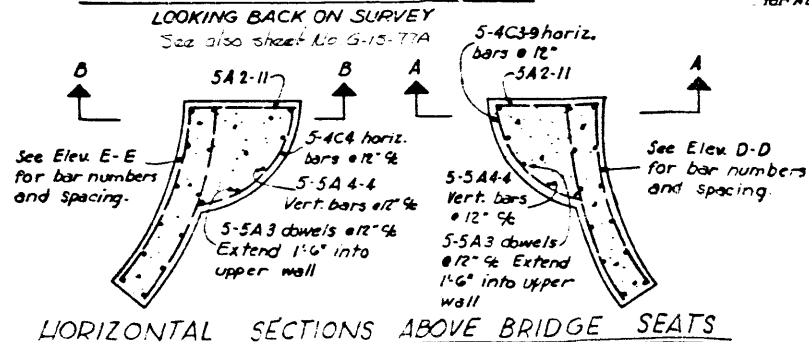
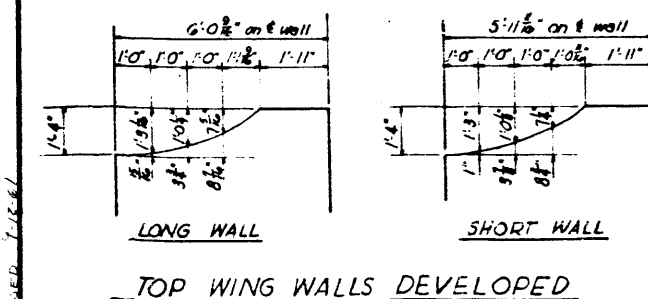
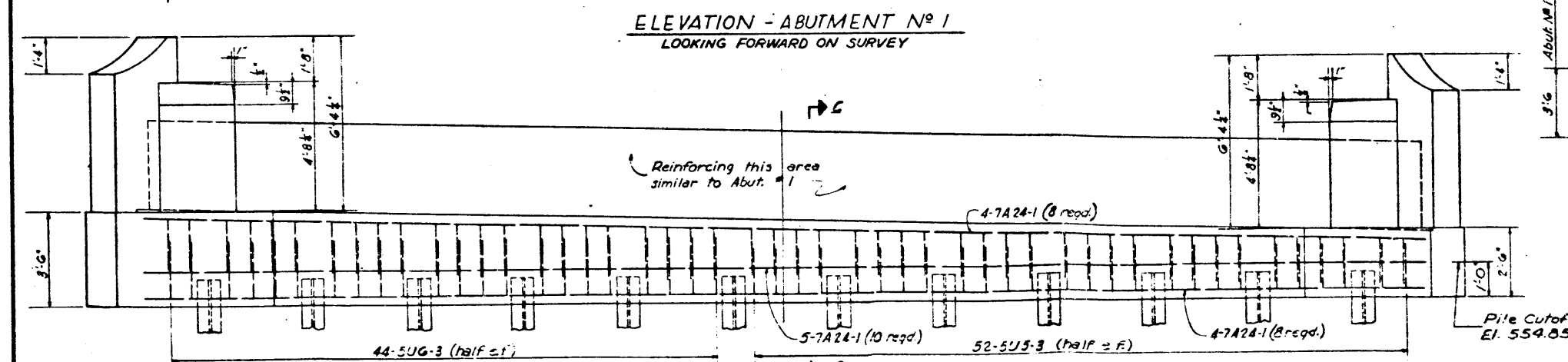
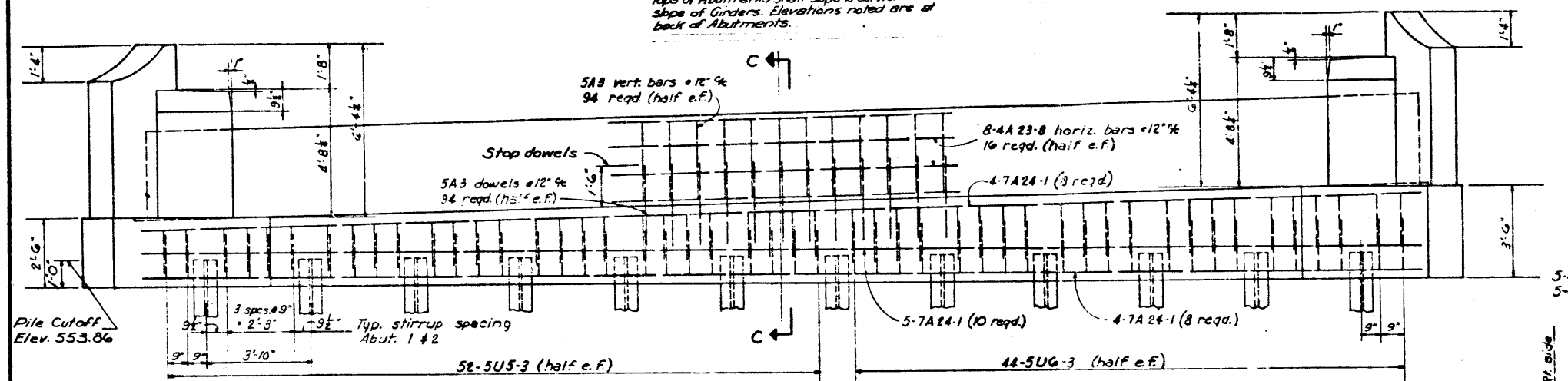
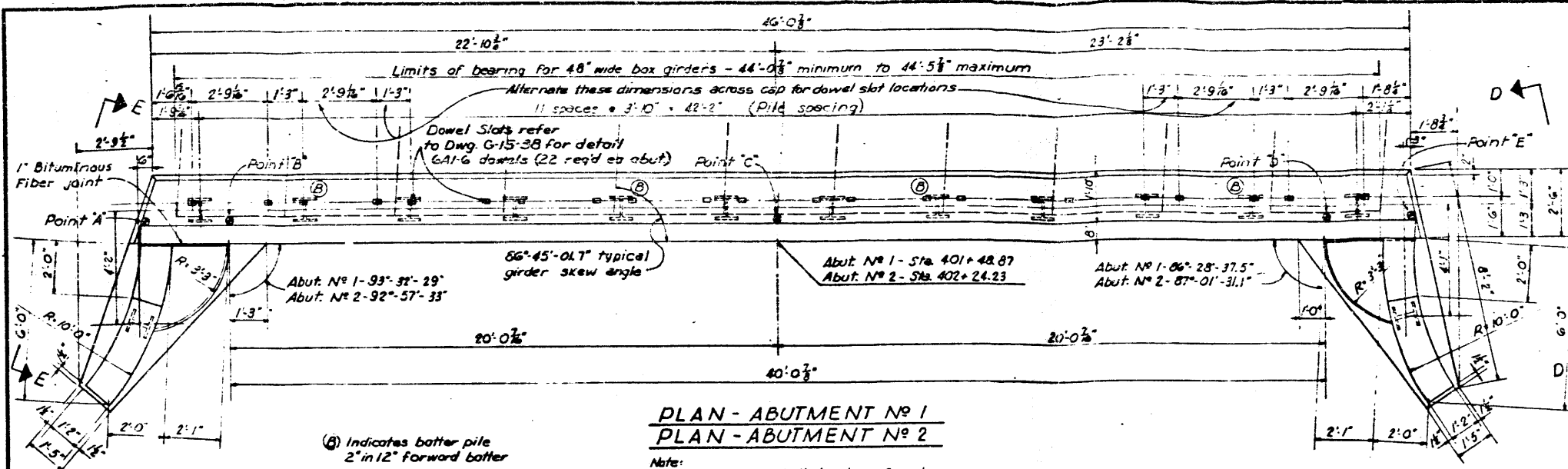
Note: All joint material and asbestos sheet packing to be included in the unit price bid for class 'A' concrete.

SOUNDING LAYOUT

(Bridges relocated after sounding data was completed.)

LOG OF SOUNDINGS

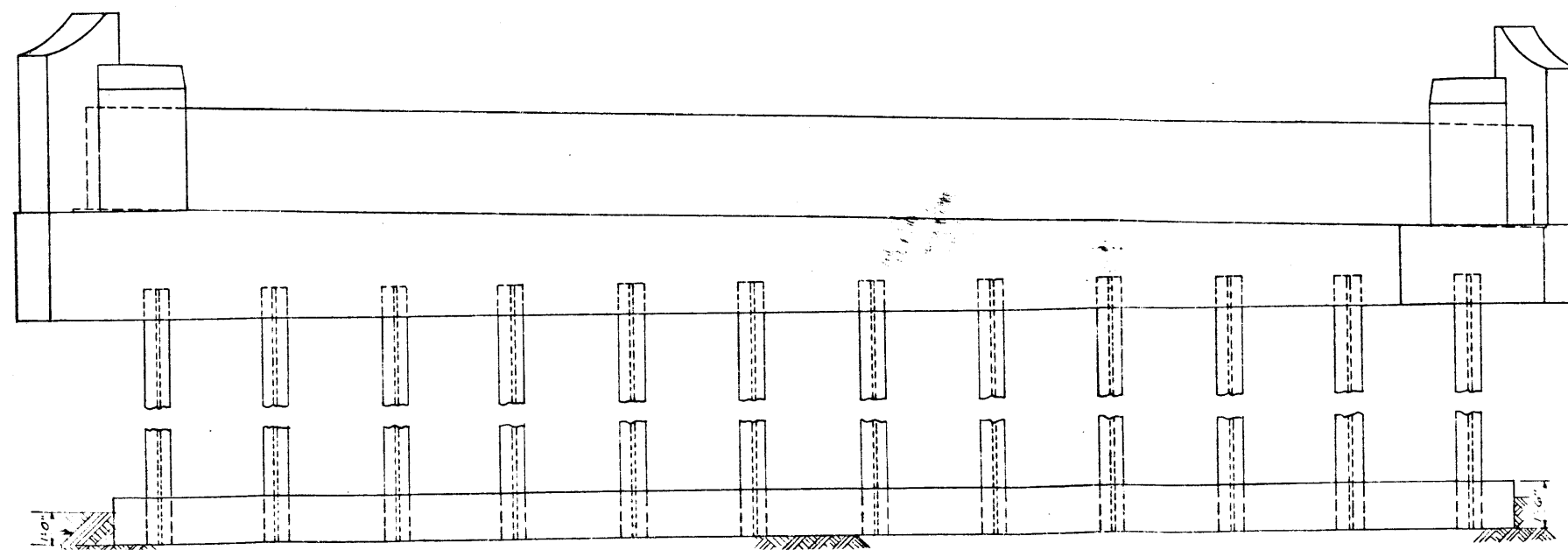
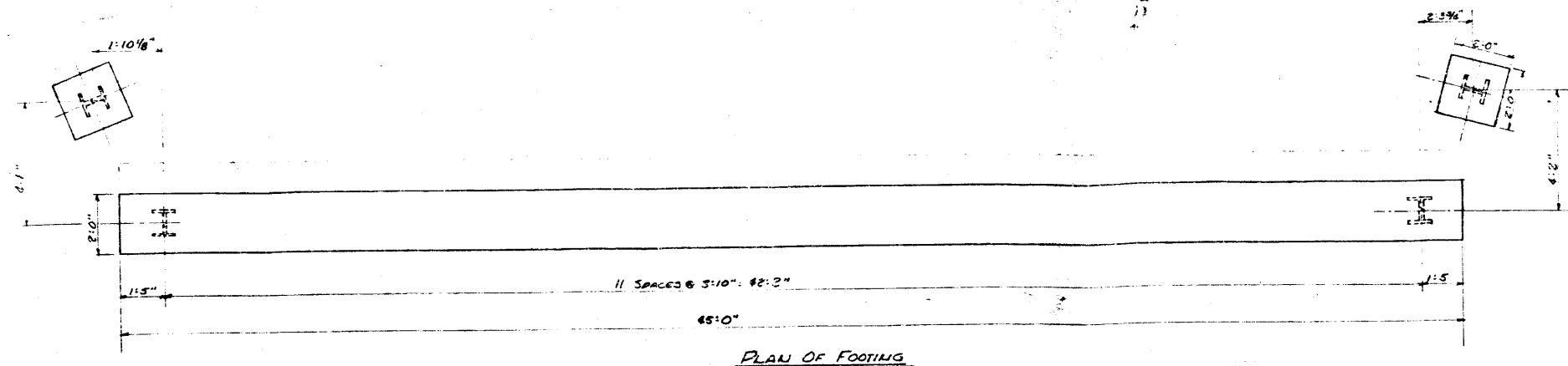
HOLE NO.	GROUND ELEV.	ROCK ELEV.
1	527.0	528.0
2	529.1	528.1
3	544.4	522.4
4	545.9	520.9
5	543.1	527.1
6	544.5	522.5
7	541.7	523.7
8	541.9	519.9
9	544.8	542.8
10	544.0	543.0
11	539.7	538.7
12	539.2	537.2
13	539.9	532.9
14	533.4	517.4
15	528.5	527.5
16	527.3	523.3



<u>ESTIMATED QUANTITIES</u>		
	ABUT. N° 1	ABUT. N° 2
Concrete - Cu.Yds.	25.4	25.5
Reinforcing Steel - Lbs	3695	3695

	Point "A"	Point "B"	Point "C"	Point "D"	Point "E"
ABUTMENT No 1	555.36	555.44	555.94	556.44	556.52
ABUTMENT No 2	557.51	557.43	556.93	556.43	556.35

SOUTH ENGINEERING CO., INC. 820 BROADWAY, N. E. KNOXVILLE, TENNESSEE	
GRADE SEPARATION-INTERSTATE OVER COUNTY ROAD RIGHT LANE (3A) STA. 401+48.00 LEFT LANE (3B) STA. 398+29.50 ABUTMENTS NO. 1 & 2 RIGHT LANE	
STATE OF TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS NASHVILLE	
DR. WRS. CHK'D. <i>RAH</i> APPRO. <i>HR</i>	DATE <i>11-29-77</i>
G-15-77	



NOTE: Set 16" into Rock

ELEVATION - ABUTMENT No. 2
Looking Back on Survey
NOTE: All piles to be vertical, and alignment maintained while pouring footings and placing backfill.

NOTE: For details and dimensions not shown see Sheet No. G-15-77.

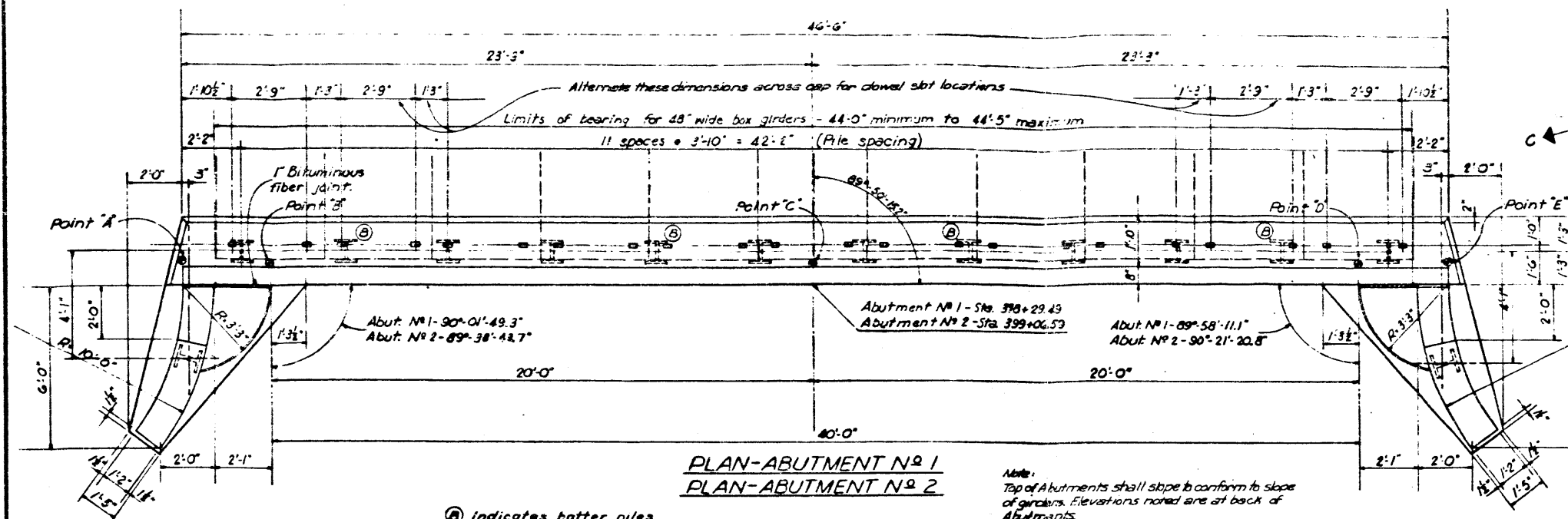
Drawn: S.R. Bowman 9-12-61

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE
STRUCTURE 3A
REVISED ABUTMENT No. 2
EIGHT LANE
STA. 901+48.00
SMITH COUNTY
1961

CORRECT *Fred Greer*
APPROVED *W.D. Long*
STATE ENGINEER

G-15-TTA

REV. ROAD DIST. NO.	3	REVISION NO.	1	DATE	1-10-59
DESIGNED BY	W. H. HARRIS	CHECKED BY	W. H. HARRIS	APPROVED BY	W. H. HARRIS



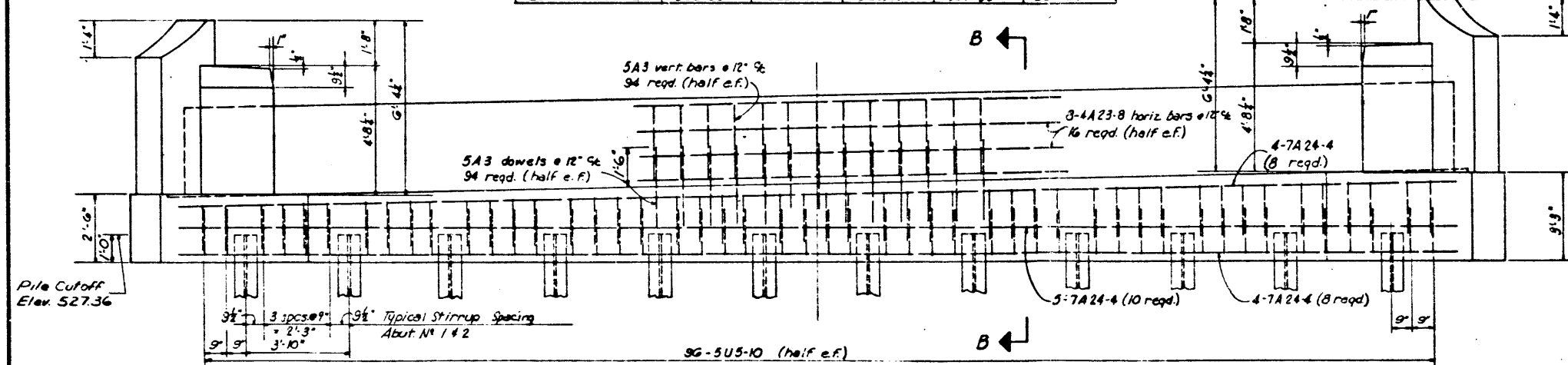
② Indicates batter piles 2' in 12' forward batter

PLAN-ABUTMENT NO 1
PLAN-ABUTMENT NO 2

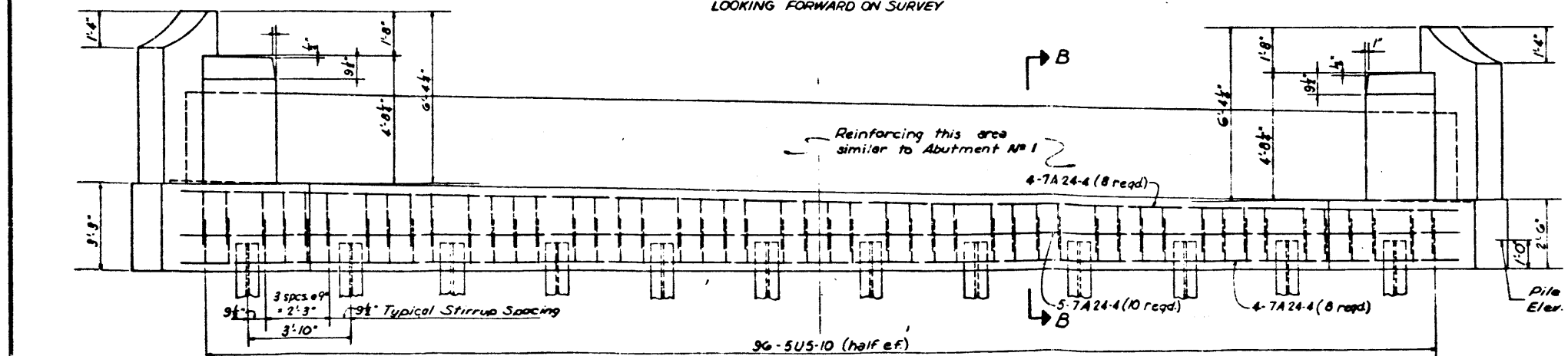
SCHEDULE - ELEVATIONS

	Point "A"	Point "B"	Point "C"	Point "D"	Point "E"
ABUTMENT NO 1	528.86	528.91	528.23	529.56	529.61
ABUTMENT NO 2	529.09	529.04	528.71	528.39	528.34

Note:
Top of Abutments shall slope to conform to slope of ground. Elevations noted are at back of Abutments.

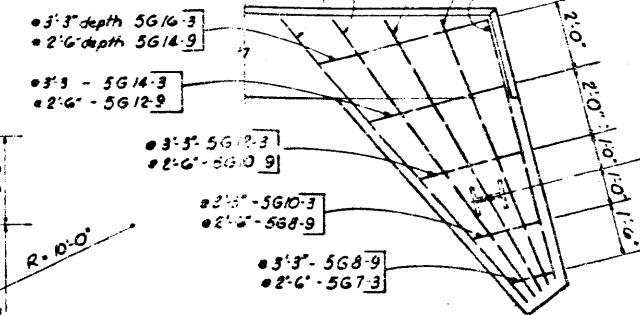


ELEVATION - ABUTMENT NO 1
LOOKING FORWARD ON SURVEY

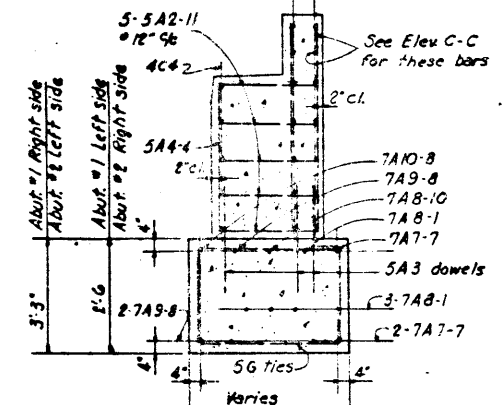


ELEVATION - ABUTMENT NO 2
LOOKING BACK ON SURVEY

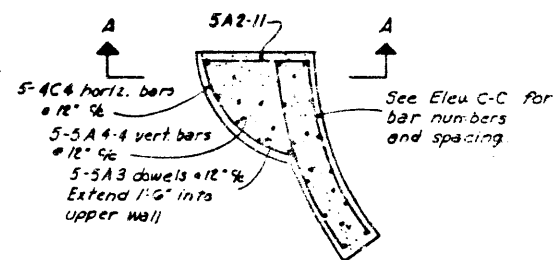
Note:
Stirrup spcs. for this Abutment same as for Abut. No. 1.



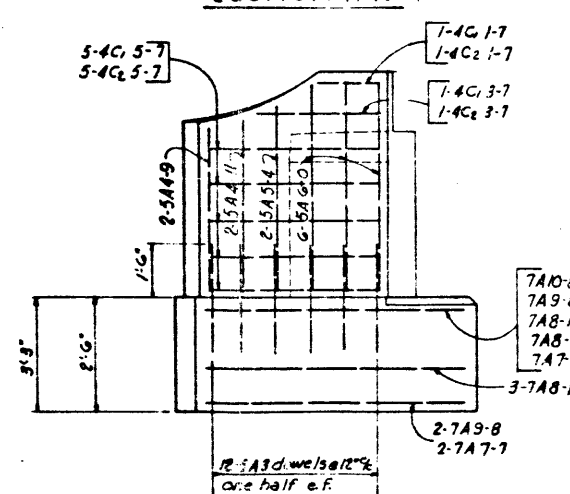
PLAN OF WING WALL FOUNDATION
(Right & Left Walls Similar)



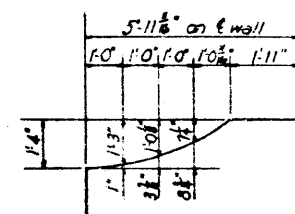
SECTION A-A



HORIZONTAL SECTION ABOVE BRIDGE SEAT
(Right & Left Walls Similar)



ELEVATION C-C
(Right & Left Walls Similar)



TOP WING WALL DEVELOPED
(Right & Left Walls Similar)

ESTIMATED QUANTITIES

	ABUT. NO 1	ABUT. NO 2
Class "A" Concrete - cu. yds.	25.2	25.2
Reinforcing Steel - lbs.	3,485	3,485

Scale: 1/4" = 1'-0"

MID-SOUTH ENGINEERING CO., INC.
100 BROADWAY, N.E. KNOXVILLE, TENNESSEE

GRADE SEPARATION-INTERSTATE OVER COUNTY ROAD
RIGHT LANE (3A) STA. 401+48.00
LEFT LANE (3B) STA. 398+29.50

ABUTMENTS NO 1 & 2
LEFT LANE

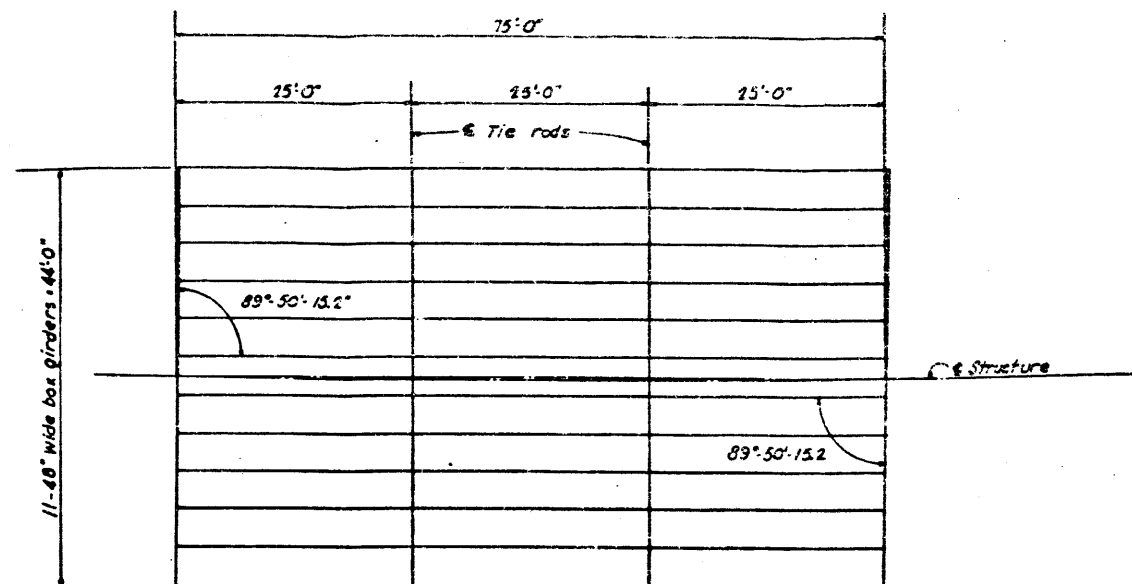
STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
AND PUBLIC WORKS
NASHVILLE

DATE: 1-10-59

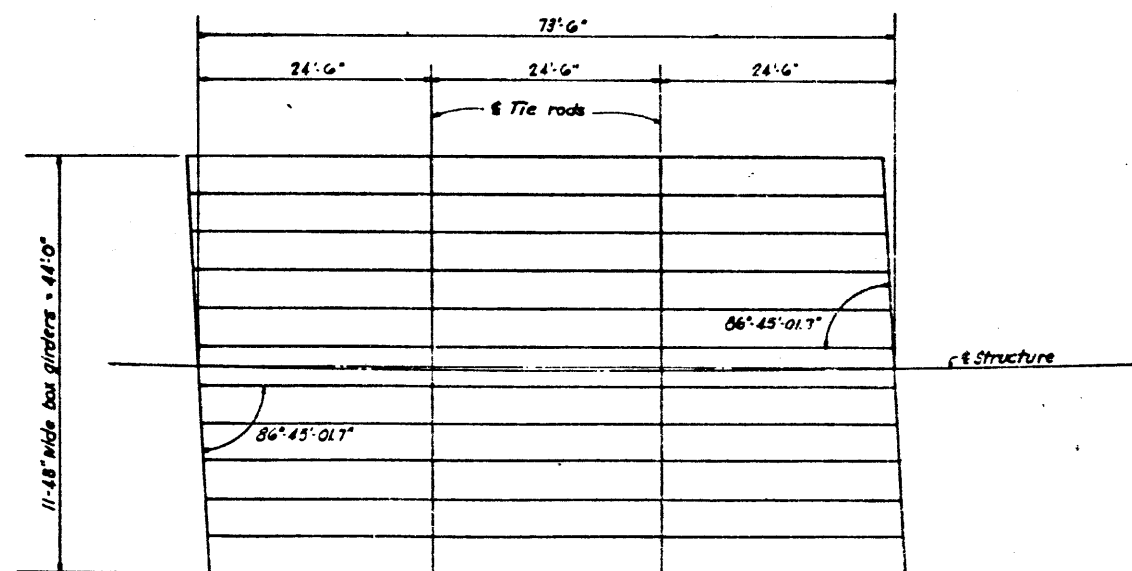
DR. P. R. S.
CHKD. P. R. H.
APPD. K. Z.

G-15-78

FDL ROAD DIST. No.	T E N N	PROJECT No.	SHEET No.	TOTAL SHEETS
3	N	1-405-2 R60	32	32

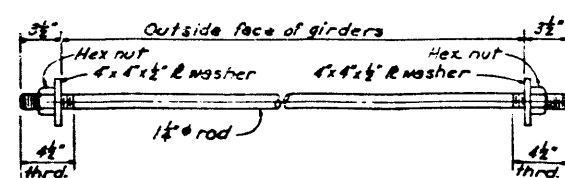


LEFT LANE BRIDGE (3B)

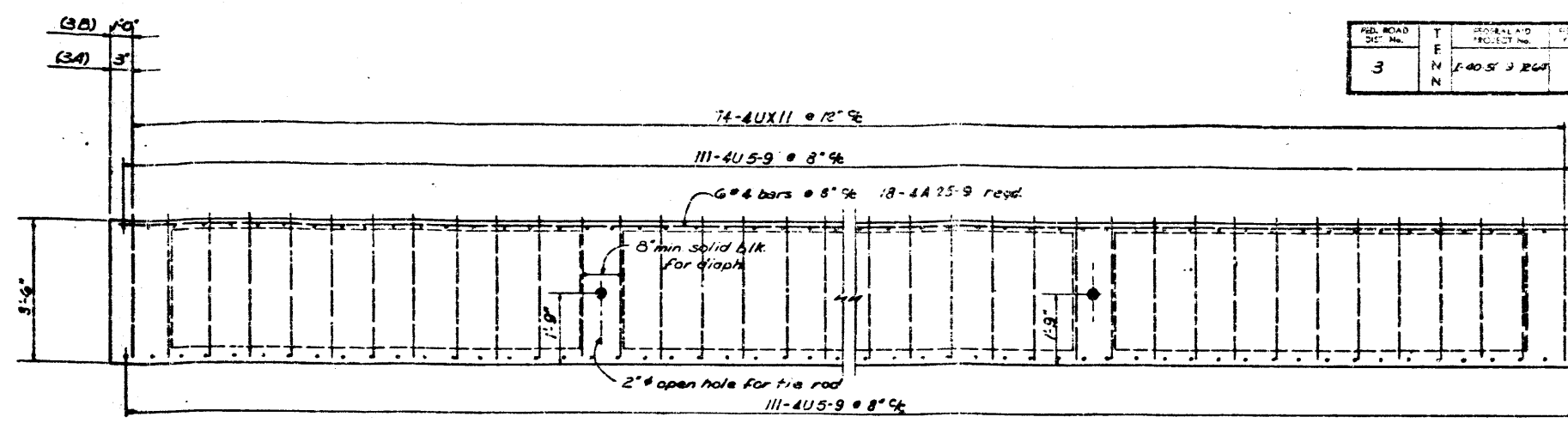


RIGHT LANE BRIDGE (3A)

PLAN- GIRDER LAYOUT-LEFT & RIGHT LANES
Scale: 1" = 10'



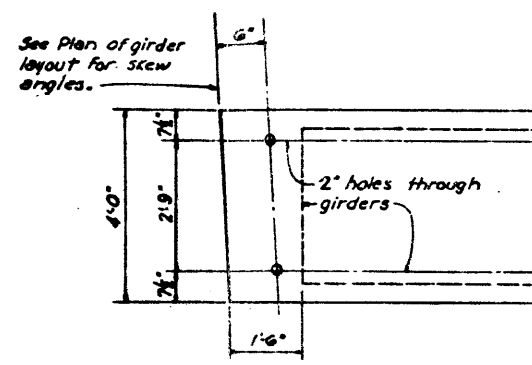
DETAIL OF TIE ROD AT DIAPHRAGMS (4 REQ'D) (WT. 750')
Scale: 1/4" = 1'-0"



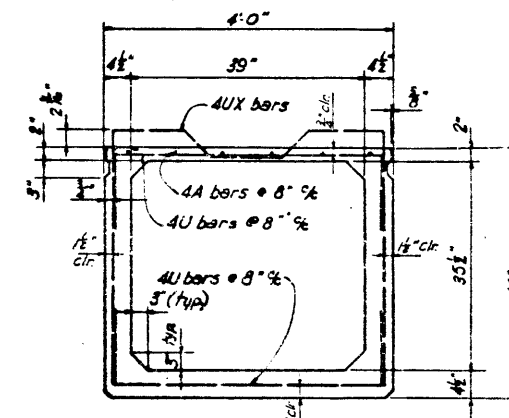
ELEVATION- BOX GIRDER

SHOWING MILD STEEL REINFORCING:
SEE SECTIONS THIS DRAWING FOR NUMBER, SIZE
AND LOCATION OF HIGH TENSILE PRESTRESSING
STEEL CABLES.

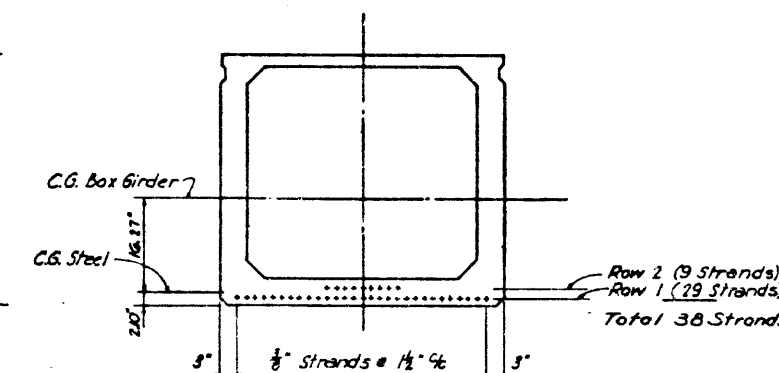
NOTE: Top surface of girders shall be artificially
roughened to insure bond with deck slab.



PLAN AT ABUTMENT END (TYP)
PART PLAN - BOX GIRDER



SECTION A-A
Scale: 1/4" = 1'-0"



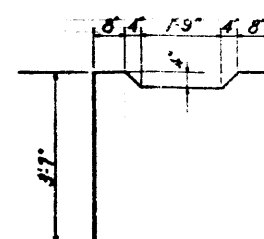
CABLE PATTERN

Note: Locate strands symmetrically
about vertical &
An initial force of 19000 lbs. shall be applied
to each strand in all girders

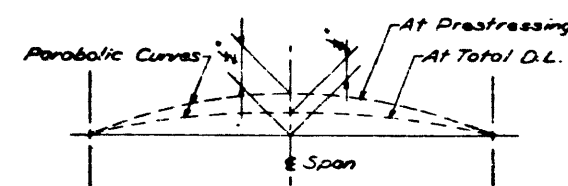
ESTIMATED QUANTITIES
BOX GIRDERS

5000 psi Concrete	Cu Yds.	311.5
Hi-tensile reinforcing strands	Lbs.	17,582
Reinforcing steel	Lbs.	37,752

Quantities for both bridges (3A) & (3B)



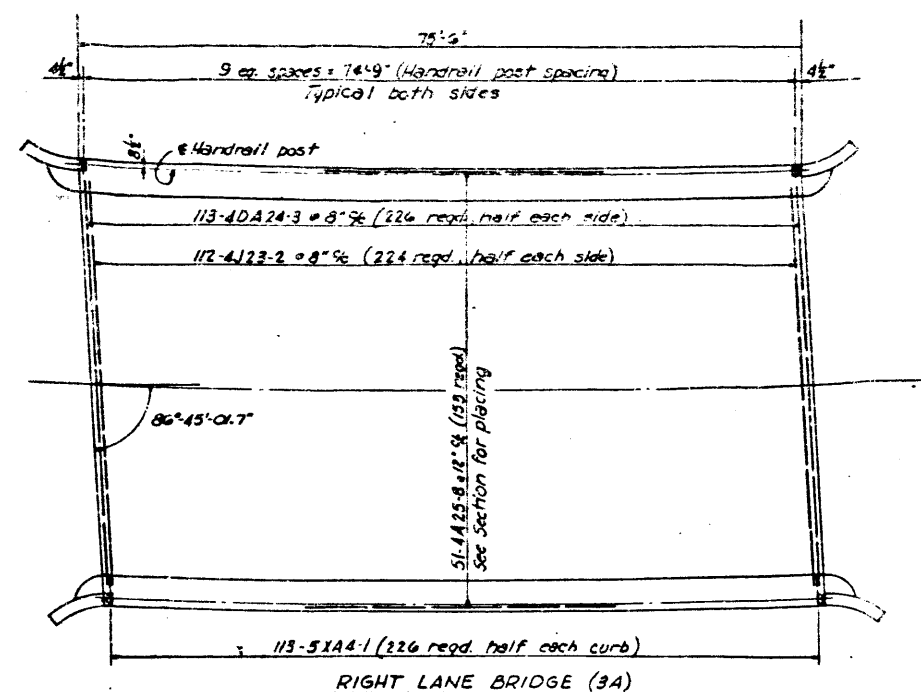
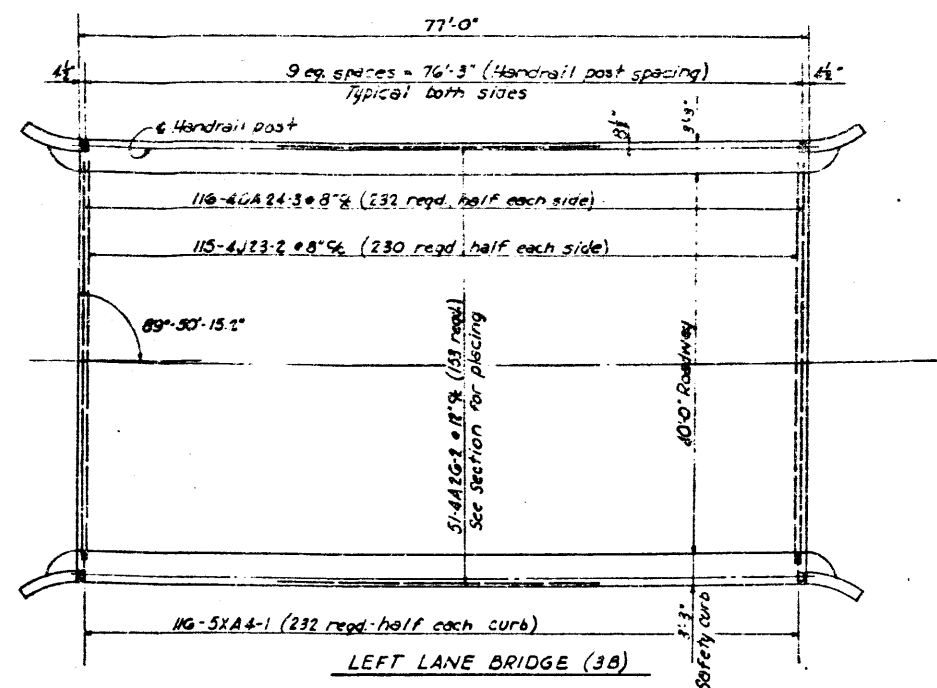
DETAIL 4U X II BARS



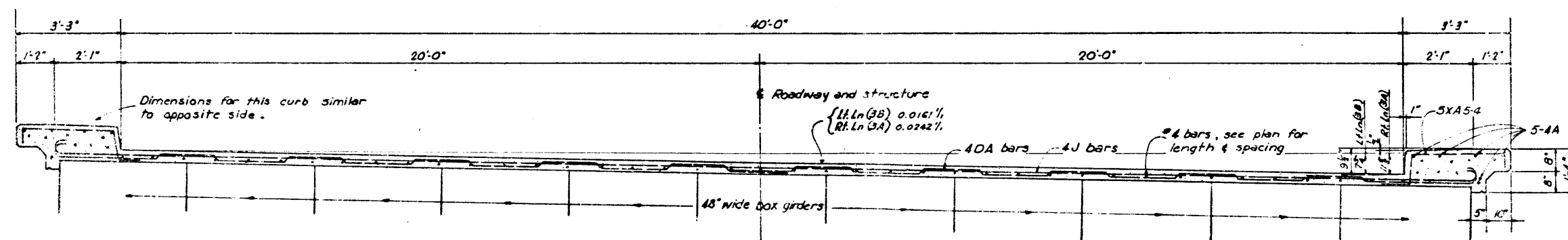
DEFLECTION DIAGRAM

MID-SOUTH ENGINEERING CO., INC. 620 BROADWAY, N. E. KNOXVILLE, TENNESSEE	
GRADE SEPARATION - INTERSTATE OVER COUNTY ROAD RIGHT LANE (3A) STA. 401+45.00 LEFT LANE (3B) STA. 398+29.50	
BOX GIRDER LAYOUT AND DETAILS	
STATE OF TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS NASHVILLE	
DR. H.R.S. CHKD. E.H.H. APPD. H.R.	DATE 11/16-79 G-15-79

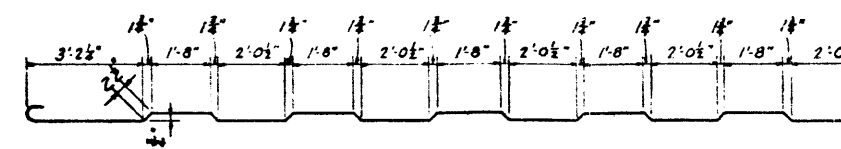
REV. ROAD DIST. NO.	T E N N	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3		40-519 E64		93	100



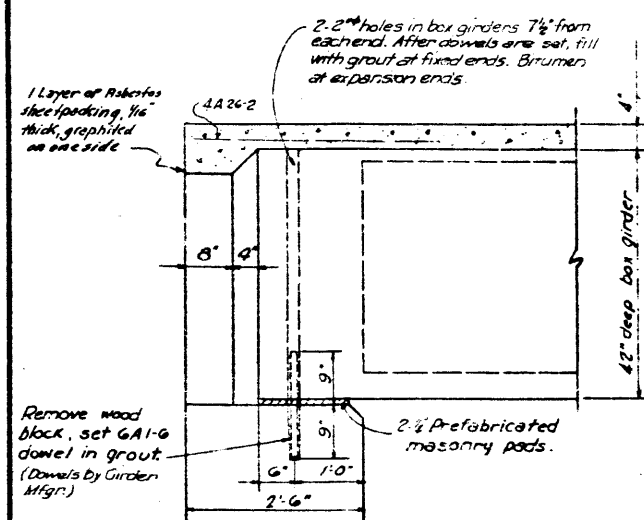
PLANS AND SAFETY CURB LAYOUT
Scale: 1" = 10'



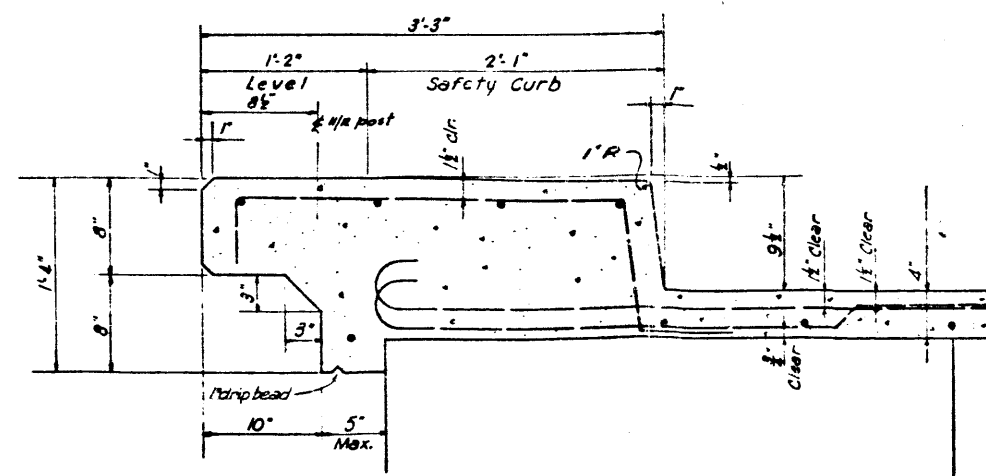
TYPICAL SECTION THRU SLAB
Scale: 1/2" = 1'-0"



DETAIL 4DA BARS
(Refer to Reinf. Schedule Dwg. G-15-31 for quantity)



SECTION AT ABUTMENT
Scale: 1/2" = 1'-0"



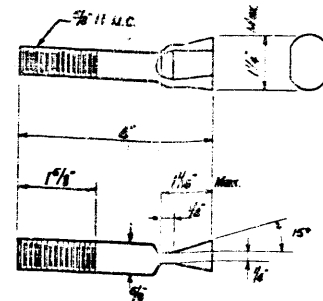
DETAIL OF SAFETY CURB
Scale: 1/2" = 1'-0"

ESTIMATED QUANTITIES

		Rt. Lane	Lt. Lane
Class "A" Concrete	Cu. Yds.	60.1	61.3
Reinforcing Steel	Lbs.	10,998	11,283

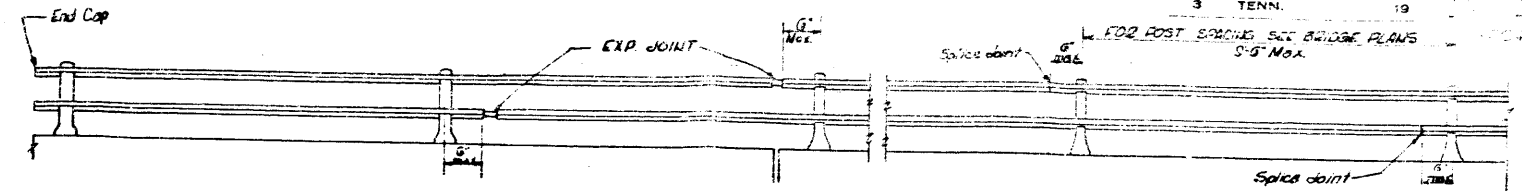
Scale: As noted

MID-SOUTH ENGINEERING CO., INC. 820 BROADWAY, N.E. KNOXVILLE, TENNESSEE	
GRADE SEPARATION - INTERSTATE OVER COUNTY ROAD RIGHT LANE (3A) STA 401+48.00 LEFT LANE (3B) STA 398+29.50	
SLAB AND SAFETY CURB LAYOUT AND DETAILS	
STATE OF TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS NASHVILLE	
DR. W.R.S. CHKD. EAH APPD. ME	DATE 11-12-52 G-15-80

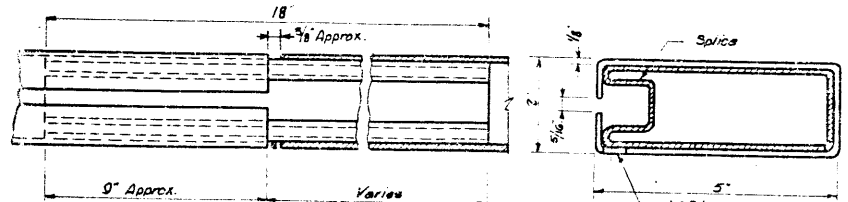
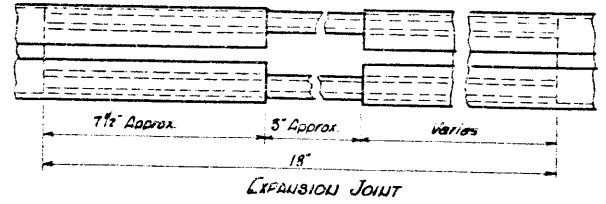
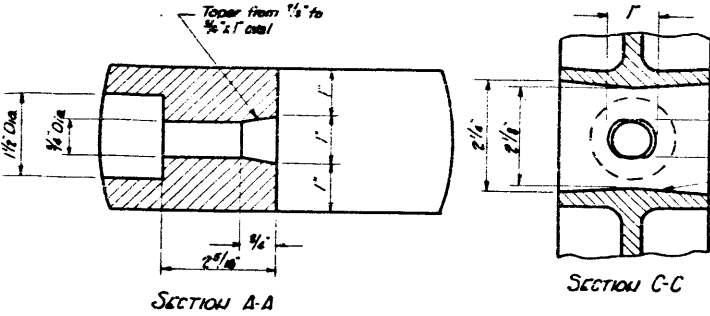


STEEL WEDGE BOLT

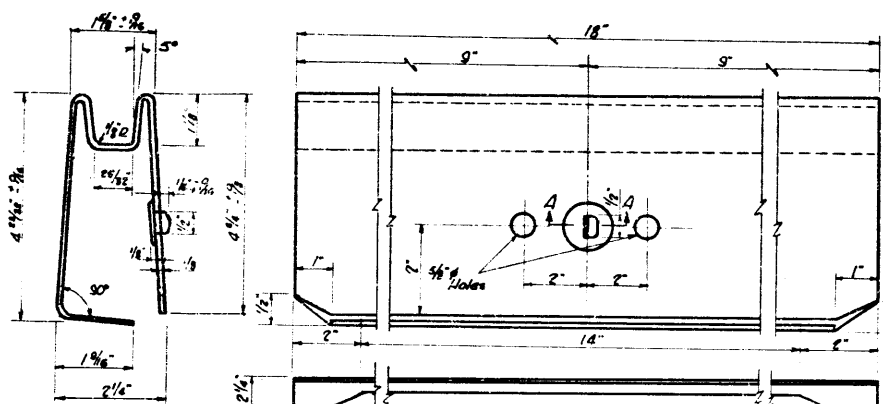
2 Req's (Each Rail)
Bolt to A.S.T.M. A-153-53
Tighten wedges to fix each rail at one post in each length of rail. Tighten enough to prevent rattle but provide sliding fit at any other post within same length of rail.



TYPICAL ELEVATION
Showing typical joint location & maximum joint spacing
NOTE: Rails shall be continuous through several panels unless otherwise shown on the bridge plans. No two rails shall be spliced in the same panel.



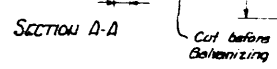
SECTION THRU JOINT
(See Detail of Splice)



BOTTOM VIEW

SPLICE

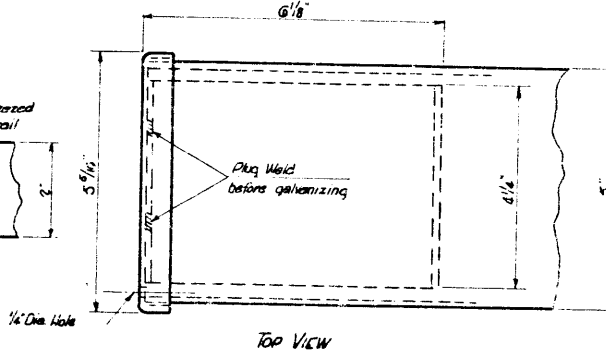
Splice Material A.S.T.M. A-245 Grade C
galv. to A.S.T.M. spec. A-123-53
Mat'l 1/8\"/>



END CAP

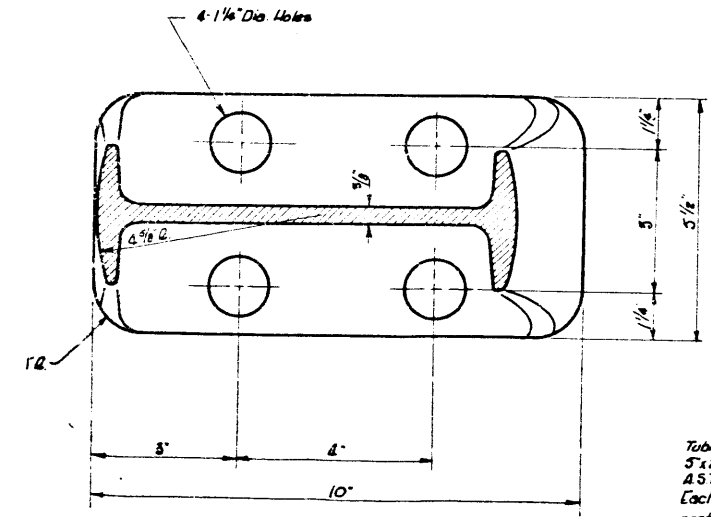
NOTE: Tolerance $\pm 1/16$ \"/>

Material: A.S.T.M. A-245 Grade C
galv. to A.S.T.M. spec. A-123-53
Mat'l 1/8\"/>



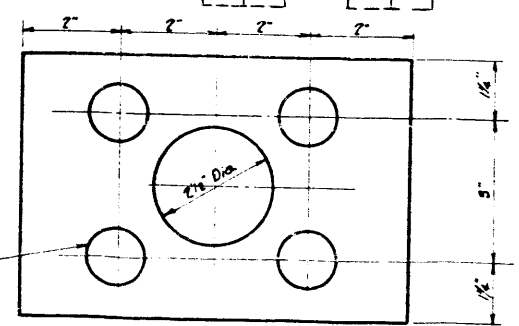
TOP VIEW

All railings are to be fabricated and erected so that the rails are parallel to each other and to the top of the wall, and so that the posts are truly vertical.
Since the finished railings must meet all requirements of fit, alignment, grade and verticality of posts, to the full satisfaction of the engineer it is suggested that complete field measurements be made before any shop fabrication is performed.
Rail item 14, 702 shall include tubular rail, malleable iron posts, wedge bolts, 4\"/>



SECTION B-B

Tubing
5\"/>



ANCHOR PLATE

ANCHOR BOLT ASSEMBLY:
4\"/>

POST SPECIFICATIONS
Malleable Iron Castings A.S.T.M. A-47
Grade 350/18
Galvanized to A.S.T.M. A-153-53

DESIGNED BY
DRAWN BY
TRACED BY
CHECKED BY

DATE
DATE
DATE
DATE

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
AND PUBLIC WORKS
NASHVILLE
**STANDARD
2 RAIL TYPE
STEEL HANDRAILING**

CORRECT
APPROVED

G-10-99
REVISED

General Revision 7/27/60
 Revised 11/16/60 General detail on casting A.S.T.M. A-530-53 from post spec.