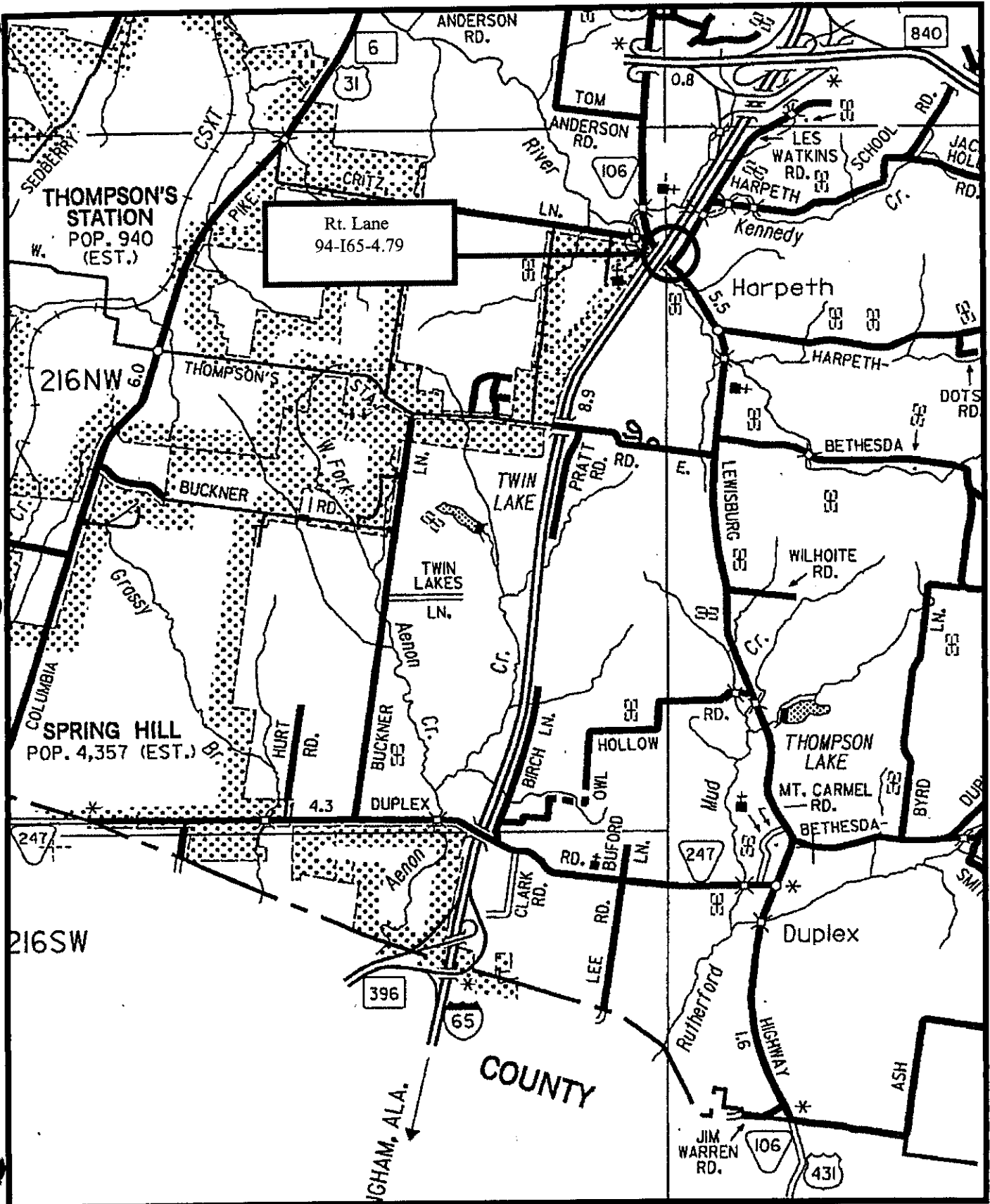


Williamson County

Date: 08/20/03



Bridge Maintenance Recommendations

Page No. _____

Page 1 of 1

Bridge Location No.: 94 - I0065 - 4.79 R

Co. Route Log Mile

Bridge Number: 94I00650005

County: WILLIAMSON

Crossing: SR. 106 & HARPETH RIVER

Region: 03

Bridge Rating: FAIR

District: 31

Inspection Cycle: 16

Maint.Resp.: 01

Inspection Date: 8/20/2003

Spec.Case: 0

Co.Seq: 01

Comments: -0-

Level of Service: 1

Number Main Spans: 004

Owner: 01

Number Appr Spans: 0000

Appr Rdwy (xxx ft): 038

Bridge Length (xxxxxxx ft) 000194

Skew: 70

Curb-to-Curb (xxx.x ft): 0405

Type of Service: 16

Out-to-Out (xxx.x ft): 0440

Main Structure Type: 502

Item 500: 01

Appr Structure Type: 000

Facility Carried By: I65

Maintenance Recommendations:

Maintenance Completed
By / Date

204

CUT VEGETATION

Bridge Maintenance Recommendations

Page No. _____

Page 1 of 1

Bridge Location No.: 94 - I0065 - 4.79 R

Co. Route Log Mile

Bridge Number: 94I00650005

County: WILLIAMSON

Crossing: SR. 106 & HARPETH RIVER

Region: 03

Bridge Rating: FAIR

District: 31

Inspection Cycle: 15

Maint.Resp.: 01

Inspection Date: 8/16/01

Spec.Case: 0

Co.Seq: 01

Comments: -0-

Level of Service: 1

Number Main Spans: 004

Owner: 01

Number Appr Spans: 0000

Appr Rdwy (xxx ft): 038

Bridge Length (xxxxxxx ft) 000194

Skew: 70

Curb-to-Curb (xxx.x ft): 0405

Type of Service: 16

Out-to-Out (xxx.x ft): 0440

Main Structure Type: 502

Item 500: 01

Appr Structure Type: 000

Facility Carried By: 165

Maintenance Recommendations:

Maintenance Completed
By / Date

-0-

REPAIR COLUMN "B" OF BENT NO. 3

BRIDGE MAINTENANCE RECOMMENDATIONS

BRIDGE SEQ. NO. : 94I00650005

BRIDGE NO. : 94 - I0065 - 0479 - R
OVER : I65/SR 106&HARPETH RIVER*

DATE : 09/07/99 BRIDGE RATING : FAIR COUNTY : Williamson
CO. SEQ. : 01 INSPECTION CYCLE : 14 MAINT DIST : 31
SPEC. CASE : 0 INSPECTION DATE : 08/23/99 REGION : 03

007 - FACILITY CARRIED BY STRUCT : I65
021 - MAINTENANCE RESPONSIBILITY : 01
022 - OWNER : 01
042 - TYPE OF SERVICE : 16
043 - STRUCTURE TYPE, MAIN : 502
044 - STRUCTURE TYPE, APPROACH : 000
045 - SPANS, MAIN UNIT : 004
046 - SPANS, APPROACH : 0000
049 - STRUCTURE LENGTH : 000194
032 - APPROACH ROADWAY WIDTH : 038
034 - SKEW : 70
051 - BRDG RDWY WID, CRB-TO-CRB : 0405
052 - DECK WIDTH, OUT-TO-OUT : 0440
500 - HWY OF THE INVENTORY ROUTE : 01

: ROUTINE RECOMMENDATIONS :

1 REPAIR COLUMN "B" OF BENT NO. 3

1BY__ DATE __

COMMENTS FOR BRIDGE SEQ. NO. : 94I00650005 :

COMPLETION NOTIFICATION : RETURN WITHIN 6 MONTHS OF INSPECTION DATE

MAINTENANCE ACTIVITIES ARE

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

EXPLANATIONS AND COMMENTS:

DATE ADDED: 02/11/99

BRIDGE REPAIR RECOMMENDATIONS

REVISED: 03/09/99

BRIDGE NO. 94-I0065-0479-L

FED. BRIDGE NO. 94I00650006

OVER: I65 / SR 106

ROUTE CARRIED: I65

COUNTY: WILLIAMSON

SKREW:

HIGHWAY SYSTEM: 03

NUMBER OF MAIN SPANS:

TOTAL BRIDGE LENGTH: 000194

BRIDGE WIDTH (CURB-CURB): 000

MAXIMUM SPAN LENGTH: 0052

BRIDGE WIDTH (OUT-OUT):

APPROACH ROADWAY WIDTH: 038

NSD

94.2

TYPE STRUCTURE (MAIN SPANS): Precast Concrete I-Beam (continuous spans)

TYPE STRUCTURE (APPROACHES):

INSPECTION DATE: 09/16/97

BRIDGE RATING: FAIR

H TRUCK @ INV.

EVALUATION DATE: 06/03/98

H TRUCK @ INV. AFTER REPAIRS: 20

**** RECOMMENDED MINIMUM REPAIRS BY: EVALUATION SECTION ****

1. REPAIR SPALLED CONCRETE COLUMNS AT BENTS 1, 2 & 3.
2. REPAIR SPALLED & CRACKED CONCRETE DIAPHRAMS AT ABUTMENTS & BENTS.
3. REPAIR SPALLED & CRACKED CONCRETE CAPBEAMS AT BOTH ABUTMENTS & BENTS.

COMMENTS:

1-10-01
Spoke to Ray McClelland
about the spalling. His repair
team has been working on
the repair of all of the
bents.
WJS.

**** PROPOSED REPAIRS BY: REPAIR SECTION ****

- 1.

REPAIR LIST NUMBER: 1

REPAIR CONTRACT PLANS TO BE PREPARED BY:

TENTATIVE LETTING SCHEDULE:

REPAIR DRAWING LAYOUT SHEET:

ESTIMATED COST:

FED. BRIDGE NO. 94I00650006



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
Federal Bldg. - U.S. Courthouse
801 Broadway, Room A926
Nashville, Tennessee 37203
February 16, 1978

82-0664

In Reply Refer To:

Mr. Lewis Evans, Director
Bureau of Highways
Department of Transportation
State of Tennessee
Nashville, Tennessee

94 - I-65 - 57.72
94-I-65-4.79-R

Subject: Tennessee Projects I-65-1() and IR-65-1(),
Maury County; I-65-2() and IR-65-2(),
Williamson County

Dear Mr. Evans:

Please refer to Mr. Derthick's letter of February 10, 1978, which submitted for our review the preliminary bridge layouts and bridge deck evaluation surveys for the following bridges which are proposed to be widened:

<u>County</u>	<u>Bridge</u>
Maury	I-65/SR-99 (LM 46.15)
Maury	I-65/Rutherford Creek (LM 51.74)
Williamson	I-65/West Harpeth River and SR-106 (LM 57.72)
Williamson	I-65/Harpeth River (LM 63.93)

FHWA approval to widen these bridges as a part of a major safety upgrading and resurfacing project along a substantial section of highway was previously given in our letter of August 30, 1977.

We note from Mr. Derthick's letter that two of these bridges (i.e. I-65/SR-99 and I-65/Harpeth River) have previously been sealed using the Chevron system and the System A Protecto-wrap system respectively under previous experimental projects and that both of the seals have failed. We further note that TDOT proposes the following deck repair procedures on the existing decks:

1. Removal of existing overlays and/or seals.
2. Removal of all delaminated areas.

-more-

Mr. Lewis Evans

-2-

February 16, 1978

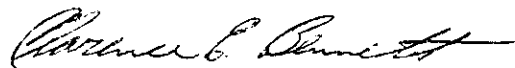
3. In areas of high potential readings (over 0.35V), remove the concrete to 3/4" below the level of the top mat of reinforcing steel and blast clean the steel.
4. Scarification of the top 1/4" of the remaining deck surface.
5. Sealing the deck with either LSDC or PMC overlay, as an experimental project.

At this time we wish to stress that items 2 and 3 of the proposed deck repair procedures are considered reconstruction work and are therefore eligible for Federal-aid participation from appropriate funds whereas items 1, 4 and 5 are considered as a part of an additional stage of construction and are eligible for Federal-aid participation with regular Interstate funds. Therefore, the plans quantities and work items should be appropriately separated.

We have reviewed the bridge deck evaluation surveys and note they have been prepared from data collected prior to the previous sealing and/or overlaying of the above structures. We concur in your proposal that new deck surveys for these bridges be made after the contract is underway and the decks have been stripped. We further agree that quantities for bidding will be based on judicious increases of known deteriorated areas as indicated from the previous deck surveys.

Subject to your consideration of the above comments, you may proceed to develop plans for the widening of the above noted bridges.

Very truly yours,



for E. G. Oakley
Division Administrator

February 10, 1978

Mr. E. G. Oakley
Division Administrator
PHVA

Projects:
1-55-1 () and IR-65-1 ()
Maury County

I-65-2 () and IR-65-2 ()
Williamson County

Dear Mr. Oakley:

Enclosed is one (1) print each of the proposed widening layouts for the subject projects:

Maury County

1-65/SR 99, Station 583 +31.61
1-65/Rutherford Creek, Station 877 +54.00

Williamson County

I-65/CR-106 and West Harpeth River, Station 248 + 14.00
I-65/Big Harpeth River, Station 566 + 04.25

I-65/SR 99 has previously been sealed with the Chevron system under experimental project I-65-2 (38) 45 and I-65/Big Harpeth River sealed with the Protecto-wrap system under experimental project I-65-2 (37) 61. These seals have failed. I-65/Rutherford Creek and I-65/SR 105 and West Harpeth River have both been overlayed, but not sealed.

Accordingly, we offer the following:

1. Removal of existing overlays and seals.
2. Removal of all delaminated areas.
3. In areas of high potential readings, removal of the concrete to a level 3/4" below the top mat of reinforcing and the blast cleaning of the bars.

[illegible]

February 10, 1978

4. Scarification of the top 1/4" of the remaining deck surface.
5. Sealing the deck with either LABC or PMC overlay, as an experimental project.

We are also enclosing bridge deck surveys made prior to scaling and/or overlaying the structures, as an indication of expected conditions. Since overlays are in place, additional survey data taken would prove useless at this time. Therefore we further propose that a new deck evaluation be made after the contract is underway and the decks have been stripped. Estimated quantities for bidding would be based on judicious increases of known deteriorated areas indicated in existing surveys.

Please give us your comments and/or approval at your earliest convenience.

Yours very truly,

Original Signed By
EDWARD P. WASSERMAN

Henry W. Berthick
Engineer of Structures

EPW:rmr

Enclosures

cc: Mr. J. L. Jett

TENNESSEE BRIDGE INSPECTION PROGRAM

SUMMARY OF EVALUATION

REV. 03-05-2003

BRIDGE ID NO: 94I00650005

LOCATION NO: 94 - I0065 - 4.79 R

(6A) CROSSING: I65 / SR106 & HARPETH RV

(505) METHOD OF ANALYSIS: LOAD FACTOR
METHOD

(548) RATING BASED ON: VIRTIS ANALYSIS - 11"
ASPHALT

LOAD RATINGS IN TONS

INVENTORY (503) H 18	(518B) HS 28
OPERATING (504) H 30	(519) HS 46

(549) EVALUATOR: MRJ
(522) EVAL. DATE: 4/18/2017
LAST UPDATED BY: JOHNSON
(29) ADT: 74,700 (30) ADT YR: 2018
(100) STRAHNET ROUTE: YES
(19) DETOUR LENGTH: 2 KM
(520) VC OVER RDWY: 99.99 METERS

CONDITION RATINGS

(58) DECK RATING: 5

(59) SUPERSTRUCTURE RATING: 7

(60) SUBSTRUCTURE RATING: 5

(61) CHANNEL PROTECTION: 7

(62) CULVERT RATING: N

(113A) NBIS SCOUR CODE: 8

(113B) TDOT SCOUR CODE: R

APPRAISAL RATINGS

(67) STRUCTURAL EVALUATION: 5

(68) DECK GEOMETRY: 8

(69) UNDER CLEARANCE: 6

(70) BRIDGE POSTING: 5

(71) WATERWAY ADEQUACY: 6

(72) APPROACH RDWY ALIGNMENT: 8

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

OTHER RATING ITEMS

(521) OVERALL CONDITION: F

(513) TEXTURE COAT RATING: G 06

(514) PAINT CONDITION RATING: N

(41) WEIGHT POSTING CODE: A

(36) TRAFFIC SAFETY FEATURES: 0 0 0 0

(525) REPAIR LIST NO: 3

COMMENTS

NO COMMENTS AT THIS TIME.

(502) SUFF. RATING:	67.8
(528) STR. DEFICIENT:	NO
(529) FUNC. OBSOLETE:	NO

Bridge Name: I 65 / SR106 & Harpeth River

NBI Structure ID: 94I00650005

Bridge ID: 94I00650005

Analyzed By: bridgeware

Analyze Date: Thursday, August 30, 2018 09:25:23

Analysis Engine: AASHTO LFR Engine Version 6.8.1.3001

Analysis Preference Setting: None

Report By: bridgeware

Report Date: Thursday, August 30, 2018 09:27:33

Structure Definition Name: SPAN 4

Member Name: G5

Member Alternative Name: G5

Load Factor Rating Summary

		Girder Summary							
Live Load		Rating		Capacity	Location				
		Factor	Controls	(Ton)	Span	(ft)	Percent	Impact	Lane
H 15-44	Inventory	1.215	Design Flexure - Concrete	18.22	1	17.26	50.0	As Requested	As Requested
H 15-44	Operating	2.029	Design Flexure - Concrete	30.43	1	17.26	50.0	As Requested	As Requested
HS 20-44	Inventory	0.772	Design Flexure - Concrete	27.79	1	17.26	50.0	As Requested	As Requested
HS 20-44	Operating	1.289	Design Flexure - Concrete	46.41	1	17.26	50.0	As Requested	As Requested
Type 3S2	Inventory	0.984	Design Flexure - Concrete	35.42	1	17.26	50.0	As Requested	As Requested
Type 3S2	Operating	1.643	Design Flexure - Concrete	59.15	1	17.26	50.0	As Requested	As Requested
Annual Permit 1	Inventory	0.609	Design Flexure - Concrete	50.24	1	17.26	50.0	As Requested	As Requested
Annual Permit 1	Operating	1.017	Design Flexure - Concrete	83.90	1	17.26	50.0	As Requested	As Requested
Annual Permit 2	Inventory	0.609	Design Flexure - Concrete	50.24	1	17.26	50.0	As Requested	As Requested
Annual Permit 2	Operating	1.017	Design Flexure - Concrete	83.90	1	17.26	50.0	As Requested	As Requested
Gravel Truck	Inventory	0.632	Design Flexure - Concrete	23.37	1	17.26	50.0	As Requested	As Requested
Gravel Truck	Operating	1.055	Design Flexure - Concrete	39.03	1	17.26	50.0	As Requested	As Requested
Overweight Permit	Inventory	0.569	Design Flexure - Concrete	72.57	1	17.26	50.0	As Requested	As Requested
Overweight Permit	Operating	0.950	Design Flexure - Concrete	121.19	1	17.26	50.0	As Requested	As Requested
EV2	Operating	1.380	Design Flexure - Concrete	39.68	1	13.81	40.0	As Requested	As Requested
EV3	Operating	0.840	Design Flexure - Concrete	36.10	1	17.26	50.0	As Requested	As Requested
SU6 LFR	Operating	1.138	Design Flexure - Concrete	39.56	1	17.26	50.0	As Requested	As Requested
SU7 LFR	Operating	1.080	Design Flexure - Concrete	41.84	1	17.26	50.0	As Requested	As Requested

Bridge Name: I 65 / SR106 & Harpeth River
NBI Structure ID: 94I00650005
Bridge ID: 94I00650005

Analyzed By: bridgeware
Analyze Date: Wednesday, July 16, 2014 08:32:48
Analysis Engine: AASHTO LFR Engine Version 6.4.0.3001
Analysis Preference Setting: None

Report By: bridgeware
Report Date: Wednesday, July 16, 2014 08:35:01

Structure Definition Name: SPAN 4
Member Name: G5
Member Alternative Name: G5

Load Factor Rating Summary

		Rating			Capacity			Location		
Live Load		Factor	Controls		(Ton)	Span	(ft)	Percent	Impact	Lane
H 15-44	Inventory	1.348	PS Tensile Stress - Concrete		20.22	1	17.26	50.0	As Requested	As Requested
	Operating	2.259	Design Flexure - Concrete		33.88	1	17.26	50.0	As Requested	As Requested
HS 20-44	Inventory	0.857	PS Tensile Stress - Concrete		30.84	1	17.26	50.0	As Requested	As Requested
	Operating	1.435	Design Flexure - Concrete		51.67	1	17.26	50.0	As Requested	As Requested
Gravel - Concrete Truck	Inventory	0.701	PS Tensile Stress - Concrete		25.93	1	17.26	50.0	As Requested	As Requested
	Operating	1.174	Design Flexure - Concrete		43.45	1	17.26	50.0	As Requested	As Requested
Overweight Permit	Inventory	0.632	PS Tensile Stress - Concrete		80.52	1	17.26	50.0	As Requested	As Requested
	Operating	1.058	Design Flexure - Concrete		134.93	1	17.26	50.0	As Requested	As Requested
SU4 LFR	Inventory	0.881	PS Tensile Stress - Concrete		23.78	1	17.26	50.0	As Requested	As Requested
	Operating	1.476	Design Flexure - Concrete		39.85	1	17.26	50.0	As Requested	As Requested
SU5 LFR	Inventory	0.837	PS Tensile Stress - Concrete		25.94	1	17.26	50.0	As Requested	As Requested
	Operating	1.402	Design Flexure - Concrete		43.46	1	17.26	50.0	As Requested	As Requested
SU6 LFR	Inventory	0.756	PS Tensile Stress - Concrete		26.29	1	17.26	50.0	As Requested	As Requested
	Operating	1.268	Design Flexure - Concrete		44.05	1	17.26	50.0	As Requested	As Requested
SU7 LFR	Inventory	0.717	PS Tensile Stress - Concrete		27.80	1	17.26	50.0	As Requested	As Requested
	Operating	1.202	Design Flexure - Concrete		46.58	1	17.26	50.0	As Requested	As Requested

Note:

"N/A" indicates not applicable

***" indicates not available

Bridge Name: I 65 / SR106 & Harpeth River
NBI Structure ID: 94I00650005
Bridge ID: 94I00650005

Analyzed By: bridgeware
Analyze Date: Wednesday, July 16, 2014 08:32:48
Analysis Engine: AASHTO LFR Engine Version 6.4.0.3001
Analysis Preference Setting: None

Report By: bridgeware
Report Date: Wednesday, July 16, 2014 08:35:01

Structure Definition Name: SPANS 1,2,3
Member Name: G1
Member Alternative Name: G1

Load Factor Rating Summary

		Rating			Capacity	Location			
Live Load		Factor	Controls	(Ton)	Span	(ft)	Percent	Impact	Lane
H 15-44	Inventory	2.587	Design Shear - Concrete	38.81	3	10.27	20.0	As Requested	As Requested
	Operating	4.321	Design Shear - Concrete	64.81	3	10.27	20.0	As Requested	As Requested
HS 20-44	Inventory	1.412	Design Shear - Concrete	50.84	3	10.27	20.0	As Requested	As Requested
	Operating	2.358	Design Shear - Concrete	84.90	3	10.27	20.0	As Requested	As Requested
Gravel - Concrete Truck	Inventory	1.319	Design Shear - Concrete	48.80	3	10.27	20.0	As Requested	As Requested
	Operating	2.202	Design Shear - Concrete	81.49	3	10.27	20.0	As Requested	As Requested
Overweight Permit	Inventory	0.931	Design Shear - Concrete	118.71	3	10.27	20.0	As Requested	As Requested
	Operating	1.555	Design Shear - Concrete	198.24	3	10.27	20.0	As Requested	As Requested
SU4 LFR	Inventory	1.737	Design Shear - Concrete	46.91	3	10.27	20.0	As Requested	As Requested
	Operating	2.901	Design Shear - Concrete	78.34	3	10.27	20.0	As Requested	As Requested
SU5 LFR	Inventory	1.574	Design Shear - Concrete	48.78	3	10.27	20.0	As Requested	As Requested
	Operating	2.628	Design Shear - Concrete	81.46	3	10.27	20.0	As Requested	As Requested
SU6 LFR	Inventory	1.500	Design Shear - Concrete	52.14	3	10.27	20.0	As Requested	As Requested
	Operating	2.506	Design Shear - Concrete	87.08	3	10.27	20.0	As Requested	As Requested
SU7 LFR	Inventory	1.452	Design Shear - Concrete	56.25	3	10.27	20.0	As Requested	As Requested
	Operating	2.424	Design Shear - Concrete	93.93	3	10.27	20.0	As Requested	As Requested

Note:
"N/A" indicates not applicable
"***" indicates not available

Bridge Name: I 65 / SR106 & Harpeth River
NBI Structure ID: 94I00650005
Bridge ID: 94I00650005

Analyzed By: bridgeware
Analyze Date: Wednesday, July 16, 2014 08:32:48
Analysis Engine: AASHTO LFR Engine Version 6.4.0.3001
Analysis Preference Setting: None

Report By: bridgeware
Report Date: Wednesday, July 16, 2014 08:35:01

Structure Definition Name: SPANS 1,2,3
Member Name: G2
Member Alternative Name: G2

Load Factor Rating Summary

		Rating			Capacity			Location		
Live Load		Factor	Controls	(Ton)	Span	(ft)	Percent	Impact	Lane	
H 15-44	Inventory	2.172	Design Shear - Concrete	32.58	3	10.27	20.0	As Requested	As Requested	
	Operating	3.627	Design Shear - Concrete	54.41	3	10.27	20.0	As Requested	As Requested	
HS 20-44	Inventory	1.186	Design Shear - Concrete	42.68	3	10.27	20.0	As Requested	As Requested	
	Operating	1.980	Design Shear - Concrete	71.27	3	10.27	20.0	As Requested	As Requested	
Gravel - Concrete Truck	Inventory	1.107	Design Shear - Concrete	40.96	3	10.27	20.0	As Requested	As Requested	
	Operating	1.849	Design Shear - Concrete	68.41	3	10.27	20.0	As Requested	As Requested	
Overweight Permit	Inventory	0.782	Design Shear - Concrete	99.65	3	10.27	20.0	As Requested	As Requested	
	Operating	1.305	Design Shear - Concrete	166.42	3	10.27	20.0	As Requested	As Requested	
SU4 LFR	Inventory	1.458	Design Shear - Concrete	39.38	3	10.27	20.0	As Requested	As Requested	
	Operating	2.436	Design Shear - Concrete	65.76	3	10.27	20.0	As Requested	As Requested	
SU5 LFR	Inventory	1.321	Design Shear - Concrete	40.95	3	10.27	20.0	As Requested	As Requested	
	Operating	2.206	Design Shear - Concrete	68.38	3	10.27	20.0	As Requested	As Requested	
SU6 LFR	Inventory	1.260	Design Shear - Concrete	43.77	3	10.27	20.0	As Requested	As Requested	
	Operating	2.104	Design Shear - Concrete	73.10	3	10.27	20.0	As Requested	As Requested	
SU7 LFR	Inventory	1.218	Design Shear - Concrete	47.22	3	10.27	20.0	As Requested	As Requested	
	Operating	2.035	Design Shear - Concrete	78.85	3	10.27	20.0	As Requested	As Requested	

Note:
"N/A" indicates not applicable
"***" indicates not available

Bridge Name: I 65 / SR106 & Harpeth River
NBI Structure ID: 94I00650005
Bridge ID: 94I00650005

Analyzed By: bridgeware
Analyze Date: Wednesday, July 16, 2014 08:32:48
Analysis Engine: AASHTO LFR Engine Version 6.4.0.3001
Analysis Preference Setting: None

Report By: bridgeware
Report Date: Wednesday, July 16, 2014 08:35:01

Structure Definition Name: SPANS 1,2,3
Member Name: G3
Member Alternative Name: G3

Load Factor Rating Summary

		Rating			Capacity	Location			
Live Load		Factor	Controls	(Ton)	Span	(ft)	Percent	Impact	Lane
H 15-44	Inventory	2.459	Design Shear - Concrete	36.89	3	10.27	20.0	As Requested	As Requested
	Operating	4.107	Design Shear - Concrete	61.60	3	10.27	20.0	As Requested	As Requested
HS 20-44	Inventory	1.342	Design Shear - Concrete	48.32	3	10.27	20.0	As Requested	As Requested
	Operating	2.242	Design Shear - Concrete	80.70	3	10.27	20.0	As Requested	As Requested
Gravel - Concrete Truck	Inventory	1.253	Design Shear - Concrete	46.38	3	10.27	20.0	As Requested	As Requested
	Operating	2.093	Design Shear - Concrete	77.45	3	10.27	20.0	As Requested	As Requested
Overweight Permit	Inventory	0.885	Design Shear - Concrete	112.83	3	10.27	20.0	As Requested	As Requested
	Operating	1.478	Design Shear - Concrete	188.42	3	10.27	20.0	As Requested	As Requested
SU4 LFR	Inventory	1.651	Design Shear - Concrete	44.58	3	10.27	20.0	As Requested	As Requested
	Operating	2.758	Design Shear - Concrete	74.46	3	10.27	20.0	As Requested	As Requested
SU5 LFR	Inventory	1.496	Design Shear - Concrete	46.36	3	10.27	20.0	As Requested	As Requested
	Operating	2.498	Design Shear - Concrete	77.43	3	10.27	20.0	As Requested	As Requested
SU6 LFR	Inventory	1.426	Design Shear - Concrete	49.56	3	10.27	20.0	As Requested	As Requested
	Operating	2.382	Design Shear - Concrete	82.76	3	10.27	20.0	As Requested	As Requested
SU7 LFR	Inventory	1.380	Design Shear - Concrete	53.46	3	10.27	20.0	As Requested	As Requested
	Operating	2.304	Design Shear - Concrete	89.28	3	10.27	20.0	As Requested	As Requested

Note:
"N/A" indicates not applicable
"***" indicates not available

Bridge Name: I 65 / SR106 & Harpeth River
NBI Structure ID: 94I00650005
Bridge ID: 94I00650005

Analyzed By: bridgeware
Analyze Date: Wednesday, July 16, 2014 08:32:48
Analysis Engine: AASHTO LFR Engine Version 6.4.0.3001
Analysis Preference Setting: None

Report By: bridgeware
Report Date: Wednesday, July 16, 2014 08:35:01

Structure Definition Name: SPANS 1,2,3
Member Name: G6
Member Alternative Name: G6

Load Factor Rating Summary

		Rating			Capacity	Location			
Live Load		Factor	Controls	(Ton)	Span	(ft)	Percent	Impact	Lane
H 15-44	Inventory	1.985	Design Shear - Concrete	29.78	3	10.27	20.0	As Requested	As Requested
	Operating	3.316	Design Shear - Concrete	49.73	3	10.27	20.0	As Requested	As Requested
HS 20-44	Inventory	1.084	Design Shear - Concrete	39.01	3	10.27	20.0	As Requested	As Requested
	Operating	1.810	Design Shear - Concrete	65.15	3	10.27	20.0	As Requested	As Requested
Gravel - Concrete Truck	Inventory	0.988	PS Tensile Stress - Concrete	36.57	3	25.67	50.0	As Requested	As Requested
	Operating	1.690	Design Shear - Concrete	62.53	3	10.27	20.0	As Requested	As Requested
Overweight Permit	Inventory	0.714	Design Shear - Concrete	91.09	3	10.27	20.0	As Requested	As Requested
	Operating	1.193	Design Shear - Concrete	152.12	3	10.27	20.0	As Requested	As Requested
SU4 LFR	Inventory	1.283	PS Tensile Stress - Concrete	34.64	3	25.67	50.0	As Requested	As Requested
	Operating	2.226	Design Shear - Concrete	60.11	3	10.27	20.0	As Requested	As Requested
SU5 LFR	Inventory	1.185	PS Tensile Stress - Concrete	36.74	3	25.67	50.0	As Requested	As Requested
	Operating	2.016	Design Shear - Concrete	62.51	3	10.27	20.0	As Requested	As Requested
SU6 LFR	Inventory	1.073	PS Tensile Stress - Concrete	37.29	3	25.67	50.0	As Requested	As Requested
	Operating	1.923	Design Shear - Concrete	66.82	3	10.27	20.0	As Requested	As Requested
SU7 LFR	Inventory	1.002	PS Tensile Stress - Concrete	38.82	3	25.67	50.0	As Requested	As Requested
	Operating	1.860	Design Shear - Concrete	72.08	3	10.27	20.0	As Requested	As Requested

Note:
"N/A" indicates not applicable
"***" indicates not available

Bridge Name: I 65 / SR106 & Harpeth River
NBI Structure ID: 94I00650005
Bridge ID: 94I00650005

Analyzed By: bridgeware
Analyze Date: Wednesday, July 16, 2014 08:32:48
Analysis Engine: AASHTO LFR Engine Version 6.4.0.3001
Analysis Preference Setting: None

Report By: bridgeware
Report Date: Wednesday, July 16, 2014 08:35:01

Structure Definition Name: SPAN 4
Member Name: G1
Member Alternative Name: G1

Load Factor Rating Summary

		Rating			Capacity	Location			
Live Load		Factor	Controls	(Ton)	Span	(ft)	Percent	Impact	Lane
H 15-44	Inventory	2.143	Design Flexure - Concrete	32.15	1	17.26	50.0	As Requested	As Requested
	Operating	3.579	Design Flexure - Concrete	53.68	1	17.26	50.0	As Requested	As Requested
HS 20-44	Inventory	1.362	Design Flexure - Concrete	49.02	1	17.26	50.0	As Requested	As Requested
	Operating	2.274	Design Flexure - Concrete	81.87	1	17.26	50.0	As Requested	As Requested
Gravel - Concrete Truck	Inventory	1.114	Design Flexure - Concrete	41.22	1	17.26	50.0	As Requested	As Requested
	Operating	1.861	Design Flexure - Concrete	68.84	1	17.26	50.0	As Requested	As Requested
Overweight Permit	Inventory	1.004	Design Flexure - Concrete	128.00	1	17.26	50.0	As Requested	As Requested
	Operating	1.677	Design Flexure - Concrete	213.77	1	17.26	50.0	As Requested	As Requested
SU4 LFR	Inventory	1.400	Design Flexure - Concrete	37.80	1	17.26	50.0	As Requested	As Requested
	Operating	2.338	Design Flexure - Concrete	63.13	1	17.26	50.0	As Requested	As Requested
SU5 LFR	Inventory	1.330	Design Flexure - Concrete	41.23	1	17.26	50.0	As Requested	As Requested
	Operating	2.221	Design Flexure - Concrete	68.85	1	17.26	50.0	As Requested	As Requested
SU6 LFR	Inventory	1.203	Design Flexure - Concrete	41.79	1	17.26	50.0	As Requested	As Requested
	Operating	2.008	Design Flexure - Concrete	69.79	1	17.26	50.0	As Requested	As Requested
SU7 LFR	Inventory	1.140	Design Flexure - Concrete	44.19	1	17.26	50.0	As Requested	As Requested
	Operating	1.905	Design Flexure - Concrete	73.80	1	17.26	50.0	As Requested	As Requested

Note:
"N/A" indicates not applicable
"***" indicates not available

Bridge Name: I 65 / SR106 & Harpeth River
NBI Structure ID: 94I00650005
Bridge ID: 94I00650005

Analyzed By: bridgeware
Analyze Date: Wednesday, July 16, 2014 08:32:48
Analysis Engine: AASHTO LFR Engine Version 6.4.0.3001
Analysis Preference Setting: None

Report By: bridgeware
Report Date: Wednesday, July 16, 2014 08:35:01

Structure Definition Name: SPAN 4
Member Name: G2
Member Alternative Name: G2

Load Factor Rating Summary

		Rating			Capacity	Location			
Live Load		Factor	Controls	(Ton)	Span	(ft)	Percent	Impact	Lane
H 15-44	Inventory	1.609	Design Flexure - Concrete	24.14	1	17.26	50.0	As Requested	As Requested
	Operating	2.687	Design Flexure - Concrete	40.31	1	17.26	50.0	As Requested	As Requested
HS 20-44	Inventory	1.020	Design Flexure - Concrete	36.73	1	13.81	40.0	As Requested	As Requested
	Operating	1.704	Design Flexure - Concrete	61.33	1	13.81	40.0	As Requested	As Requested
Gravel - Concrete Truck	Inventory	0.837	Design Flexure - Concrete	30.96	1	17.26	50.0	As Requested	As Requested
	Operating	1.397	Design Flexure - Concrete	51.70	1	17.26	50.0	As Requested	As Requested
Overweight Permit	Inventory	0.754	Design Flexure - Concrete	96.12	1	17.26	50.0	As Requested	As Requested
	Operating	1.259	Design Flexure - Concrete	160.52	1	17.26	50.0	As Requested	As Requested
SU4 LFR	Inventory	1.051	Design Flexure - Concrete	28.38	1	17.26	50.0	As Requested	As Requested
	Operating	1.756	Design Flexure - Concrete	47.40	1	17.26	50.0	As Requested	As Requested
SU5 LFR	Inventory	0.999	Design Flexure - Concrete	30.96	1	17.26	50.0	As Requested	As Requested
	Operating	1.668	Design Flexure - Concrete	51.70	1	17.26	50.0	As Requested	As Requested
SU6 LFR	Inventory	0.903	Design Flexure - Concrete	31.38	1	17.26	50.0	As Requested	As Requested
	Operating	1.508	Design Flexure - Concrete	52.40	1	17.26	50.0	As Requested	As Requested
SU7 LFR	Inventory	0.856	Design Flexure - Concrete	33.18	1	17.26	50.0	As Requested	As Requested
	Operating	1.430	Design Flexure - Concrete	55.42	1	17.26	50.0	As Requested	As Requested

Note:
"N/A" indicates not applicable
"***" indicates not available

Bridge Name: I 65 / SR106 & Harpeth River
NBI Structure ID: 94I00650005
Bridge ID: 94I00650005

Analyzed By: bridgeware
Analyze Date: Wednesday, July 16, 2014 08:32:48
Analysis Engine: AASHTO LFR Engine Version 6.4.0.3001
Analysis Preference Setting: None

Report By: bridgeware
Report Date: Wednesday, July 16, 2014 08:35:01

Structure Definition Name: SPAN 4
Member Name: G3
Member Alternative Name: G3

Load Factor Rating Summary

		Rating			Capacity	Location			
Live Load		Factor	Controls	(Ton)	Span	(ft)	Percent	Impact	Lane
H 15-44	Inventory	1.549	Design Flexure - Concrete	23.24	1	17.26	50.0	As Requested	As Requested
	Operating	2.587	Design Flexure - Concrete	38.81	1	17.26	50.0	As Requested	As Requested
HS 20-44	Inventory	0.982	Design Flexure - Concrete	35.37	1	13.81	40.0	As Requested	As Requested
	Operating	1.641	Design Flexure - Concrete	59.06	1	13.81	40.0	As Requested	As Requested
Gravel - Concrete Truck	Inventory	0.805	Design Flexure - Concrete	29.80	1	17.26	50.0	As Requested	As Requested
	Operating	1.345	Design Flexure - Concrete	49.76	1	17.26	50.0	As Requested	As Requested
Overweight Permit	Inventory	0.726	Design Flexure - Concrete	92.53	1	17.26	50.0	As Requested	As Requested
	Operating	1.212	Design Flexure - Concrete	154.52	1	17.26	50.0	As Requested	As Requested
SU4 LFR	Inventory	1.012	Design Flexure - Concrete	27.32	1	17.26	50.0	As Requested	As Requested
	Operating	1.690	Design Flexure - Concrete	45.63	1	17.26	50.0	As Requested	As Requested
SU5 LFR	Inventory	0.961	Design Flexure - Concrete	29.80	1	17.26	50.0	As Requested	As Requested
	Operating	1.606	Design Flexure - Concrete	49.77	1	17.26	50.0	As Requested	As Requested
SU6 LFR	Inventory	0.869	Design Flexure - Concrete	30.21	1	17.26	50.0	As Requested	As Requested
	Operating	1.452	Design Flexure - Concrete	50.45	1	17.26	50.0	As Requested	As Requested
SU7 LFR	Inventory	0.824	Design Flexure - Concrete	31.95	1	17.26	50.0	As Requested	As Requested
	Operating	1.377	Design Flexure - Concrete	53.35	1	17.26	50.0	As Requested	As Requested

Note:
"N/A" indicates not applicable
"***" indicates not available

Bridge No.: 94 — I65 — 4.79 Rt. Ln
Crossing: I65 / SR 106 & - Harpeth River
Federal No.: 94I00650005

Date:

August 20, 2003

PIC1



Br. No. Abutment No. 1

Bridge No.: 94 — I65 4.79 Rt. Ln
Crossing:: I65 /SR 106 & - Harpeth River
Federal No 94I00650005

Date: August 20, 2003

PIC2



Elev. View, Rt. Side

PIC3



Looking Ahead on Route (94-106-5.88)

Bridge No.: 94 — I65 4.79 Rt. Ln
Crossing:: I65 /SR 106 & - Harpeth River
Federal No.: 94I00650005

Date: August 20, 2003

PIC4



Looking Back on Route (94-106-5.88)

PIC5



Across Top of Deck

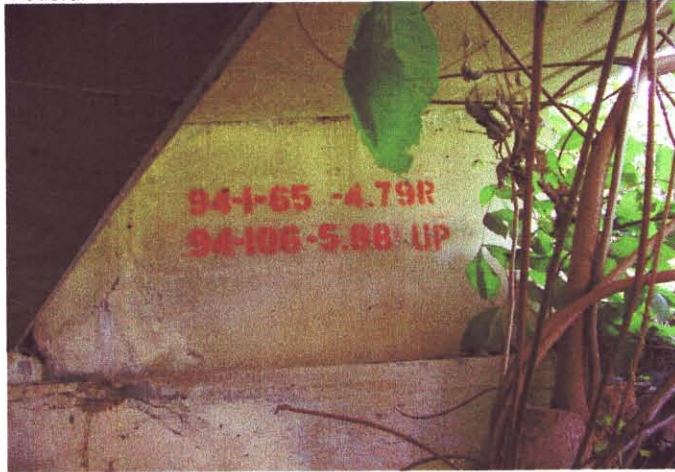
Bridge No.: 94 — 10065 — 0479
Crossing:: I65/SR 106&HARPETH RIVER*
Federal No.: 94100650005

Date:

RIGHT LANE

August 16, 2001

PIC1



BR. NO. ABUTMENT NO. 1

Bridge No.: 94 — I0065 — 0479
Crossing:: I65/SR 106&HARPETH RIVER*
Federal No 94I00650005

RIGHT LANE

Date:

August 16, 2001

PIC2



ACROSS TOP, OF DECK

PIC3



ELEV. VIEW, RT. SIDE

Bridge No.: 94 — 10065 — 0479
Crossing: I65/SR 106&HARPETH RIVER*
Federal No.: 94100650005

Date:

August 16, 2001

PIC4



SPALL & REBAR IN COLUMN "B", BENT NO. 3- REPAIRED

PIC5



LOOKING AHEAD ON ROUTE

Bridge No.: 94 — I0065 — 0479
Crossing:: I65/SR 106&HARPETH RIVER*
Federal No.: 94I00650005

Date: August 16, 2001

PIC6



LOOKING BACK ON ROUTE

Bridge No.: 94 — 10065 — 0479

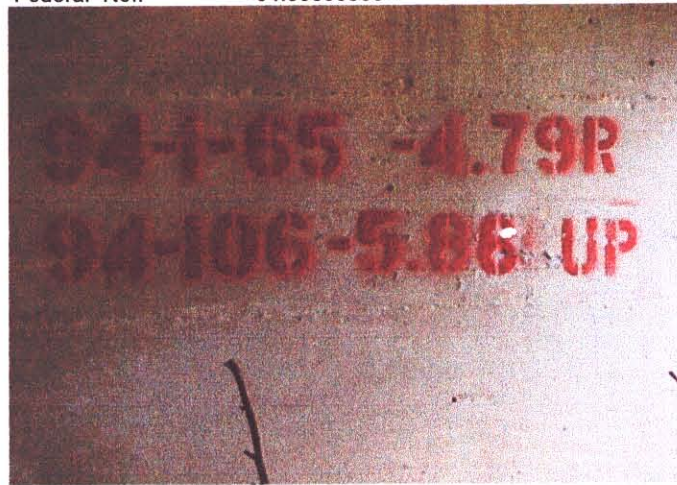
Crossing:: I65/SR 106&HARPETH RIVER*

Federal No.: 94I00650005

Date:

August 23, 1999

PIC1



BRIDGE NO. AT ABUTMENT # 1

Bridge No.: 94 — I0065 — 0479
Crossing:: I65/SR 106&HARPETH RIVER*
Federal No 94I00650005

Date: August 23, 1999

PIC2



ACROSS TOP OF DECK

PIC3



ELEV. VIEW, RT. SIDE

Bridge No.: 94 — 10065 — 0479
Crossing:: I65/SR 106&HARPETH RIVER*
Federal No.: 94I00650005

Date:

August 23, 1999

PIC4



SPALL/REBAR IN COLUMN "B", BENT #3

PIC5



LOOKING AHEAD ON ROUTE (94-106-5.86U.P.)

Bridge No.: 94 — I0065 — 0479
Crossing:: I65/SR 106&HARPETH RIVER*
Federal No.: 94I00650005

Date: August 23, 1999

PIC6



LOOKING BACK ON ROUTE (94-106-5.86U.P.)

ROUTINE BRIDGE INSPECTION REPORT

Page No. _____

Form BIR 3.0C
(Rev. 9-22-98)
DT-1537Field Report No. 16 Date 8/20/2003
Previous Report No. 14 Date 8/23/1999
Plans: YESBridge No. 94100650005Bridge Location No. 94 - 10065 - 4.79 R

Eleven Digit No.

INTERSTATE 65over SR. 106 & HARPETH RIVER

Co. Route Log Mile

Road Name

Crossing

Indepth Insp. Req'd: NO

(If yes itemize limits under comment)

Structure Type PPCIBFRACTURE CRITICAL: NOFEATURE CHANGES: NoWearing Surface NOType ASPHALTDepth +2 (in.)Bridge Rail NO

Describe changes:

Approach Rail NOCLEARANCE CHANGES: NO (If yes make changes below)

Vertical Clearance over deck _____ (ft.-in.)

Vertical Under Clearance 19'-2" (ft.-in.)Horizontal Under Clearance 46'-4" (*. ft.)

Deck Width Curb/Curb _____ (*. ft.)

Deck Width Rail/Rail _____ (*. ft.)

Sidewalk Width Rt. _____ Lt. _____

INSPECTORSCHOATEFINCHWILLIAMSCondition: FAIR (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)

GOOD	
G	
GOOD	A FEW COLLISION SCRAPES
GOOD	
FAIR	EXPOSED REBARS, CRACKS & SPALLS
FAIR	LIGHT TO MODERATE CRACKS & SCALING
FAIR	MODERATE TO HEAVY CRACKS & LIGHT SCALING
N/V	
GOOD	
GOOD	
G	

UNDERWATER INSPECTIONTo Be Performed By: DOT FIELD TEAMDate Underwater Insp. 08/20/03BRIDGE is: OPEN**COMMENTS:**Weight Limit Posted NO

Gross..... Tons

2 Axle..... Tons

3 or more Axles.. Tons

Supervising Bridge Inspector: _____

BRIDGE RATING: FAIR

INSPECTION TEAM'S SUMMARY

INSPECTION TEAM'S SUMMARY
BRIDGE NUMBER 94-I65-4.79 (RIGHT LANE)
I-65 OVER SR-106 & HARPETH RIVER

AUGUST 20, 2003

The subject bridge was inspected, on the above date, and found to be in fair condition.

This structure is a 4 span precast, prestressed, concrete I-beam bridge on a 70° skew to the left. The bridge has a cross-section of 6 I-beams. All substructure members are cast-in-place concrete. The bridge has a roadway width of 40'-6" and a total length of 193'-10"

The approach alignment and embankment are rated good. Approach pavement is fair with cracks and light spall at the bridge ends.

The approach guardrailing and bridge railing is present and all is standard.

The parapets are good with a few light cracks. The deck structural is good with a few light cracks. The diaphragms are fair with a few cracks, spalls, and rebar popouts.

Abutment No. 1 cap is fair with moderate to heavy cracks, chips, and light scaling. The bent caps, are fair with moderate to heavy cracks, chips, and light scaling. The bent columns are fair with moderate to heavy cracks and light scaling.

The channel opening appears to be adequate, but there is very heavy vegetation growing underneath this bridge.

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

Field Report No. 16 Date 8/20/2003
Previous Report No. 14 Date 8/23/1999

Bridge No. 94100650005
Eleven Digit No.

Underpass Location No.	94	-	SR106	-	5.86
	Co.		Route		Log Mile


 _____ or 94 - 10065 - 0479 R
 Railroad/Walkway Co. Route Log Mile

over 94 - SR106 - 5.86
Co. Route Log Mile

County **WILLIAMSON**

Structure Name (If Named) _____

Year Constructed	1963	ACTUAL
------------------	------	--------

Year Widened Year Rehabilitated

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

Divided Highway N.A.

Type of Wearing Surface ASPHALT

Width of Approach Traveled Roadway 21'-4" ft. (Does Not Include Shoulders)

Width of Median if Divided Highway _____ ft.

Approach Shoulder Width 6 ft. Right 7 ft. Left

*Horizontal Clearance Under Bridge 46'-4" ft.

*Distance Between Pier Protection Guardrail and Substructure	3	ft.	Right	2	ft.	Left
---	---	-----	-------	---	-----	------

*Width of Sidewalk Under Bridge — ft. Right — ft. Left

*Minimum Vertical Clearance: 19 ft. 2 in. (ft.-in.)

***Show on Sketch**

TRAFFIC SAFETY FEATURES

Pier Protection Railing or Parapet

Approach Guardrail Terminals

Approach Guardrail

Approach Guardrail Terminal

Rating	Standard/ SubStandard	Non Exist
--------	-----------------------	-----------

GOOD	STANDARD
GOOD	STANDARD
GOOD	STANDARD
GOOD	STANDARD

SIGNING

Yes/ No/ Needed

Paddleboards

YES

Vertical Clearance (<14'-6")

NO

Narrow Passage

NO

One Lane Passage

NO

Other Underpass Signs Needed NO

INSPECTORS

- | | |
|----|----------|
| 1. | HOWELL |
| 2. | CHOATE |
| 3. | FINCH |
| 4. | WILLIAMS |
| 5. | |
| 6. | |

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

Date 8/20/2003

Underpass Location No. 94 - SR106 - 5.86
Co. Route Log Mile

Other Signs or Plaques: NONE

Comments Regarding any
Problems with Signing: NONE

BRIDGE FEATURES (*. * ft.)

Bridge Skew	<u>70°</u>	Number of Lanes/Tracks on Bridge	<u>2</u>
Structure Type (Main Span)	<u>PPCIB</u>	No. Main Spans	<u>4</u>
Structure Type (Appr. Spans)	<u>N.A.</u>	No. Appr. Spans	<u>0</u>
Maximum Span Length	<u>52'-1"</u> (ft.)	Total Length	<u>193'-10"</u> (ft.)
Width of Bridge Out-to-Out	<u>43'-4"</u> (ft.)	Right Angle to Centerline of Bridge	
Width of Bridge Along Skew	<u>—</u> (ft.)	(If Unable to Measure at Right Angle to Centerline of Bridge)	

BRIDGE CONDITION: FAIR

Does Potential Exist for Elements from Bridge Falling on Roadway Beneath? NO
Does Potential Exist Because of Deteriorated Condition or Failure of Major Members? NO

Comment on any Conditions of Bridge that would Effect Roadway Beneath:
NONE

Note: If Underpass Route is Divided Highway, Use Two 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

ROUTINE BRIDGE INSPECTION REPORT

Page No. _____

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

Field Report No. 15 Date 8/16/01
Previous Report No. 14 Date 8/23/99
Plans: YES

Bridge No. 94I00650005
Eleven Digit No.

Bridge Location No. 94 - I0065 - 4.79 R
Co. Route Log Mile

INTERSTATE 65 over SR. 106 & HARPETH RIVER
Road Name Crossing

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

Structure Type PPCIB

FRACTURE CRITICAL: NO

FEATURE CHANGES: Yes

Wearing Surface YES Type ASPHALT Depth +2 (in.)

Bridge Rail NO Describe changes:

Approach Rail NO

CLEARANCE CHANGES: NO (If yes make changes below)

Vertical Clearance over deck _____ (ft.-in.)
Vertical Under Clearance 19'-2" (ft.-in.)
Horizontal Under Clearance 46'-3" (*. * ft.)
Deck Width Curb/Curb _____ (*. * ft.)
Deck Width Rail/Rail _____ (*. * ft.)
Sidewalk Width Rt. _____ Lt. _____

INSPECTORS

HOWELL

CHOATE

FINCH

WILLIAMS

Condition: FAIR (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)

GOOD	NEW ASPHALT
G	
GOOD	A FEW COLLISION SCRAPES
GOOD	
FAIR	EXPOSED REBARS, CRACKS & SPALLS
FAIR	LIGHT TO MODERATE CRACKS & SCALING
FAIR	MODERATE TO HEAVY CRACKS & LIGHT SCALING
N/V	
GOOD	
GOOD	
G	

UNDERWATER INSPECTION

To Be Performed By: DOT FIELD TEAM

Date Underwater Insp. _____

BRIDGE is: OPEN

COMMENTS:

Weight Limit Posted NO

Gross..... Tons

2 Axle..... Tons

3 or more Axles.. Tons

Supervising Bridge Inspector: _____

BRIDGE RATING: FAIR

INSPECTION TEAM'S SUMMARY

INSPECTION TEAM'S SUMMARY BRIDGE NUMBER 94-I65-4.79 (RIGHT LANE) I-65 OVER SR-106 & HARPETH RIVER

AUGUST 16, 2001

The subject bridge was inspected, on the above date, and found to be in fair condition.

This structure is a 4 span precast, prestressed, concrete I-beam bridge on a 70° skew to the left. The bridge has a cross-section of 6 I-beams. All substructure members are cast-in-place concrete. The bridge has a roadway width of 40'-6" and a total length of 193'-10".

The approach alignment and embankment are rated good. Approach pavement is fair with cracks and light spall at the bridge ends.

The approach guardrailing and bridge railing is present and all is standard.

The parapets are good with a few light cracks. The deck structural is good with a few light cracks. The diaphragms are fair with a few cracks, spalls, and rebar popouts.

Abutment No. 1 cap is fair with moderate to heavy cracks, chips, and light scaling. The bent caps, are fair with moderate to heavy cracks, chips, and light scaling. The bent columns are fair with moderate to heavy cracks and light scaling. Bent No. 3 cap and columns have repairs made since last inspection.

The channel opening is clean and appears to be adequate.

Field Report No. 15 Date 8/16/01
Previous Report No. 14 Date 8/23/99

Underpass Location No.	94	-	SR106	-	5.86
	Co.		Route		Log Mile

<u> </u>	or	94 - 10065 - 0479 R	over	94 - SR106 - 5.86
Railroad/Walkway		Co. Route Log Mile		Co. Route Log Mile

Structure Name (If Named) _____

Year Widened Year Rehabilitated

Divided Highway N.A. Type of Wearing Surface ASPHALT

Width of Approach Traveled Roadway 21'-4" ft. (Does Not Include Shoulders)

Width of Median if Divided Highway — ft.

Approach Shoulder Width 8'-1" ft. Right _____ ft. Left _____

*Horizontal Clearance Under Bridge 46'-4" ft.

*Distance Between Pier Protection Guardrail and Substructure	3	ft. Right	2	ft. Left
---	---	-----------	---	----------

*Width of Sidewalk Under Bridge — ft. Right — ft. Left

*Minimum Vertical Clearance: 19 ft. 2 in. (ft.-in.)

*Show on Sketch

Rating	Standard/ SubStandard Non Exist
--------	------------------------------------

Pier Protection Railing or Parapet

Approach Guardrail Terminals

Approach Guardrail

Approach Guardrail Terminal

GOOD	STANDARD
GOOD	STANDARD
GOOD	STANDARD
GOOD	STANDARD

SIGNING

Yes/ No/ Needed

Paddleboards

Vertical Clearance (<14'-6")

Narrow Passage

One Lane Passage

Other Underpass Signs Needed *NO*

INSPECTORS

- | | |
|----|----------|
| 1. | HOWELL |
| 2. | CHOATE |
| 3. | FINCH |
| 4. | WILLIAMS |
| 5. | |
| 6. | |

Date 08/16/01Underpass Location No. 94 - SR106 - 5.86
Co. Route Log MileOther Signs or Plaques: NoneComments Regarding any
Problems with Signing: None**BRIDGE FEATURES** (*.ft.)Bridge Skew 70°Number of Lanes/Tracks on Bridge 2Structure Type (Main Span) P.P.C.I.B. No. Main Spans 4Structure Type (Appr.Spans) N.A. No. Appr. Spans 0Maximum Span Length 52'-1" (ft.) Total Length 193'-10" (ft.)Width of Bridge Out-to-Out 43'-4" (ft.) Right Angle to Centerline of BridgeWidth of Bridge Along Skew - (ft.) (If Unable to Measure at Right
Angle to Centerline of Bridge)**BRIDGE CONDITION:** FairDoes Potential Exist for Elements from Bridge Falling on Roadway Beneath? NoDoes Potential Exist Because of Deteriorated Condition or Failure of Major Members? NoComment on any Conditions of Bridge that would Effect Roadway Beneath: NONE

Note: If Underpass Route is Divided Highway, Use Two 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

BRIDGE INSPECTION REPORT

FORM BIR 3.0
REV. 6-9-92
DT-0069

FIELD REPORT NO.: 14 DATE: 08-12-99
PREVIOUS REPORT NO.: 13 DATE: 09/16/97
PLANS----- YES [X] NO []

BRIDGE NO.: 94100650005 BRIDGE LOC. NO.: 94 - I65 - -4.79R -
ELEVEN DIGIT NO. CO. RTE. L.M.

94 - I65 - -4.79R OVER SR106 & HARPETH RIV
CO. RTE. L.M.

STRUCTURE NAME (IF NAMED)

YEAR CONSTRUCTED 1963 COUNTY WILLIAMSON MAINTENANCE DISTRICT NO. 31
(ESTIMATED OR ACTUAL)

[] [X]
YEAR WIDENED 1979 YEAR REHABILITATED
ESTIMATED OR ACTUAL ESTIMATED OR ACTUAL
[] [X] [] []

FEATURES

WEARING SURFACE---CONCRETE [] TIMBER [] ASPHALT [✓] (DEPTH= ")
FLARED WIDTH-----YES [] NO [X]
NAVIGATIONAL CONTROL---YES [] NO [X]
MEDIAN TYPE-----OPEN [] NONE [X] CLOSED []

BRIDGE SKEW 70.33

STRUCTURE TYPE PPCIB NO. SPANS 4
MAIN SPAN MAIN SPAN
STRUCTURE TYPE N.L. NO. SPANS 0
APPROACH SPANS APPROACH SPANS

MAXIMUM SPAN LENGTH 52.08 TOTAL LENGTH 193.87

WIDTHS	CLEARANCES
DECK OUT-TO-OUT 44.	MIN. VERT. OVER DECK
ROADWAY CURB-TO-CURB 40.5	MIN. VERT. UNDER CL. 17'-2"
SIDEWALK RT LT	MIN. LAT. UNDER CL. 12'-6" RT
*APPROACH ROADWAY 23.3	LT
APPR. SHOULDER 10.RT 4.LT	

*DOES NOT INCLUDE SHOULDERS

UNDERWATER INSPECTION

INSPECTION PERFORMED BY:

DOT FIELD TEAM [] DATE
CONTRACT DIVERS [] DATE
NONE REQUIRED [✓]

(< 25FT.)
NBIS BRIDGE
LENGTH 225
(FT.) (INCHES)

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

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

COMMENTS:

BRIDGE RATING [] [✓] [] []
GOOD FAIR POOR CRIT.

SUPERVISING BRIDGE INSPECTOR

PERFORMANCE EVALUATIONTime of day inspected 11:30Weather conditions Clear & SunnyVehicles observed See Type at Loc. 1000 ft. S. of Bridge**LIVE LOAD BEHAVIOR****YES****NO****COMMENTS**

Substructure

Horiz. & Vert. Defl. - - - []

[✓]

Vibration - - - - - []

[✓]

Superstructure

Horiz. & Vert. Defl. - - - []

[✓]

Vibration - - - - - []

[✓]

APPROACH

Alignment

(G) F P C

Slab

G F P C

Joints

G F P C

Pavement

G (F) P C

Embankment

(G) F P C

Drains

(G) F P C

TRANS & SPAN 2 Bt. PMS**TRAFFIC SAFETY FEATURES**

STANDARD

SUB-STANDARD

Bridgerailing

G (F) P C

[✓]

[]

Transitions

G F P C

[✓]

[]

Guardrail

G F P C

[✓]

[]

Guardrail Terminal

G F P C

[✓]

[]

SIGNING

YES

NO

NEEDED

Paddleboard - - - - - []

[]

[]

WEIGHT LIMIT POSTED

YES [] NO [✓]

Vertical Clearance (< 14'-6") - - - []

[✓]

[]

GROSS-- TONS

Narrow [] One Lane Bridge [] - []

[✓]

[]

2 AXLE - TONS

3 OR MORE AXLES- TONS

Other Signs or Plaques

Comments Regarding Any Problems With Signing

RECOMMENDATIONS

Bridgerail Is Substandard []

Install Post Load Limit Signs []

Approach Rail Is Substandard []

Level Approach []

Install Paddleboard Signs []

Other Recommendations

FORM BIR 3.2
Rev. 3-1-97
DT-0081

BRIDGE LOC. NO. 94- 165 - 4.79 R
CO. ROUTE L.M.

DATE: 08/23/99

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

Light CRACKS & DISINTEGRATION CON. DAMAGE

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				

CRACKS TRUSS & EXPOSED RAIL

TEXTURE COAT

CONDITION RATING	(G)	F	P	C
OVERALL APPEARANCE	(G)	F	P	C
STAINING	(G)	F	P	C

FADING	(G)	F	P	C
NEEDS SPOT PAINTING?	YES []	NO [✓]		
NEEDS REPAINTING?	YES []	NO [✓]		

COMMENTS: _____

SCALING G (F) P C

RECOMMENDATIONS _____

CLEAN & SEAL JOINTS []

CLEAN DRAINS []

SUBSTRUCTURE

ABUTMENTS

COMMENTS

PILES TO BE REPLACED

						PILE(S)	BENT
CAPS	G	(F)	P	C	<u>Light to Med. Corrosion & Spalling</u>		
BREASTWALL	G	F	P	C	<u>-</u>		
WINGS	(G)	F	P	C			
BACKWALL	G	F	P	C	<u>-</u>		
PLUMB	(G)	F	P	C			
FOOTING	G	F	P	C	<u>-</u>		
PILES	G	F	P	C	<u>N/A</u>		
EMBANKMENT	(G)	(F)	P	C	<u>Light Corrosion & Spalling: A Bent #1</u>		
BEARINGS	(G)	F	P	C			
SLOPE PAVING	(G)	F	P	C	<u>Light Corrosion</u>		

PIERS

CAPS	G	F	P	C			
COLUMNS	G	F	P	C			
PLUMB	G	F	P	C			
FOOTINGS	G	F	P	C	<u>N/A</u>		
PILES	G	F	P	C			
BEARINGS	G	F	P	C			

BENTS

CAPS	G	(F)	P	C	<u>Mod. to Heavy Corrosion, Spalling & Rebar Corrosion</u>		
COLUMNS	G	(F)	P	C	<u>Mod. to Heavy Corrosion & Rebar Corrosion</u>		
PLUMB	(G)	F	P	C			
FOOTINGS	G	F	P	C	<u>N/A</u>		
PILES	G	F	P	C	<u>-</u>		
BEARINGS	(G)	F	P	C			

PILES NEED REPLACEMENT NO ☒ YES ☐ -----

CUT VEGETATION NO ☒ YES ☐

CLEAR DRIFT NO ☒ YES ☐

RECOMMENDATIONS: _____

STREAM CHANNEL DATA AND CONDITIONS

STREAM CROSSING: SR 106 & HARPEETH RIVER

- I. 1. Type of bed material? Bedrock
2. Has the channel shifted? YES ☐ NO ☒ NOT APPARENT ☐
3. Condition of rip-rap? G F P C Est. % failed N/A ☒
4. Overall condition of channel? G F P C
5. Item 61 - Code values 0 thru 9 according to the recording and coding guide currently in effect: 8
6. Underwater diver inspection recommended? YES ☐ NO ☒
If yes, why?

- II. Channel and bank stability conditions: (check if applicable)
1. Steep bank - Failures upstream ☐ downstream ☐ conditions
2. Moderate bank erosion ☐
3. Bank (a) low growth ☒ (b) large timber ☐
Vegetation (c) dead trees ☐ (d) clear banks ☐
4. Sediment or gravel accumulation: YES ☐ NO ☒ UNKNOWN ☐
5. Channel altered or straightened: YES ☐ NO ☒ UNKNOWN ☐
6. Stable conditions: (a) live growth ☒ (b) bedrock ☒
(c) boulders ☐ (d) flat slopes ☐
($\leq 2:1$)

- III. Waterway adequacy and debris characteristics: (check if applicable)
1. Bridge deck elevations:
(a) level with approach roadway ☒
(b) higher than approach roadway ☐
(c) roadway approach $\geq 2'$ above natural ground line ☐
2. Abutment encroaches into channel ☐
3. Large scour (blowhole) under bridge ☐
4. Indications that flood waters overtop bridge:
NO ☒ YES ☐ OCCASIONALLY ☐ FREQUENTLY ☐ UNKNOWN ☐
5. Debris characteristics:
(a) debris present YES ☐ NO ☒
(b) debris likely to accumulate: YES ☐ NO ☒
(c) dead trees upstream: ☐ or downstream: ☐

IV. Comments:

SPECIAL INSPECTION DATA - FOR REASONS OTHER THAN FC OR SCOUR

- I. Does this bridge need a special inspection? YES ☐ NO ☒
II. Reason for special inspection

FORM BIR 3.0A
Rev. 3-1-97
DT-1443

CURRENT FIELD REPORT NO. 14 DATE 08/23/99
PREVIOUS FIELD REPORT NO. 13 DATE 09/16/97

INSPECTION REPORT FOR UNDERPASS ROUTE

BRIDGE NO. 94I00650005 UNDERPASS LOC. NO. 94- I65 - 5.86
ELEVEN DIGIT NO. CO. ROUTE L.M.

94-I65- 4.79R OVER 94- SR106- 5.86
CO. RTE. L.M. CO. RTE. L.M. STRUCTURE NAME

COUNTY WILLIAMSON

YEAR CONSTRUCTED 1963 YEAR WIDENED YEAR REHABILITATED
ESTIMATED [] ACTUAL [X]

GEOMETRIC FEATURES UNDER BRIDGE

DIVIDED HIGHWAY - - - - LEFT RDWY [] RIGHT RDWY [] N.A. [X]
TYPE OF WEARING SURFACE - - - - CONCRETE [] ASPHALT [X] GRAVEL []
WIDTH OF APPROACH TRAVELED ROADWAY 21'-3"ft (DOES NOT INCLUDE SHOULDERS)
WIDTH OF MEDIAN IF DIVIDED HIGHWAY ft
APPROACH SHOULDER WIDTH 6 ft (RT.) 7 ft (LT.)
*HORIZONTAL CLEARANCE UNDER BRIDGE 46 ft 3 in.
*DISTANCE BETWEEN PIER PROTECTION GUARDRAIL AND
SUBSTRUCTURE 2 ft (RT.) 3 ft (LT.)
*WIDTH OF SIDEWALK UNDER BRIDGE ft (RT.) ft (LT.)
*MINIMUM VERTICAL CLEARANCE 19 ft 2 in

*SHOW ON SKETCH

TRAFFIC SAFETY FEATURES FOR UNDERPASS ROUTE STANDARD SUB-STANDARD

PIER PROTECTION RAILING	<u>G</u> F P C	<u>[X]</u>	[] NON EXIST []
OR PARAPET			
APPROACH GUARDRAIL	<u>G</u> F P C	<u>[X]</u>	[] NON EXIST []
TRANSITIONS			
APPROACH GUARDRAIL	<u>G</u> F P C	<u>[X]</u>	[] NON EXIST []
APPROACH GUARDRAIL			
TERMINAL	<u>G</u> F P C	<u>[X]</u>	[] NON EXIST []

SIGNING FOR UNDERPASS ROUTE

	YES	NO	NEEDED
PADDLEBOARD	<u>[X]</u>	[]	[]
VERTICAL CLEARANCE			
(< 14'-6")	YES []	NO <u>[X]</u>	NEEDED []
NARROW PASSAGE	YES []	NO <u>[X]</u>	NEEDED []
ONE LANE PASSAGE	YES []	NO <u>[X]</u>	NEEDED []

INSPECTORS

1. Howell
2. Chaste
3. Evans
4. Williams
5. _____
6. _____

NOTE:

Date: 8/23/99

FORM BIR 3.0A (CONTINUED)
Rev. 3-1-97
DT-1443

UNDERPASS LOC. NO. 94 - SR106 - 5.86
CO. ROUTE L.M.

OTHER SIGNS OR PLAQUES NONE

COMMENTS REGARDING ANY PROBLEM WITH SIGNING NONE

BRIDGE FEATURES

BRIDGE SKEW 70°20'
STRUCTURE TYPE PPCIB

NO. SPANS 4
MAIN TYPE

STRUCTURE TYPE N.A.
MAIN SPAN
APPROACH SPAN

NO. SPANS 0
APPROACH TYPE

MAXIMUM SPAN LENGTH 52'-1" ft TOTAL LENGTH 193'-10" ft
WIDTH OF BRIDGE OUT-TO-OUT 43'-4" ft (RIGHT ANGLE TO CENTERLINE OF BRIDGE)
WIDTH OF BRIDGE ALONG SKEW ft (IF UNABLE TO MEASURE AT RIGHT ANGLE
TO CENTERLINE 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 OR 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

INSPECTION TEAM'S SUMMARY
BRIDGE NUMBER 94-I65-4.79 (RIGHT LANE)
I-65 OVER SR-106 & HARPETH RIVER

AUGUST 23, 1999

The subject bridge was inspected, on the above date, and found to be in fair condition.

This structure is a 4 span precast, prestressed, concrete I-beam bridge on a 70° skew to the left. The bridge has a cross-section of 6 I-beams. All substructure members are cast-in-place concrete. The bridge has a roadway width of 40'-6" and a total length of 193'-10".

The approach alignment and embankment are rated good. Approach pavement is fair with cracks and light spall at the bridge ends.

The approach guardrailing and bridge railing is present and all is standard.

The parapets are good with a few light cracks. The deck structural is good with few light cracks. The diaphragms are fair with a few cracks, spalls, and rebar popouts.

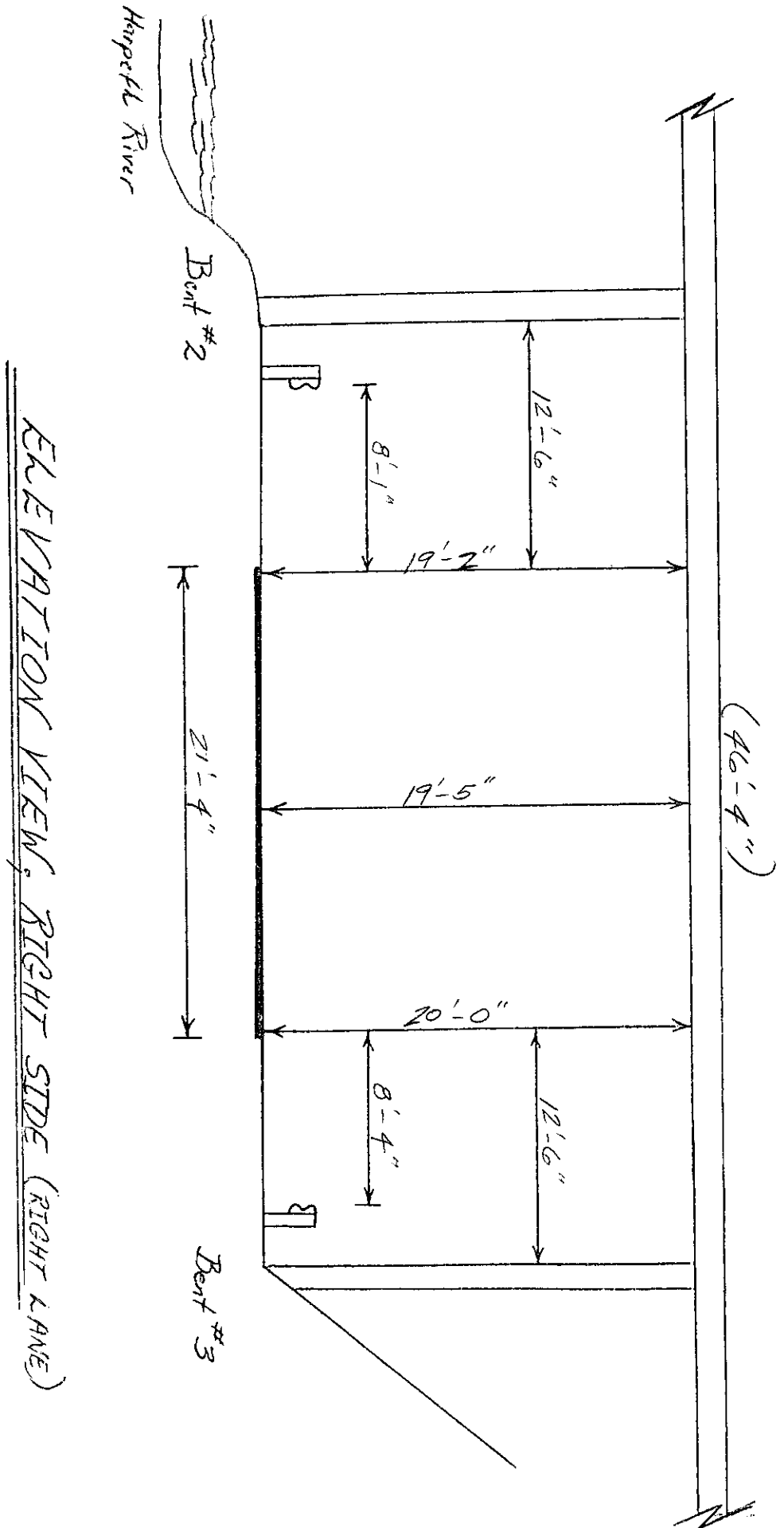
Abutment No. 1 cap is fair with moderate to heavy cracks, chips, and light scaling. The bent caps are fair with moderate to heavy cracks, chips, and light scaling. The bent columns are fair with moderate to heavy cracks and light scaling.

The channel opening is clean and appears to be adequate.

Br. No. 94-165-4.79 Rt. Lane DATE: 8/20/03

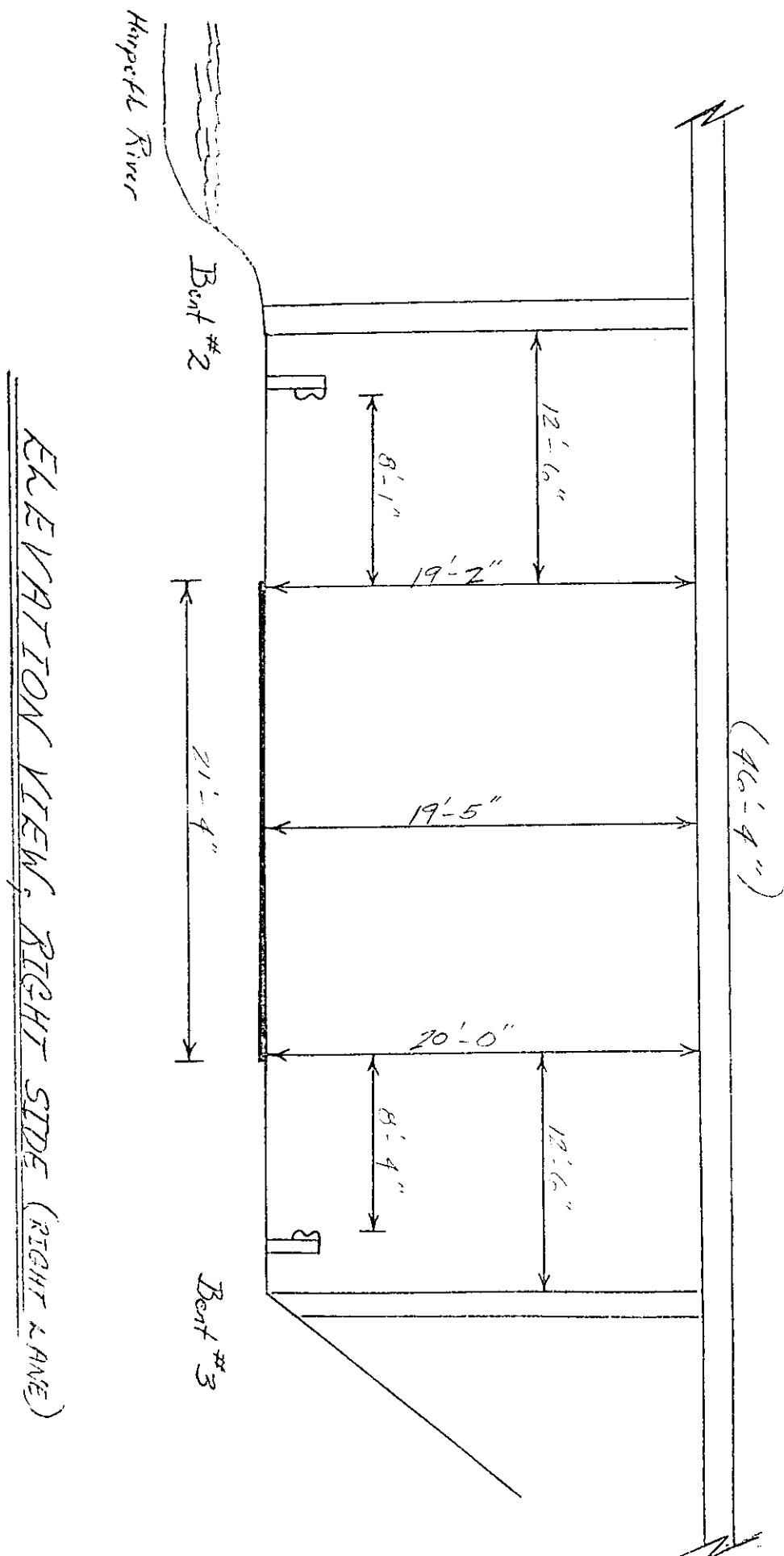
19.

Underpass Clearance



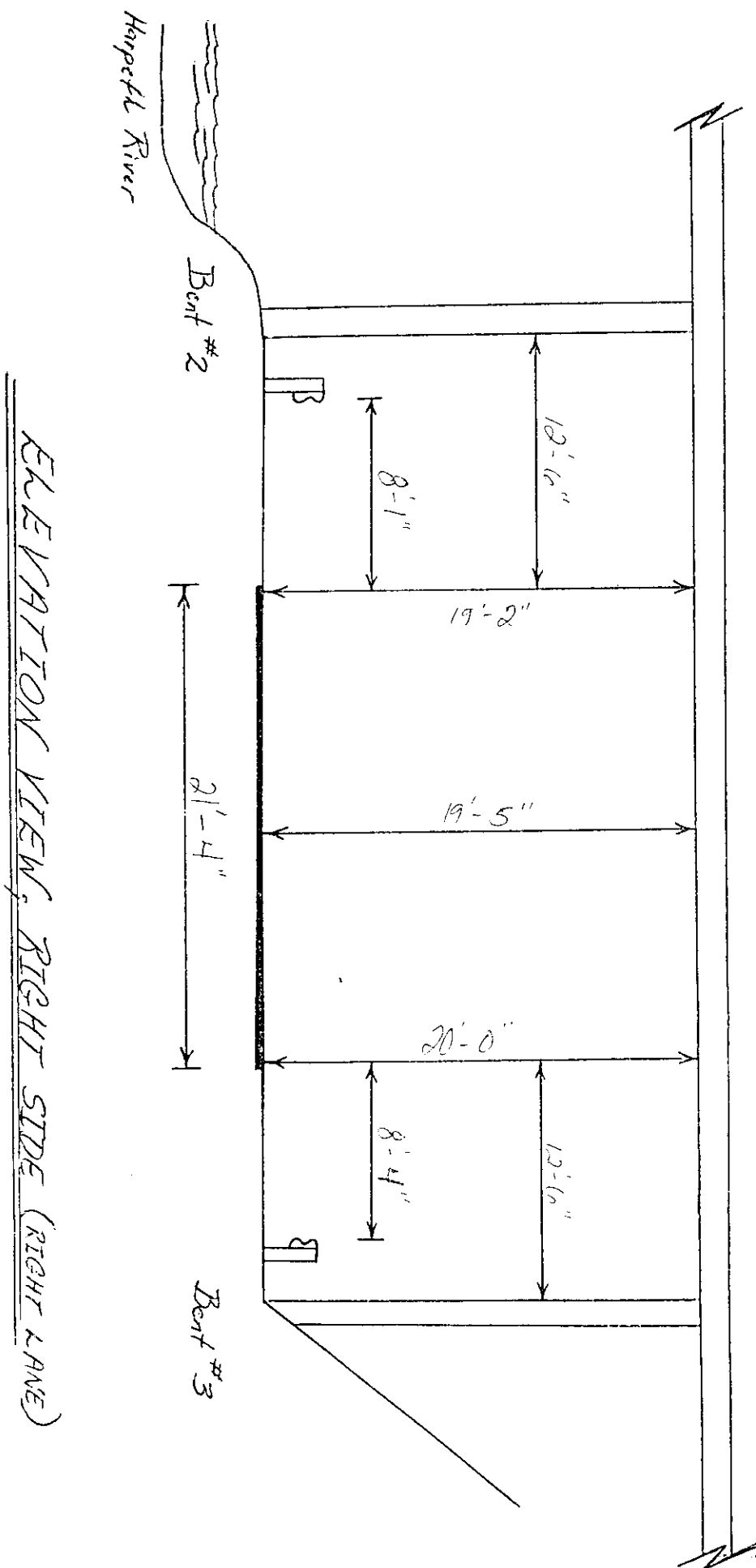
Bl. No. 94-165-4,79 Rt. Lane DATE: 8/16/01
Underpass Clearance

19.



Br. No. 94-IG5-4.79 Rt. Lane DATE: 08/23/99
Underpass Clearance

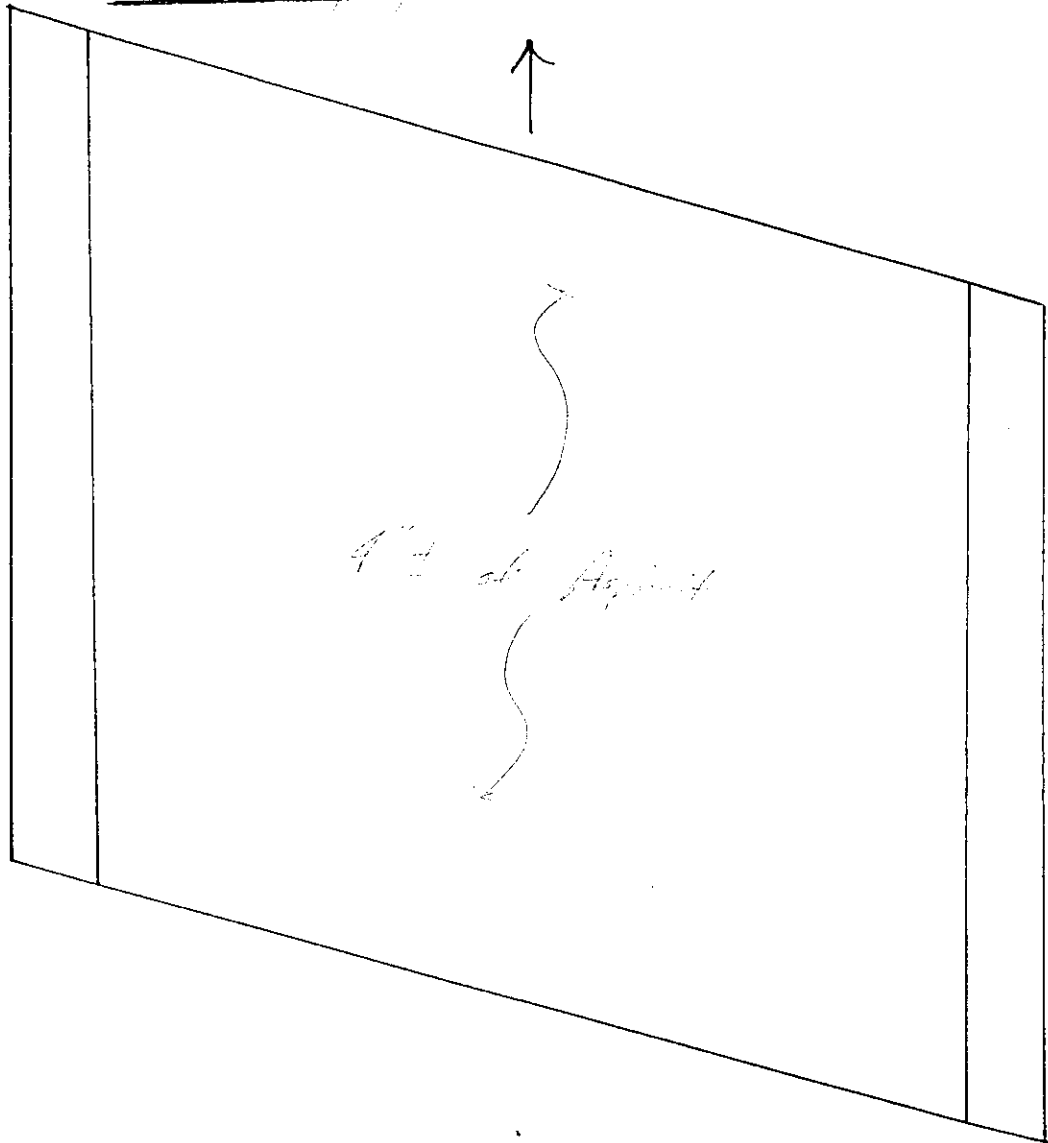
Pg.



BR # 94-I65-4.79 Rt. Lane

Date: 4/25/79

Top Span 1

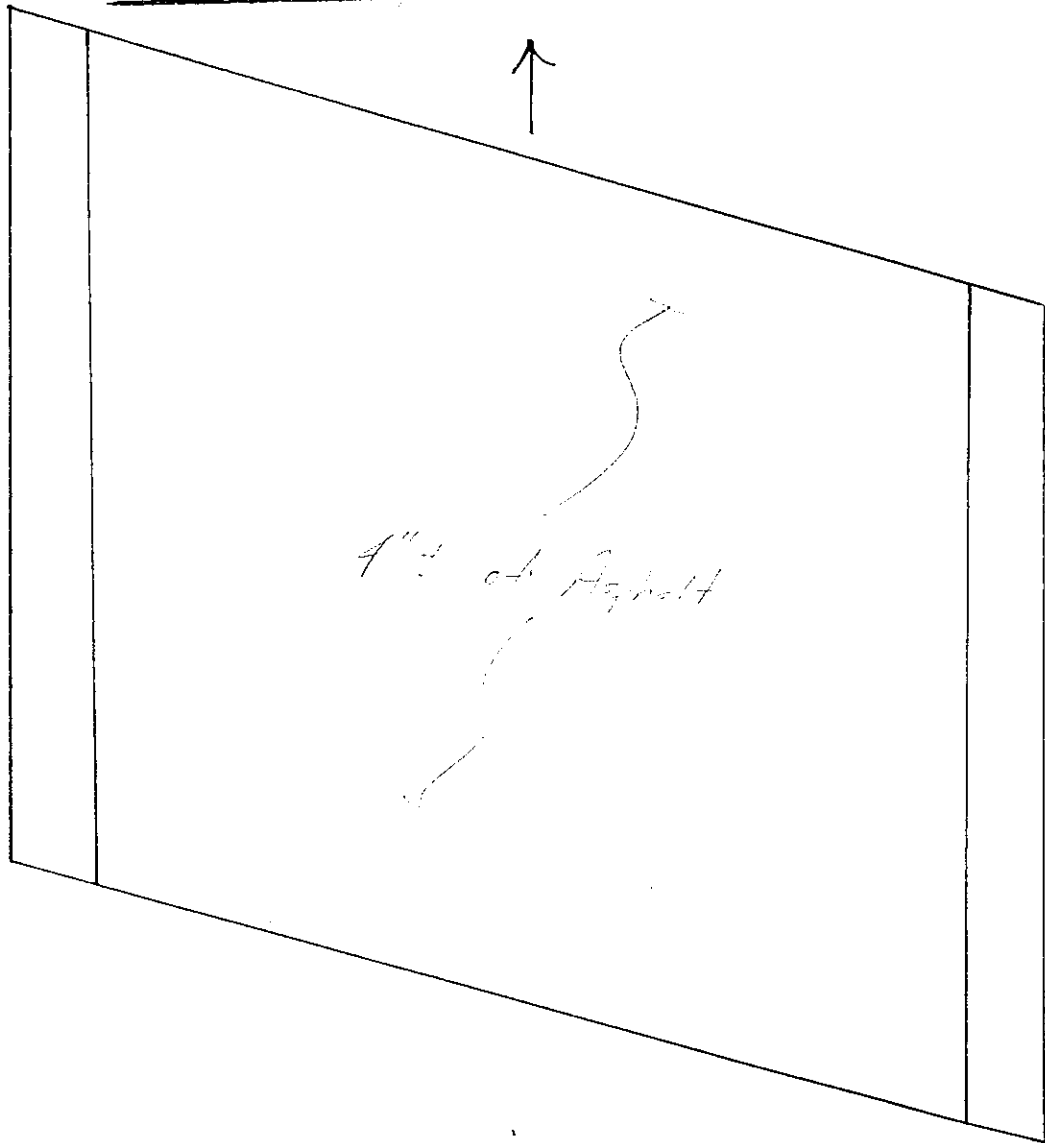


DECK	Good	
DRAINS	N/A	
HANDRAILS	N/A	
JOINTS	N/A	
PARAPET	Good	1. Area 14' x 12' Parapet

BR # 94-I65-4.79 Rt. Lane

Date: 8/25/97

Top Span 2

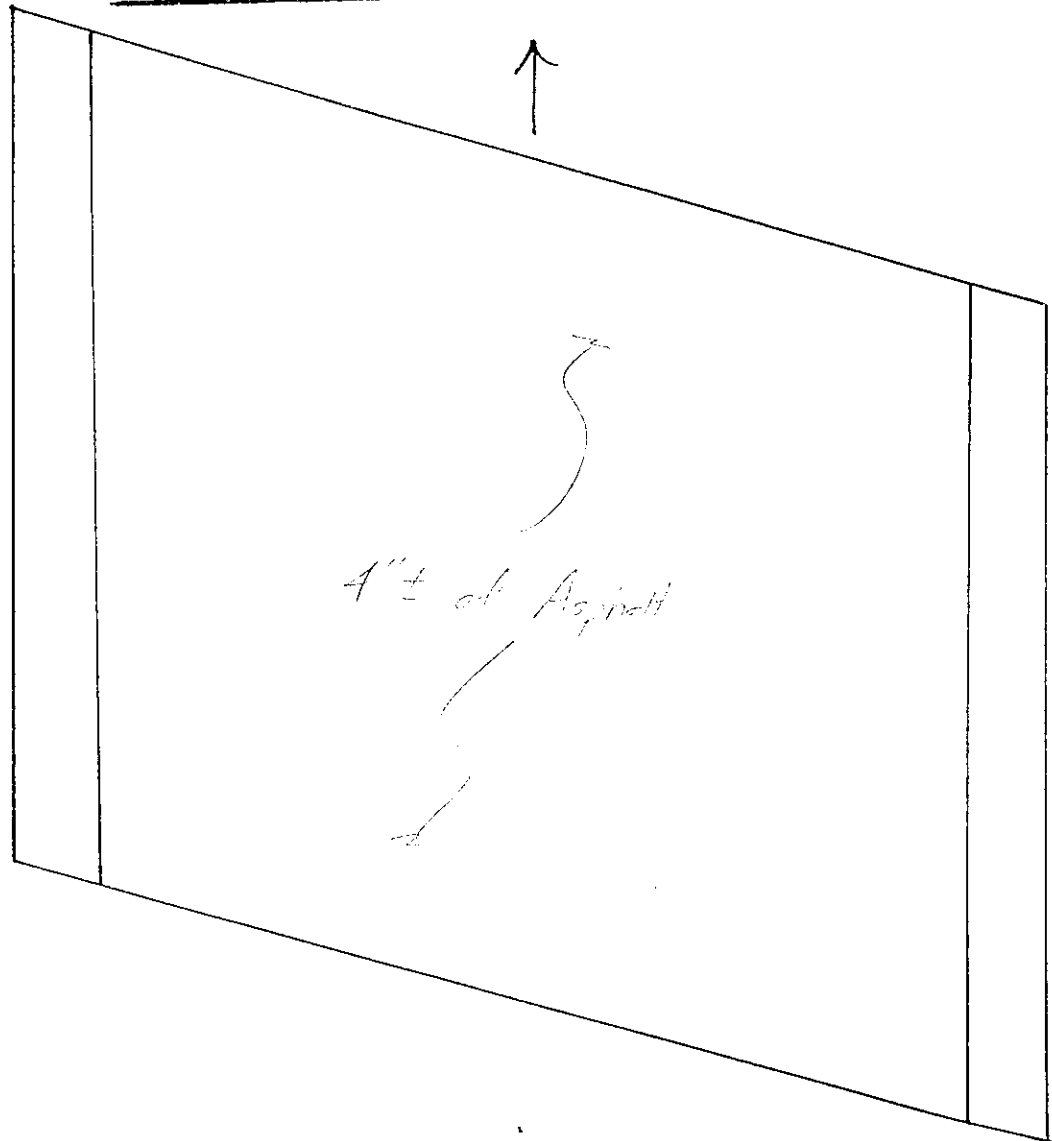


DECK	Good	
DRAINS	1/2	
HANDRAILS	1/2	
JOINTS	1/2	
PARAPET	Good	1. 4' from Top of Deck

BR # 94-I65-4.79 Rt. Lane

Date: 3/23/77

Top Span 3

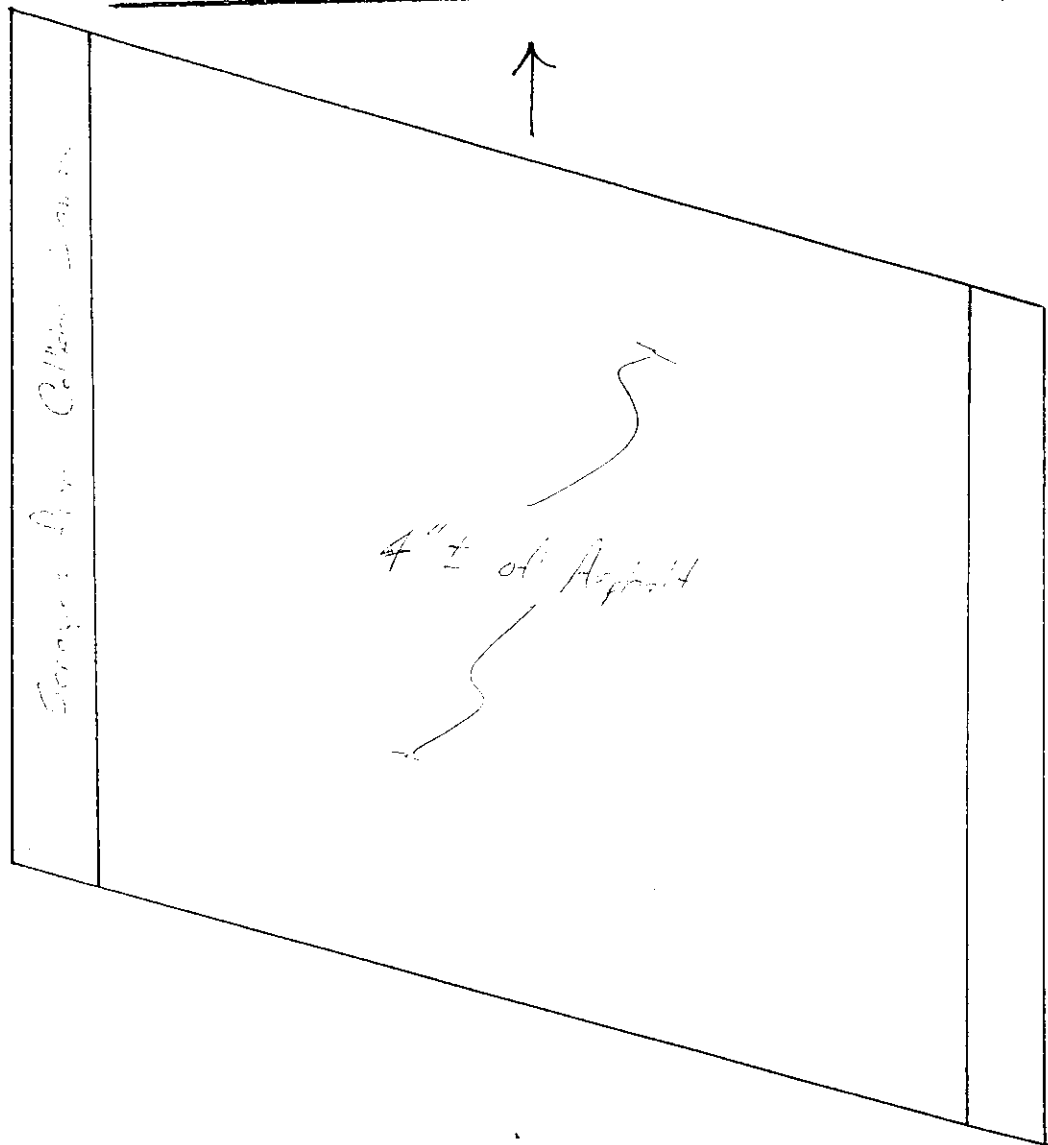


DECK	Good	
DRAINS	OK	
HANDRAILS	OK	
JOINTS	OK	
PARAPET	Good	1/4" Saw Timber Fenders

BR # 94-I65-4.79 Rt. Lane

Date: 8/23/99

Top Span 4



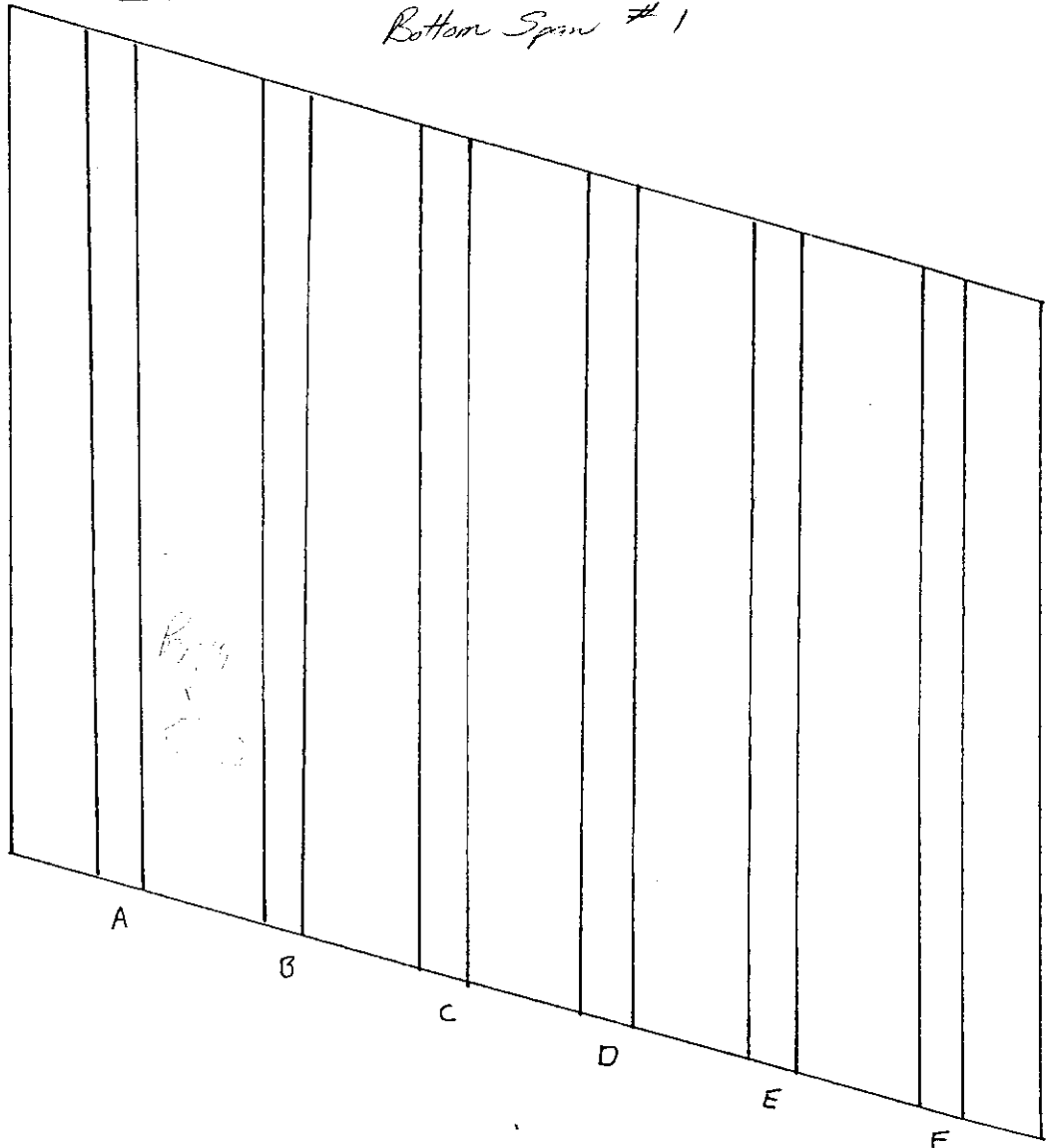
DECK	Good	
DRAINS	N/A	
HANDRAILS	N/A	
JOINTS	N/A	
PARAPET	Good	Concrete Rib Culvert Lane
		4" ± of Asphalt

BR # 94-I65-479

DATE:

Rt. Lane

Bottom Span # 1



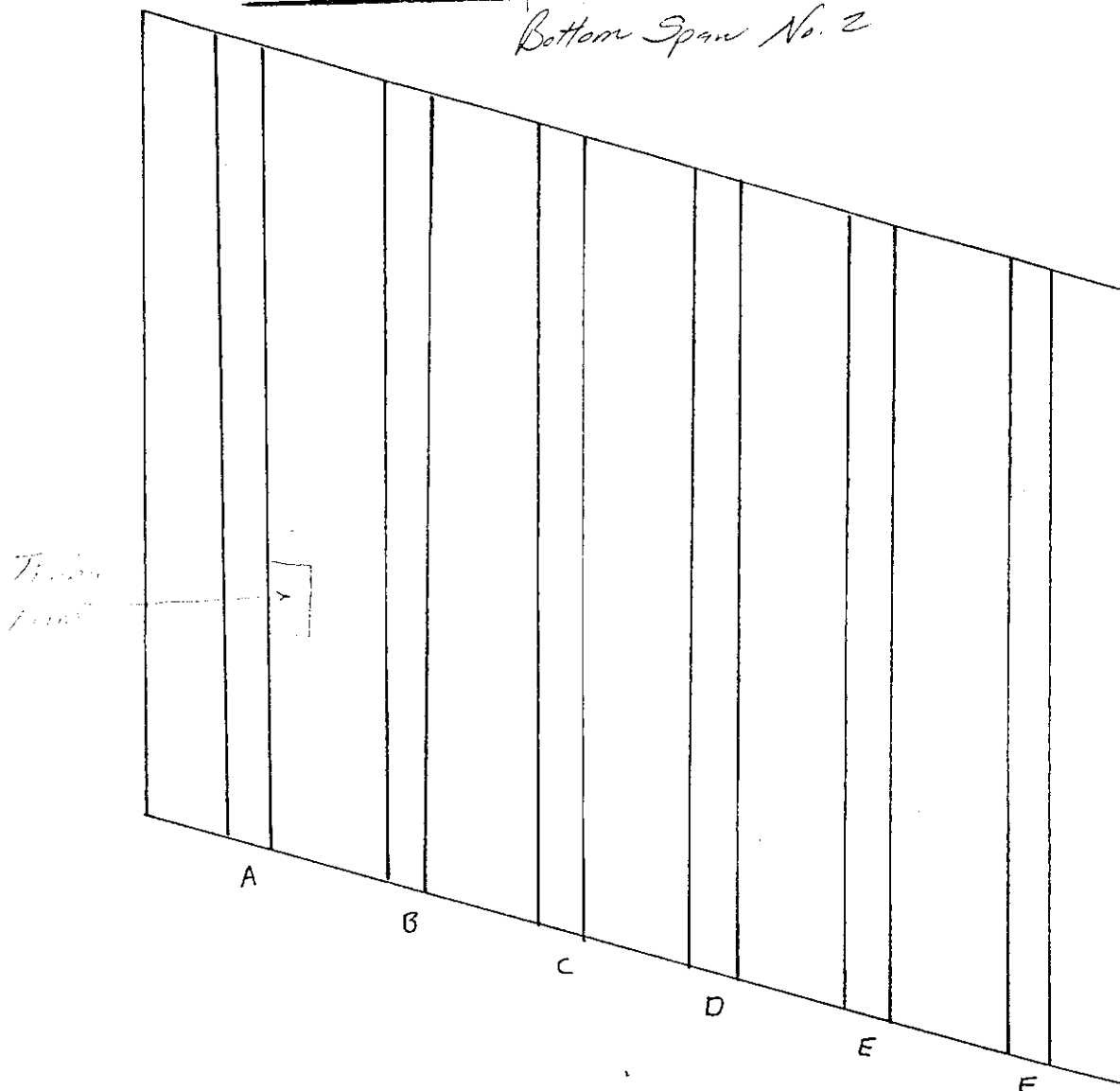
DECK	Rt. Lane	1 R-11
BEAM A		
B		
C		
D		
E		
F		
DRAINS		
DIAPH-BACK	For	(Rt. Lane E 27)
INT	Rt. Lane	
AHEAD	For	(Rt. Lane E 27)

BR # 94-I65-479

DATE: 1/23/05

Rt. Lane

Bottom Span No. 2



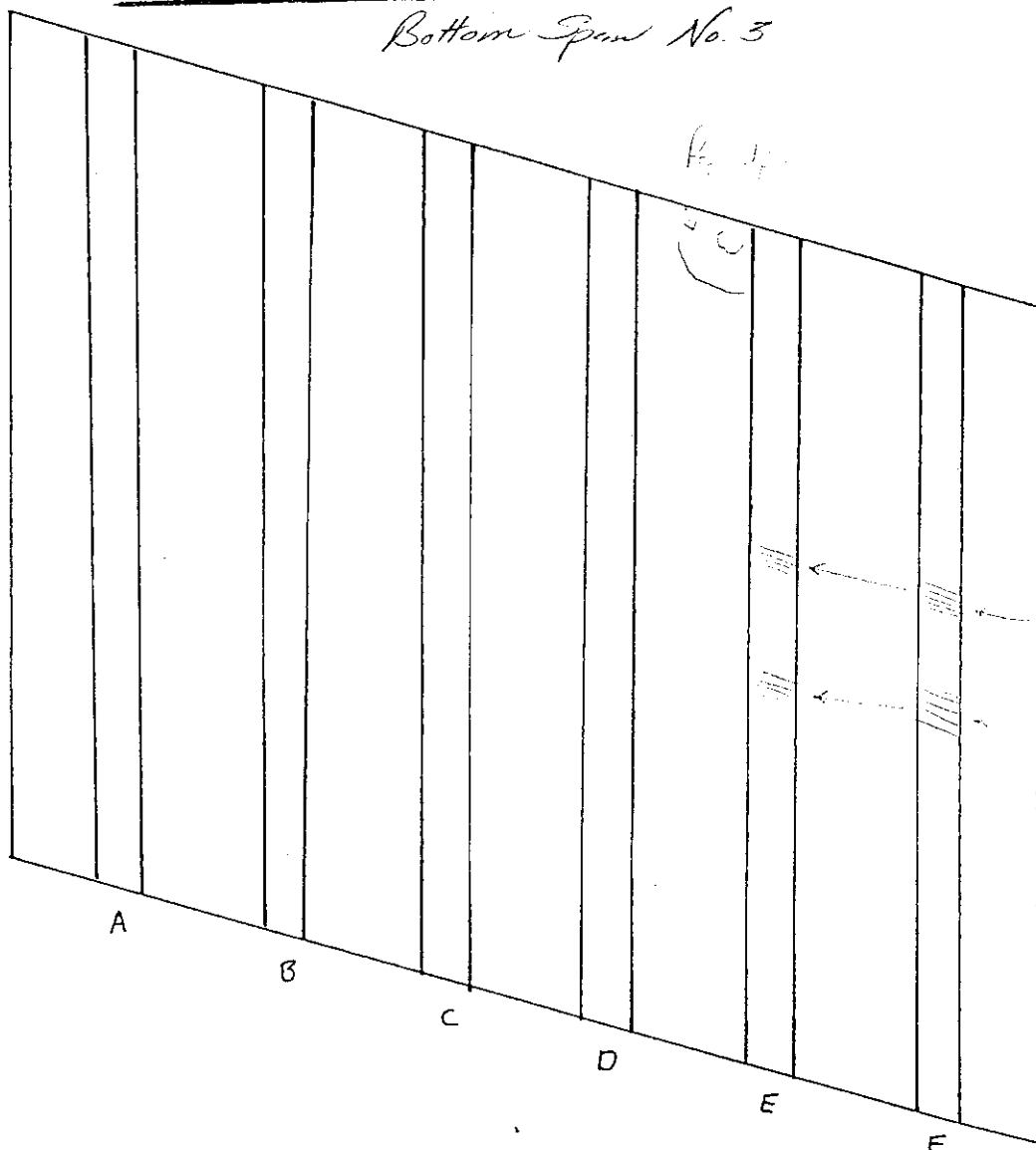
DECK	Good	
BEAM A		
B		
C		
D		
E		
F		Splice in Tension Beam
DRAINS		
DIAPH-BACK	Good	Splice in Tension Beam
INT	Good	
AHEAD	Good	Cracks

BR # 94-I65-479

DATE:

Rt. Lane

Bottom Span No. 3

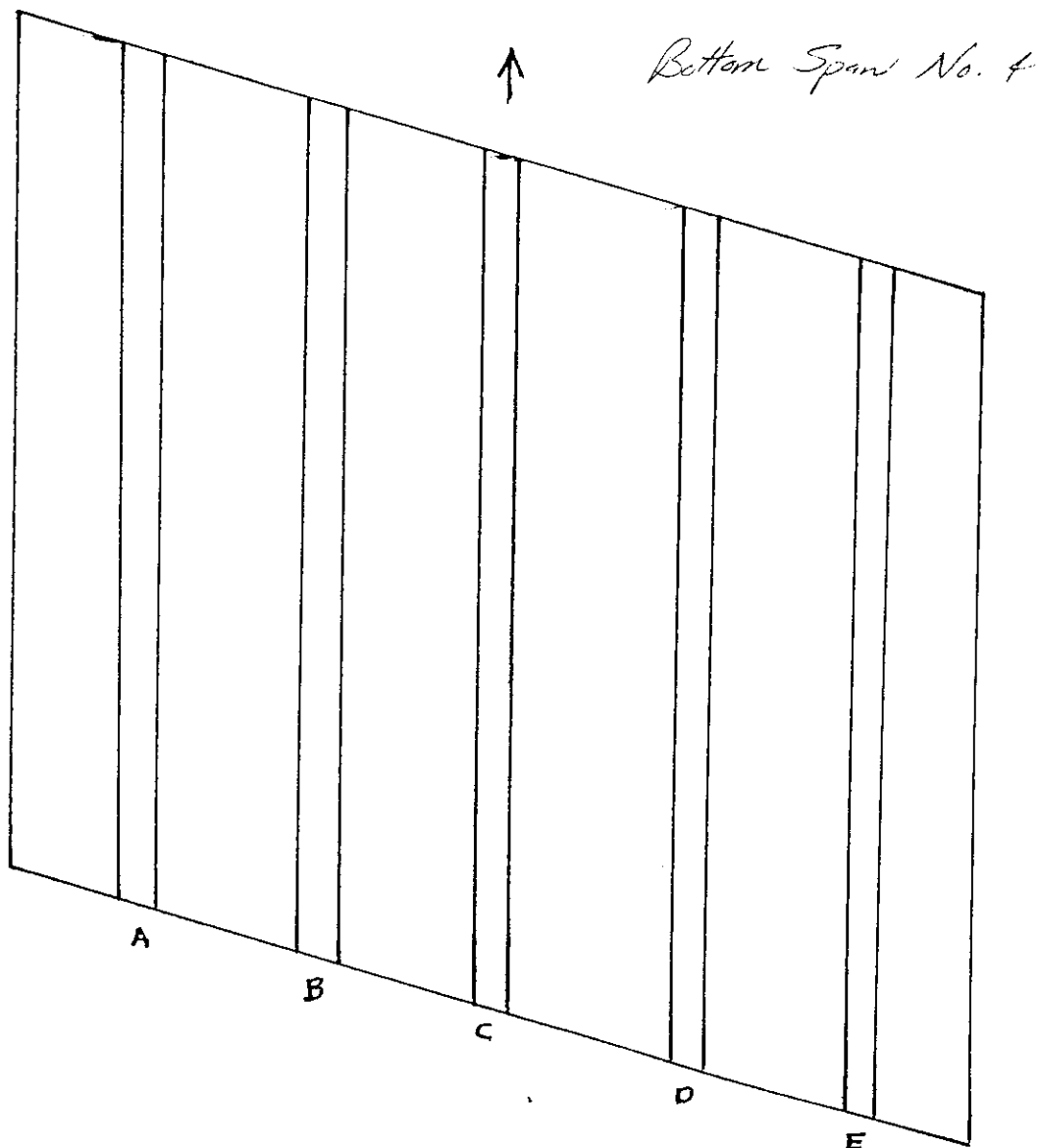


DECK	Grass	
BEAM A	"	
B	"	
C	"	
D	"	
E	"	Scrape from Collar
F	"	Scrape
DRAINS		
DIAPH-BACK	Fall	Medium
INT	Good	
AHEAD	Fall	Heavy Gravel

94-165-4.79

Date:

Rt. Lane



DECK	my	
BEAM A		
B		
C		
D		
E		
DRAINS		
DIAPH.-BACK	F-P	Heavy Grate
AHEAD	Grout	
INT.	"	

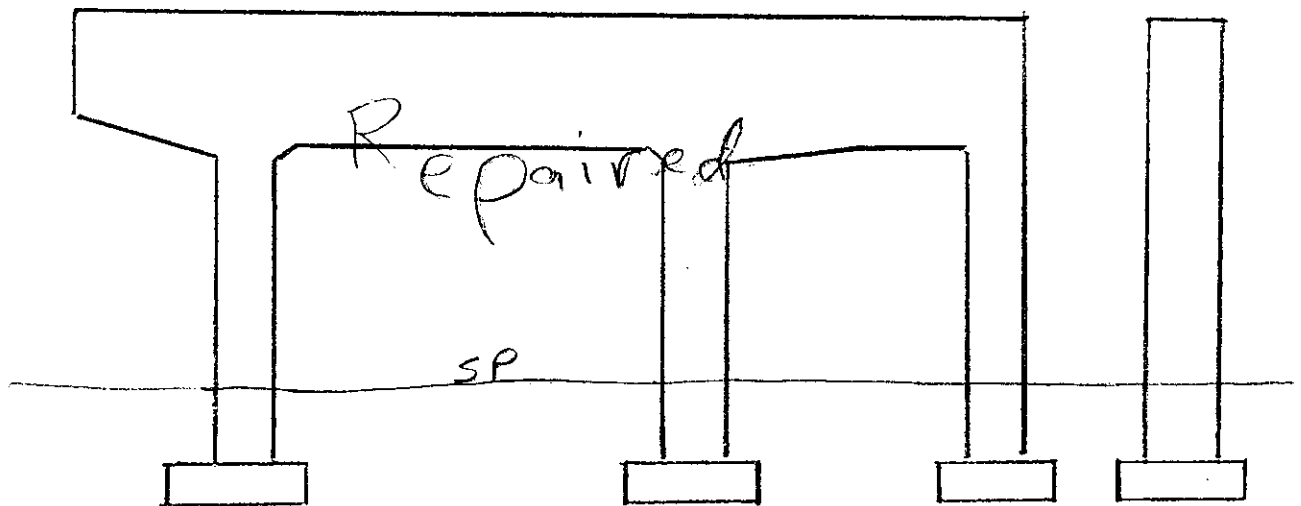
BR. No. 94-IG5-4.79

Rt. LANE 3

DATE: 8/16/01

Lt.

Rt.

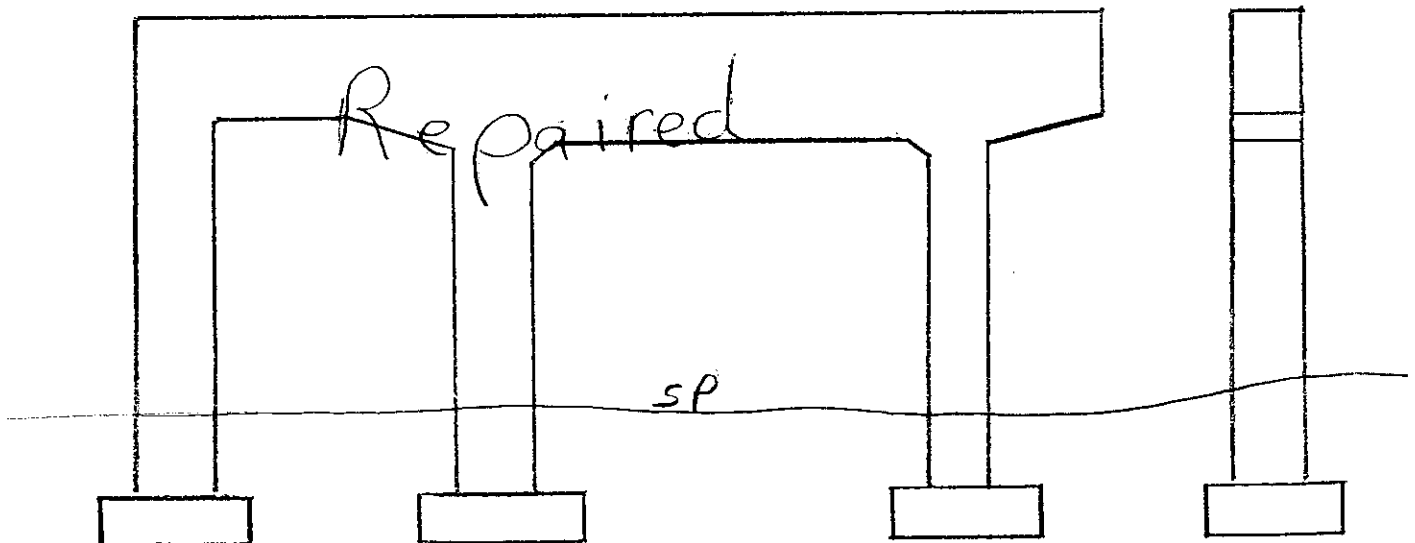


FRONT VIEW BENT No. 3

Rt. End View

Rt.

Lt.



BACK VIEW BENT No. 3

Lt. End View

BR. # 94-I65-4.79

Rt LANE

BENT # 3

DATE: 8/16/01

BEARINGS Good

CAP "

COLUMN A "

COL. B "

COL. C "

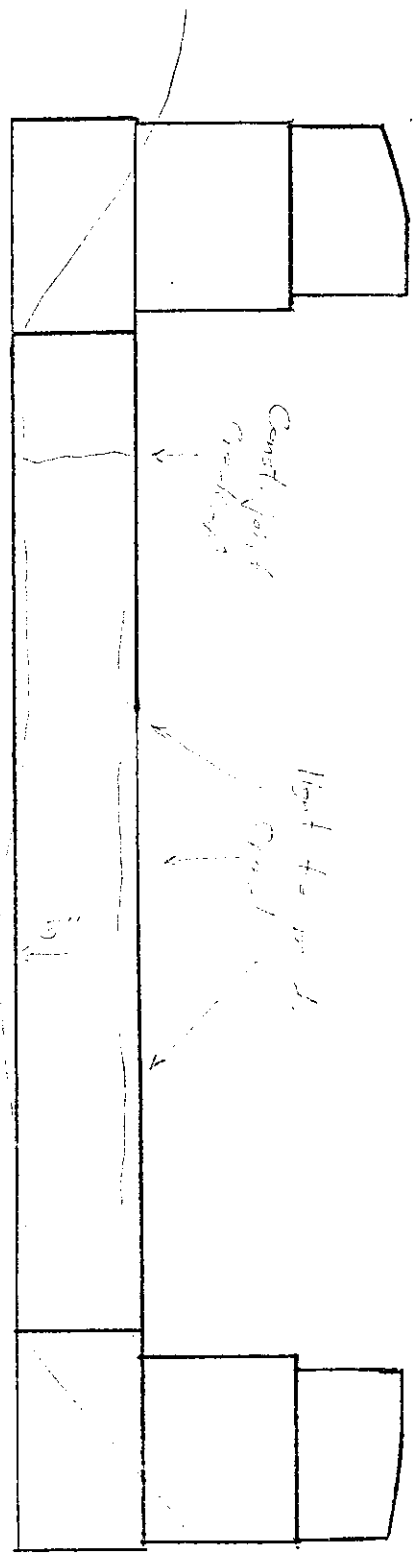
FOOTING N/V

Repaired

BR. No. 94-I65-4.79
 RT. LANE
 DATE: 7

RT.

LT.



BERRINGS	2001	Wings: 101
BR. SEAT	—	
CAO	1000	1000 to 1000
LT. Wing	—	
RT. Wing	—	
Slope Paving	1/4	

Abutment No. 1

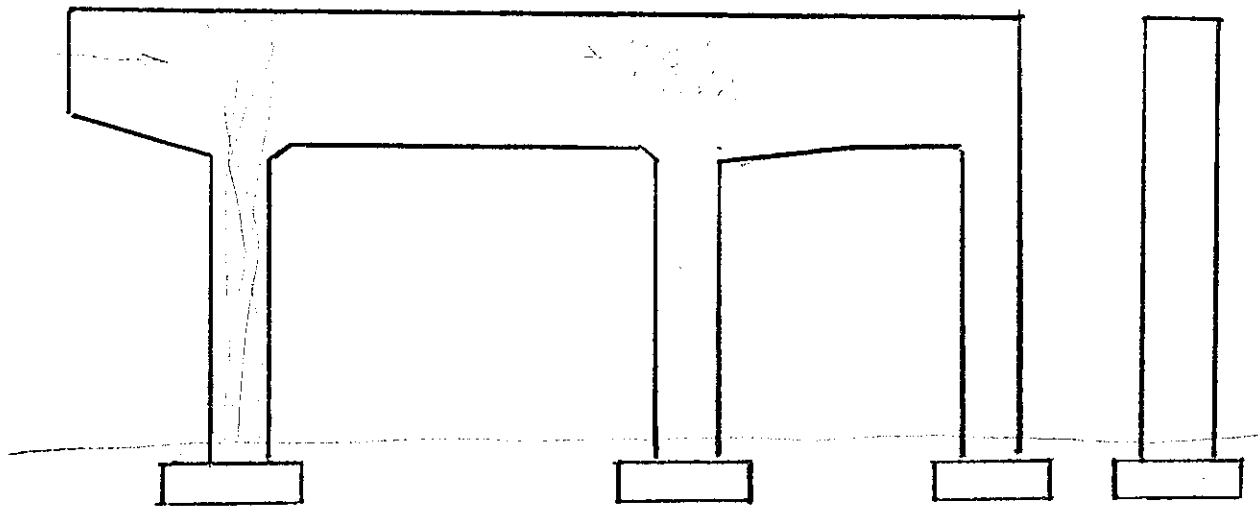
BR. No. 94-IG5-4.79

Rt. LANE

DATE:

Lt.

Rt.

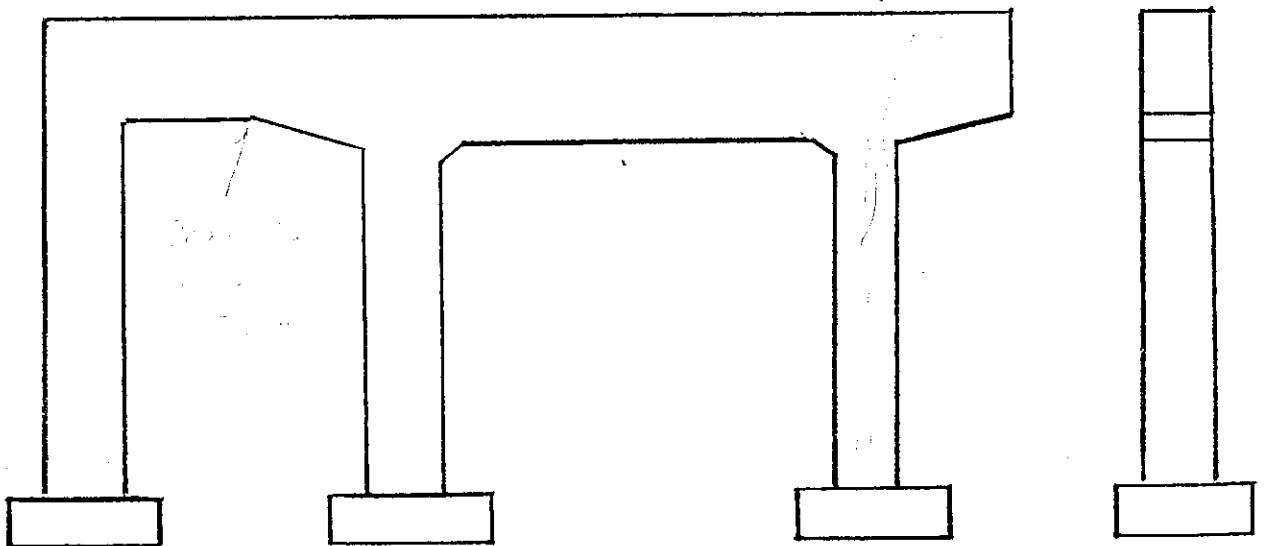


FRONT VIEW BENT No. 1

Rt. END VIEW

Rt.

Lt.



BACK VIEW BENT No. 1

Lt. END VIEW

BR. # 94-165-479

Rt LANE

BENT # 1

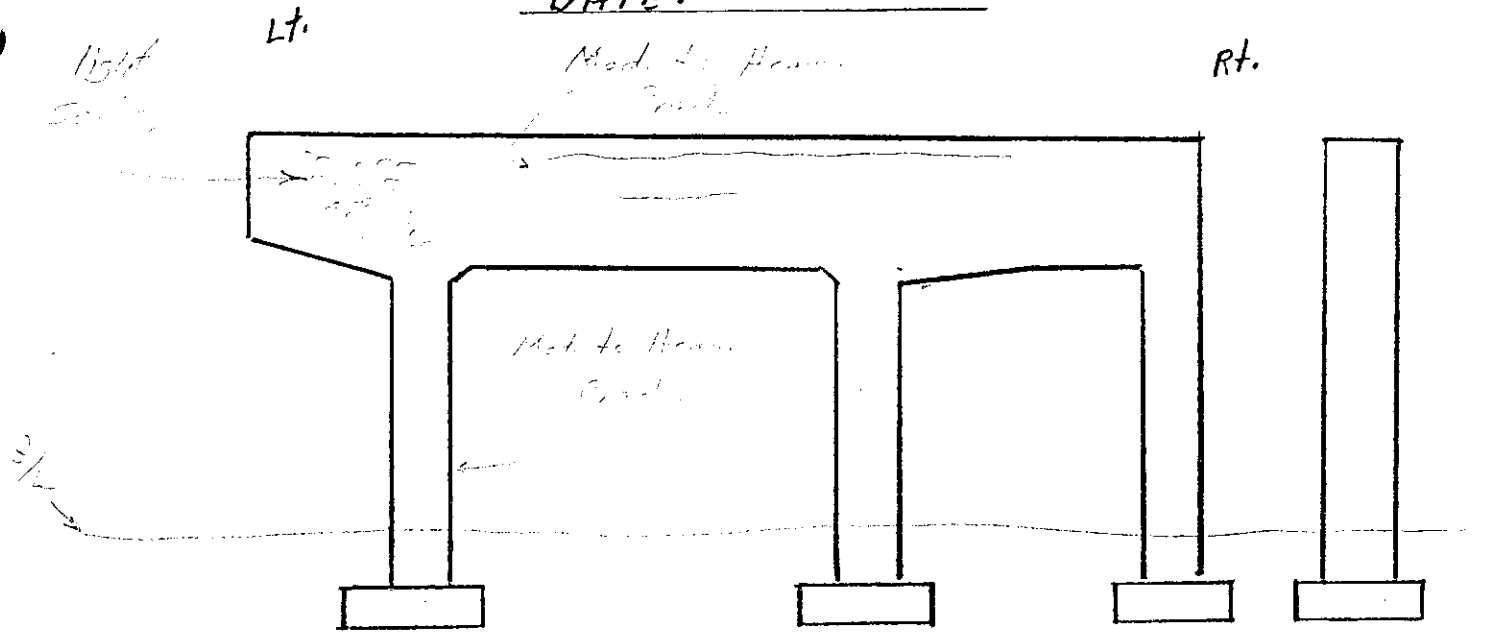
DATE:

BEARINGS *Back Neapine*CAP *in Back Neapine*COLUMN A' *Back*COL. B' *"*COL. C' *"*FOOTING *1/2*

BR. No. 94-IG5--4.79

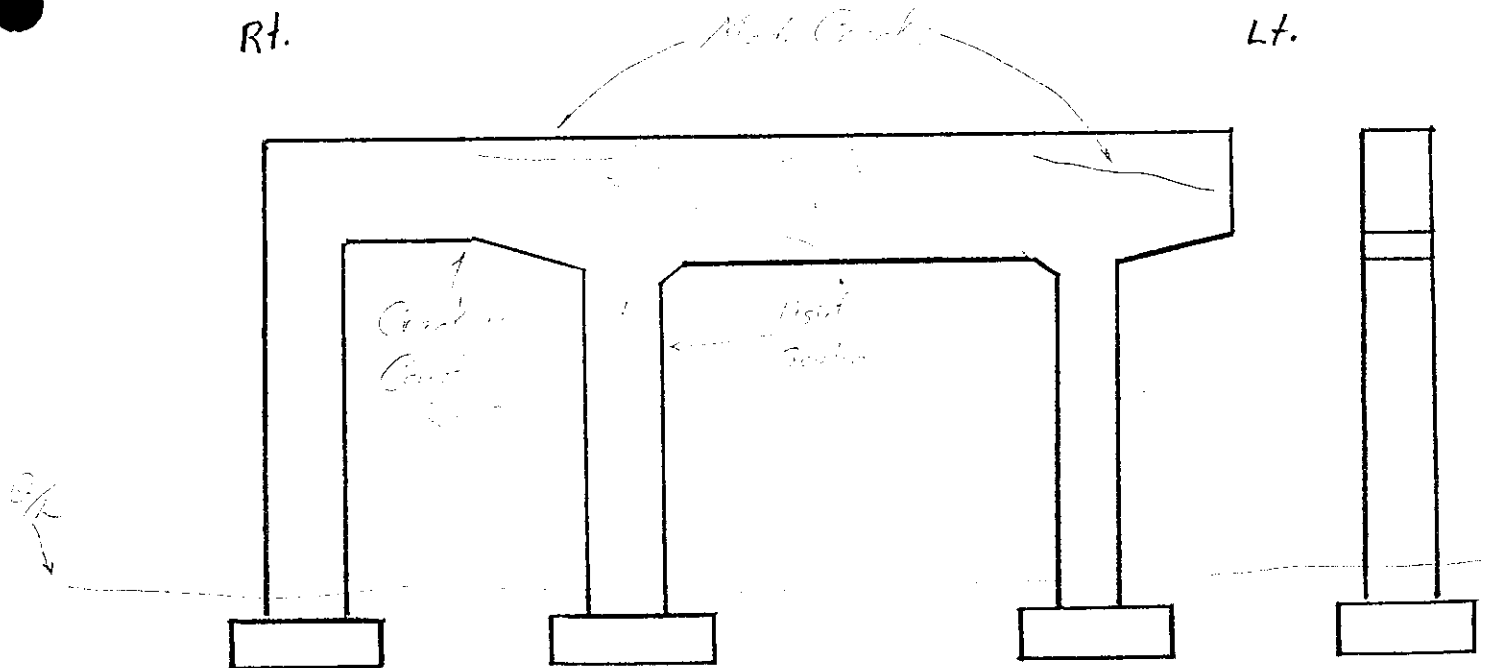
Rt. LANE

DATE:



FRONT VIEW BENT No. 2

Rt. END VIEW



BACK VIEW BENT No. 2

Lt. END VIEW

BR. # 94-I65-4.79

Rt LANE

BENT # 2

DATE:

BEARINGS

CAP

COLUMN 'A'

COL. 'B'

COL. 'C'

FOOTING

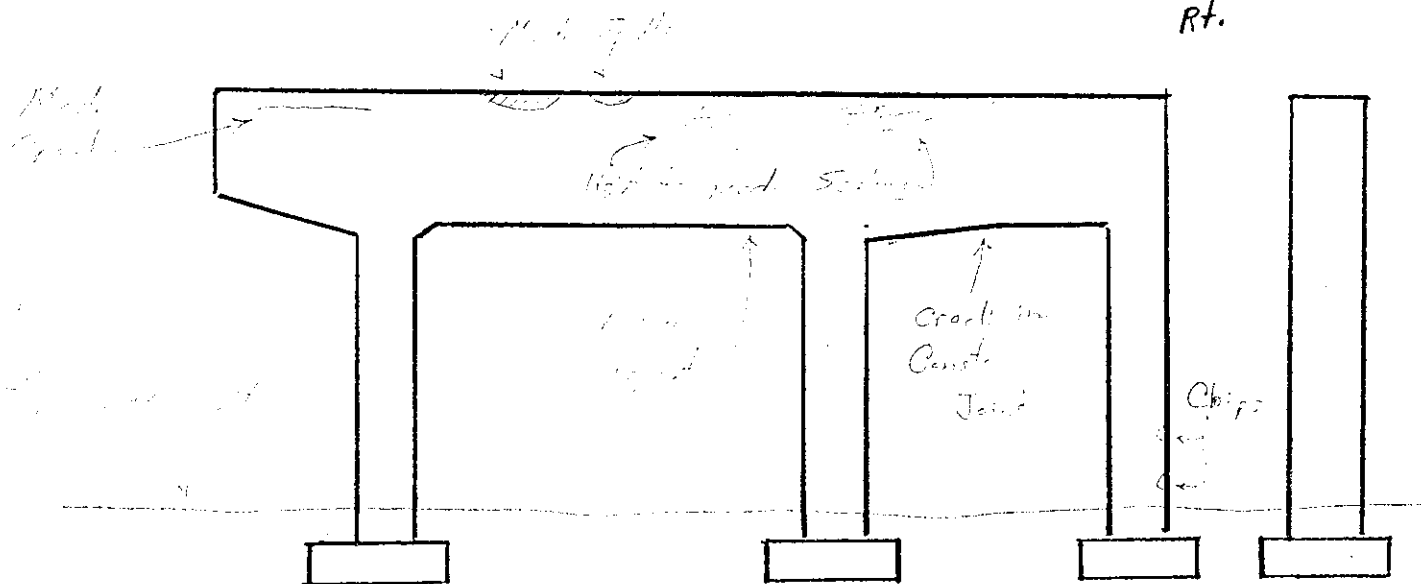
BR. No. 94-IG5-4.79

RT. LANE

DATE:

LT.

RT.

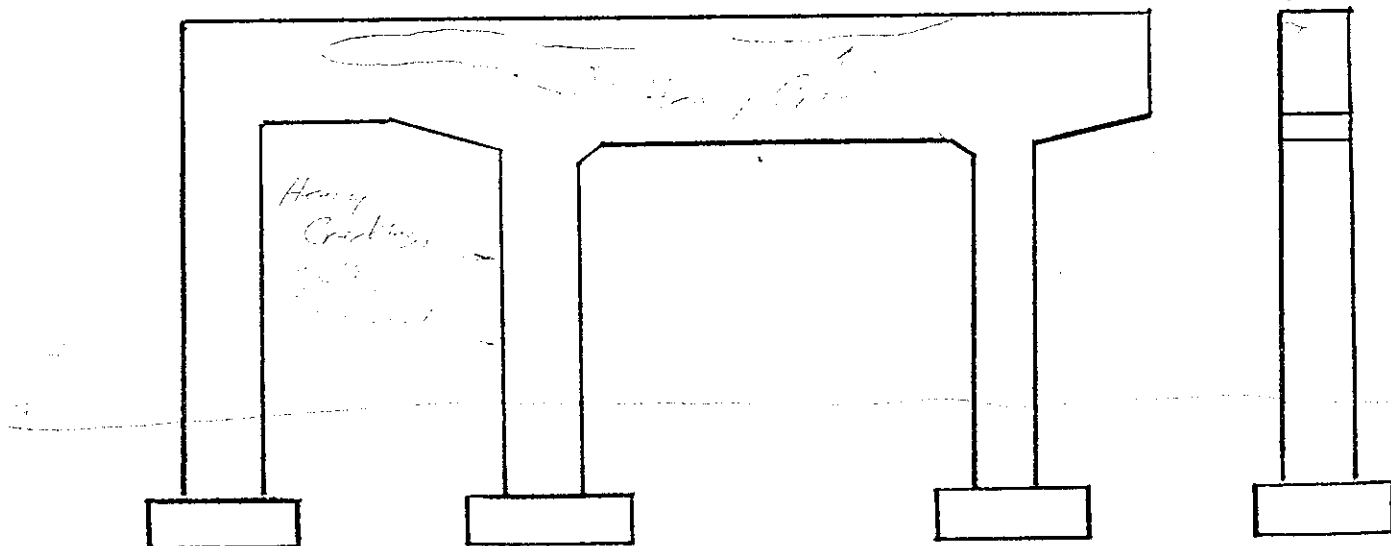


FRONT VIEW BENT No. 3

RT. END VIEW

RT.

LT. Mod. Cracks



BACK VIEW BENT No. 3

LT. END VIEW

BR. # 94-165-479

Rt LANE

BENT # 3

DATE: 7/1/79

BEARINGS (Good)

CAP

F-F

Made to Heavy Crane To Be Reamed and Grout.

COLUMN 'A'

Re-1

COL. B'

Re-1

Heavy Crane To Be Reamed and Grout.

COL. C'

Re-1

Chips

FOOTING

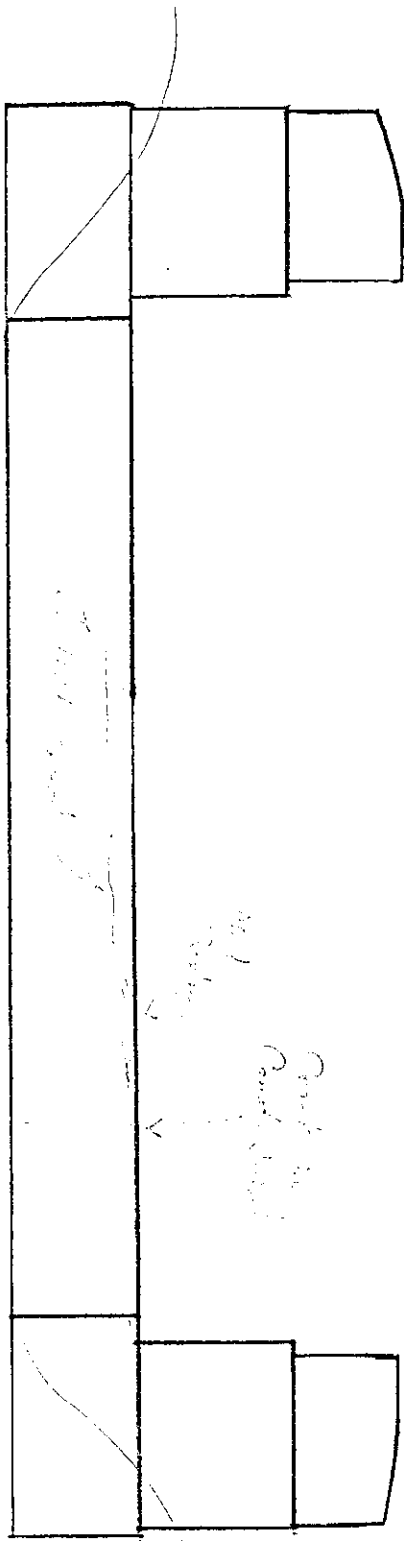
1/4"

Re-1 and Re-2 Grout.

BR. No. 94-I65-4.79
 RT. LANE
 DATE: 10-11

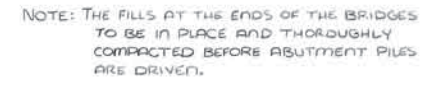
LT.

RT.



Abutment No. 2

BEARINGS	Ground
BR. SEAT	—
CAP	Fair
LT. WING	Good
RT. WING	"
Slope Paving	Good



—ELEVATION @ RIGHT ANGLES TO STATE ROUTE 106—

— LIST OF DWGS. —

LAYOUT OF BRIDGES	M-60-109
GENERAL NOTES & ESTIMATED QUANTITIES	M-60-110
SUPER STRUCTURE	M-60-111
ABUTMENTS 1&2	M-60-112
BENTS 12&3	M-60-113
PRESTRESSED BEAM DETAILS	M-60-114
BILL OF STEEL	M-60-115

— STANDARD DWGS. —

STANDARD PILE DETAILS	FEB. 24, '66	H-5-111
STD. REINF. BAR		
SUPPORT DETAILS	JAN. 14, '75	K-80-14
MISC. ABUT. &		
DRAINAGE DETAILS	JAN. 9, '75	K-85-150
BRIDGE RAILING-		
CONCRETE PARAPET	JAN. 28, '76	M-28-1
PRECAST PRESTRESSED		
CONCRETE DECK PANELS	JAN. 15, '77	K-80-15

—EXISTING DWGS.—

LAYOUT OF BRIDGES	K-8-93
PRESTRESSED BEAM DETAILS	K-8-94
SUPERSTRUCTURE DETAILS	K-8-95
ABUTMENT NO. 1	K-8-96
ABUTMENT NO. 2	K-8-97
BENTS NO. 1, 2, & 3	K-8-98
BILL OF STEEL	K-8-99

SPECIAL PROVISIONS

130-REGARDING SECTION 604- CONCRETE STRUCTURES	10-1-77
420-REGARDING APPROVAL OF SHOP DRAWINGS	9-20-76
450-REGARDING PERMANENT STEEL BRIDGE DECK FORMS	9-19-77
480-LOW SLUMP DENSE & POLYMER MODIFIED CONCRETE BRIDGE DECK OVERLAY	2-13-78
481-LOW SLUMP DENSE & POLYMER MODIFIED CONCRETE BRIDGE DECK OVERLAY FOR EXISTING BRIDGE DECKS	2-13-78
555-REGARDING SECTION 615- PRECAST PRESTRESSED CONCRETE BRIDGE MEMBERS	7-1-77
570-REGARDING HAULING OVER STRUCTURES	7-10-68
210- REGARDING SUBSECTION 908.13- ELASTOMERIC BEV. PADS	12-2-76
TWO 42" ROADWAYS w/ PARAPET	
STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION	

APET STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
LAYOUT OF BRIDGE WIDENING
LEFT & RIGHT LANES
I-65 OVER STATE ROUTE 106 &
WEST HARPETH RIVER
STATION 248+14.00
WILLIAMSON COUNTY

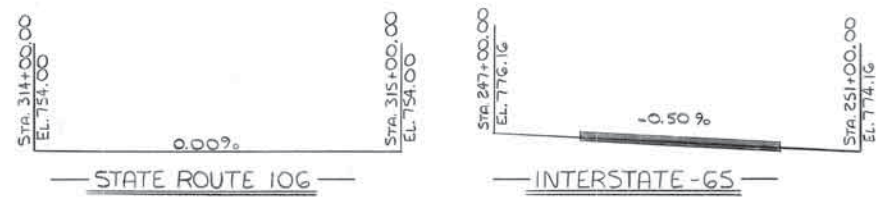
CORRECT *L. J. Dentick* 1978
ENGINEER OF STRUCTURES
APPROVED *Lewis Evans*
DIRECTOR OF HIGHWAYS

M-60-109



DRAINAGE AREA: 5.5 Square Miles
Area Provided: 349 ft.²
Discharge Q100: 3800 C.F.S.
Discharge Q50: 3300 C.F.S.
Velocity: 10.9 ft./second

SPECIAL NOTE: For sequence of construction,
see Roadway Plans, sheet no. 2



—GRADE SKETCHES—

NOTE: ELEVATIONS SHOWN REPRESENT ELEVATIONS
AT TOP OF EXISTING CONCRETE DECK.

DESIGNED BY R Woods DATE Dec. '77
DRAWN BY GA Swindle DATE Mar. '78
SUPERVISED BY FIELDS & JETT DATE Mar. '78
CHECKED BY _____ DATE _____

Class "A" Grading "D" 5 C.Y.

Bridge Deck Sealant 1,780 S.Y.

GENERAL NOTES

CON'T. NO. 94002-3133-44 + 94002-3134-44

SPECIFICATIONS: Standard Road and Bridge Specifications of The Tennessee Department of Highways (1968 Edition)

CONCRETE: To be class "A" (cast in place). $f'c$ 3000 psi. See Special Provision No. 130.

PRECAST PRESTRESSED BRIDGE DECK PANELS: A portion of the concrete deck may be constructed of precast prestressed bridge deck panels fabricated and used in accordance with Standard Drawing K-80-15.

BRIDGE RAIL SYSTEM: Build parapets according to Standard Drawing M-28-1.

PILES: To be HP10x42 driven to refusal on rock or a minimum bearing of 55 tons for the abutments.

PRECAST, PRESTRESSED BRIDGE MEMBERS: See Special Provision No. 555.

EPOXY: The binder mix, sand aggregate batch, placing method, temperature and humidity limitations and curing times shall be as recommended by the manufacturer. Acceptable brands of epoxy are: SP-1 Top 100 - Calmar Co., Colma DLR - Sika Chemical Corp., Sinmast Mortar Mix Resin #4 - Sinmast Corp., & Sikastix 370 - Sika Chemical Corp. and FEL-POXY 102, FEL-PRO BUILDING PRODUCTS INC. COST OF JOINT PREPARATION & EPOXY IN PLACE TO BE INCLUDED IN ITEMS BID ON.

ELASTOMETRIC BEARING PAD: See Special Provision No. 210

LOADING: HS20-44 WITH ALTERNATE MILITARY

DESIGN SPECIFICATIONS: AASHTO 1973 Edition with addenda.

BRIDGE DECK FORMS: BRIDGE DECK FORMS for concrete decks shall be constructed using either removable forms or permanent forms. In either case, forms shall be attached by means other than welding to support members. See Special Provision No. 450.

REINFORCING STEEL: To be ASTM A615 Grade 60. Standard CRSI hook details apply unless otherwise noted on bill of material. Bending dimensions shown are based on grade 60. Spacing dimensions are center to center unless otherwise noted on detail drawings.

BRIDGE DECK SEALANT: The bridge deck shall be sealed in accordance with Special Provision No. 480 or No. 481. These bridge deck sealant systems shall be paid for under bridge items: 604-03.16 for LSDC or 604-03.17 for PMC. (6780 sq. required).

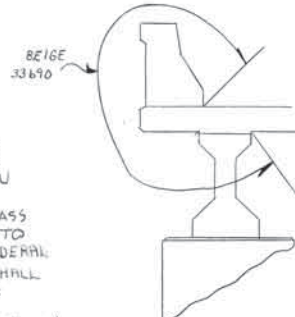
WIDENINGS: The contractor shall check the location of all existing substructures and verify span lengths before fabricating girders.

SPECIAL NOTE - Footing For Bents: After excavation to rock for footing has been completed, holes 6' deep shall be drilled at points designated by the Engineer. From the results obtained, the Engineer shall determine the final footing elevations. No reinforcing steel for bent columns shall be ordered until final footing elevations have been determined.

RIP-RAP: Rip-rap shall consist of furnishing and placing by hand, rubble stones or sacked sand cement.

Rubble stone shall meet the requirements of Section 709 and shall be clean (free from organic matter) durable, angular with fractured faces, nearly rectangular in shape with a breadth or thickness at least one-third it's length.

FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.22 OF THE TENNESSEE STANDARD SPECIFICATION EXCEPT AS MODIFIED BY SPECIAL PROVISION NO. 150. A TEXTURED COATED FINISH SHALL BE USED IN LIEU OF A CLASS 2 FINISH. THE COLOR OF THE FINISH SHALL BE SIMILAR TO BEIGE, FEDERAL SPECIFICATION NO. 33690, FEDERAL COLOR STANDARD NO. 595a, AND A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER OF STRUCTURES FOR APPROVAL. All exposed existing and new bent and abutment surfaces to be texture-coated.



ESTIMATED QUANTITIES

ITEM NUMBER	ALTERNATE LSDC			ALTERNATE PMC																
	709-01	804-02.01	804-03.01	604-03.01	604-03.16	604-03.01	604-03.17	604-03.02	604-25.03	604-25.04	615-01.02	616-03	616-12	604-10.51	710-10	710-11	604-10.50	204-04.01	204-05	606-02.03
ITEM	Rubble Stone Rip-Rap (plain) or Sacked Sand-Cement Rip-Rap (Optional) C.Y.	Dry Excavation (Bridges) CY	WET Excavation (Bridges) CY	Class "A" Concrete (Bridges) (CY)	Bridge Deck Sealant (LSDC) (CY)	Class "A" Concrete (Bridges) (CY)	Bridge Deck Sealant (PMC) (CY)	Steel Bar Reinforcement (Bridges) LB.	Textured Coating (Existing Structure) (CY)	Textured Coating (New Structure) (CY)	Prestressed Concrete I-Beam (Type II) LF	Concrete Parapet (M-28-1) LF	Portable Barrier Rail (K-28-158) LF	Scarifying (CY)	6" Perforated C.M. pipe (18ga.) with porous backfill LF	6" C.M. pipe (18ga.) underdrains LF	Bridge Deck Repairs (CY)	ROCK Excavation (CY)	ROCK Drilling (LF)	STEEL PILES (10 INCH) (LF)
SUPERSTRUCTURE				106.6	890	97.6	890	29085				412		528	30	22	200	6	18	174
Abutment #1		10		11.1		11.1		1851							16	11				84
Bent #1			5	11.2		11.2		2056										2	6	
Bent #2		41		11.1		11.1		2038										2	6	
Bent #3		37		10.6		10.6		1948										2	6	
Abutment #2		10		11.1		11.1		1816							14	11				90
TOTALS	188	98	5	161.7	890	152.7	890	38,794	1208	915	189	412		528	30	22	200	6	18	174
Substructure				106.6		97.6		29085				412					200			
Abutment #1		10		11.1		11.1		1851							14	11				75
Bent #1	218		3	11.1		11.1		2038										2	6	
Bent #2		41		10.8		10.8		1985										2	6	
Bent #3		37		10.6		10.6		1948										2	6	
Abutment #2	188	10		11.1		11.1		1816							16	11				84
TOTALS		98	3	161.3	890	152.3	890	38,723	1208	915	189	412		528	30	22	200	6	18	159
GRAND TOTALS	594	196	8	323.0	1780	305.0	1780	77,517	2416	1830	378	824	564	1056	60	44	400	12	36	333

① The cost of removing the exterior portion of the existing abutments, portions of the existing abutments, and the bridge rail, shall be included in the unit prices of Items bid on. All salvable material shall become property of the contractor.

② The cost of bituminous fiberboard, epoxy joints, & all miscellaneous joint material to be included in bridge items bid on.

③ Cost of elastomeric pads, rubber bonding cement, and dowel bars or anchor bolts to be included in the cost of prestressed beams.

④ The Contractor shall bid either Alternate LSDC or Alternate PMC. The variation in the superstructure quantity of Class "A" Concrete for Alternates LSDC and PMC is due to the difference in depth of the LSDC and PMC systems.

⑤ Quantity of 564 L.F. of Portable Barrier Rail includes 244 Ft. for traffic control on the structure & 320 L.F. for traffic control under the structure (on State Route 106).

⑥ Quantities shown are estimated. The actual quantity will be determined by the Division of Structures, after the contractor has removed the existing asphalt from the structure. Cost of removal of existing asphalt to be included in cost of scarifying.

⑦ Excavation based on lower road profile.

⑧ Cost of 24 threaded steel inserts and 24 3/8" x 4" hex head bolts (A307) to be included in bridge items bid on.

⑨ Cost of polyethylene sheeting and all miscellaneous items necessary for installation to be included in cost of perforated C.M. Pipe.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

GENERAL NOTES AND ESTIMATED QUANTITIES
I-65 OVER STATE ROUTE 106 &
WEST HARPETH RIVER
STATION 248+14.00
WILLIAMSON COUNTY
1978

CORRECT

ENGINEER OF STRUCTURES

APPROVED

DIRECTOR OF HIGHWAYS

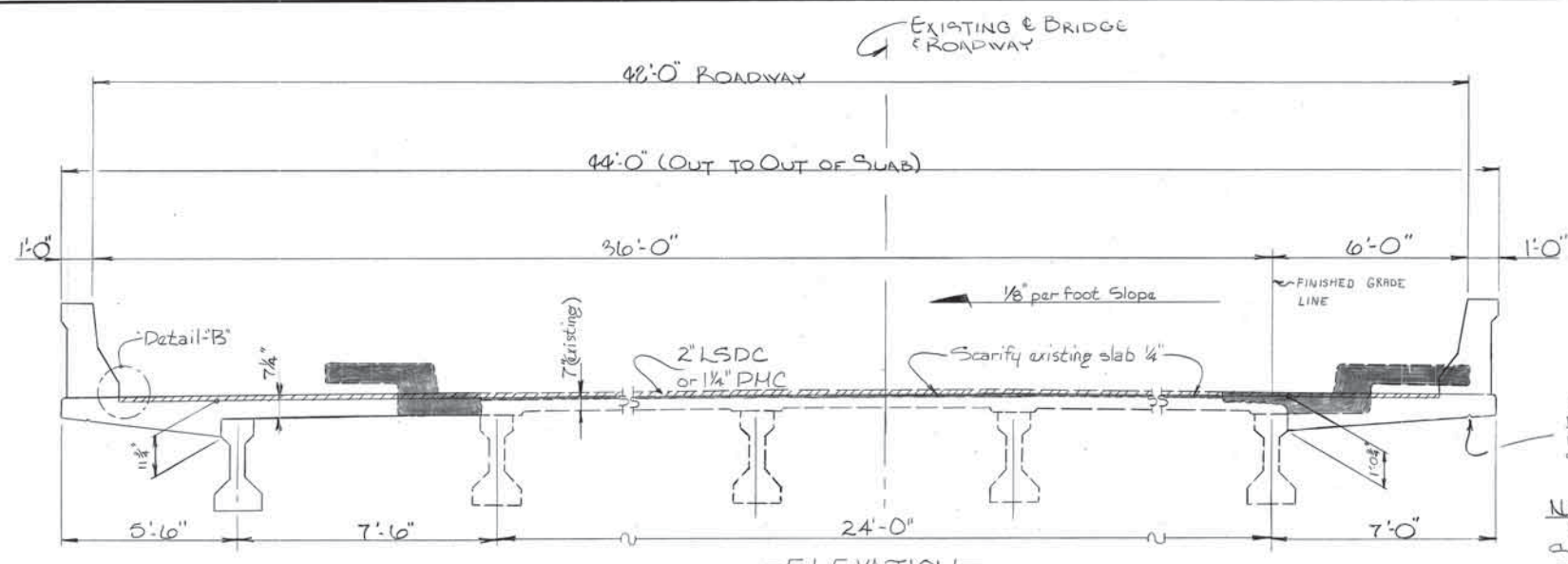
M-60-110

DESIGNED BY Ramsey Woods DATE 2-78
DRAWN BY Scotty Johnson DATE 3-78
SUPERVISED BY Charles H. Salt DATE 4-78
CHECKED BY Jeff F. Ramsey DATE 9-78

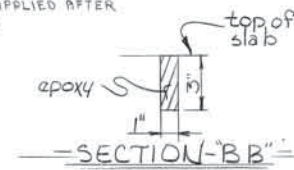
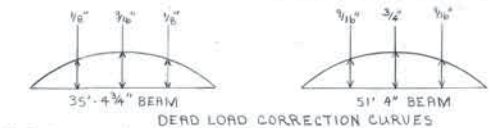
MICROFILMED

CONST. NO. 94002-3133-44 + 94002-3134-44

PROJECT NO.	YEAR	SHEET NO.	
I-65-2(47) 4b F-65-2(48) 7b	1978	24	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

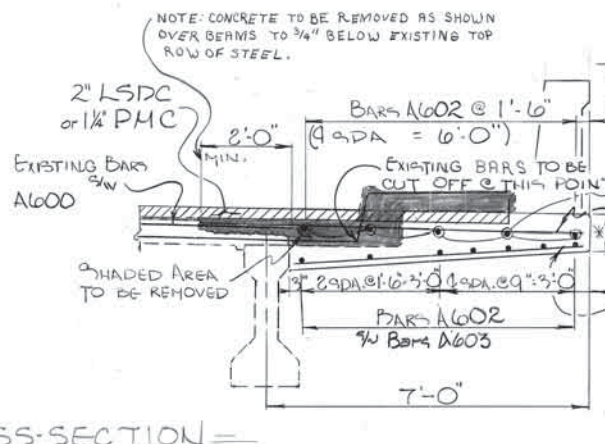
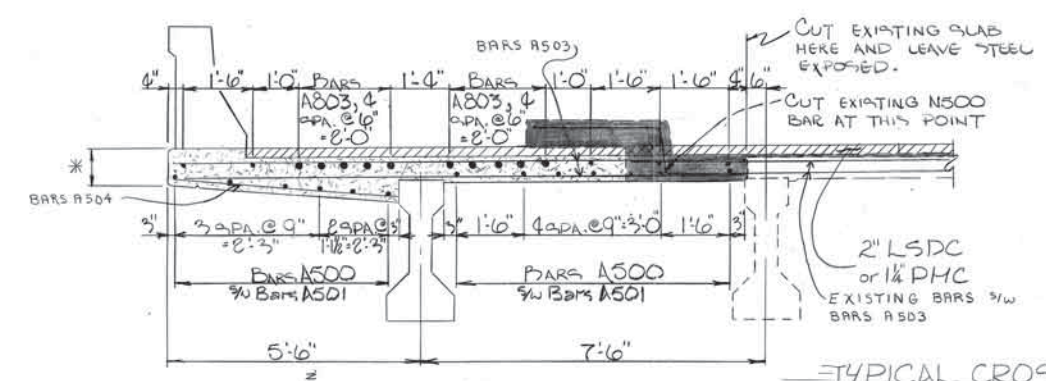


NOTE: THIS CURVE IS FOR DEAD LOAD SLAB + ALL DEAD LOADS THAT ARE APPLIED AFTER SLAB IS IN PLACE.

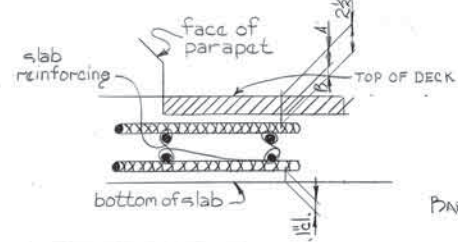
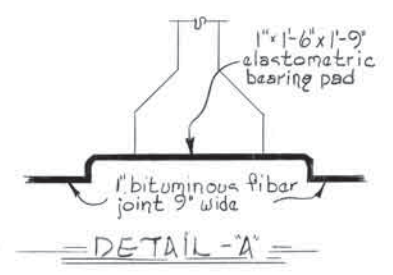
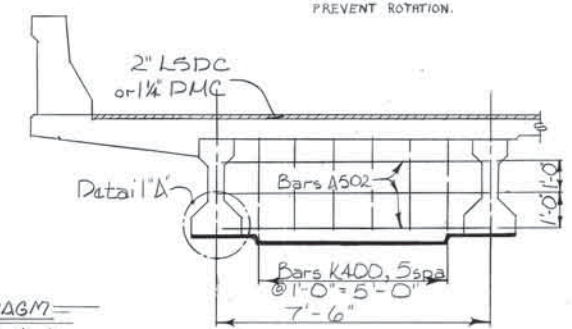


NOTE: GIRDERS TO BE SUPPORTED DURING CONSTRUCTION OF SLAB TO PREVENT ROTATION.

* NOTE: 8" for PMC
8 3/4" for LSDC

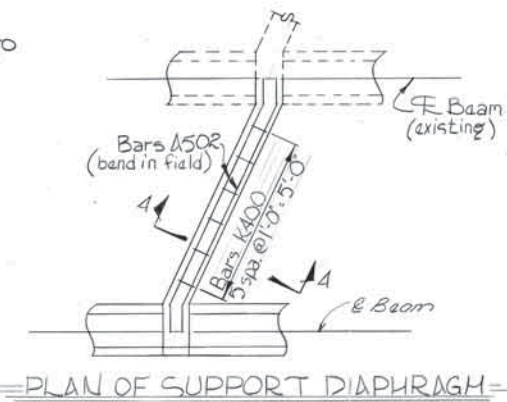
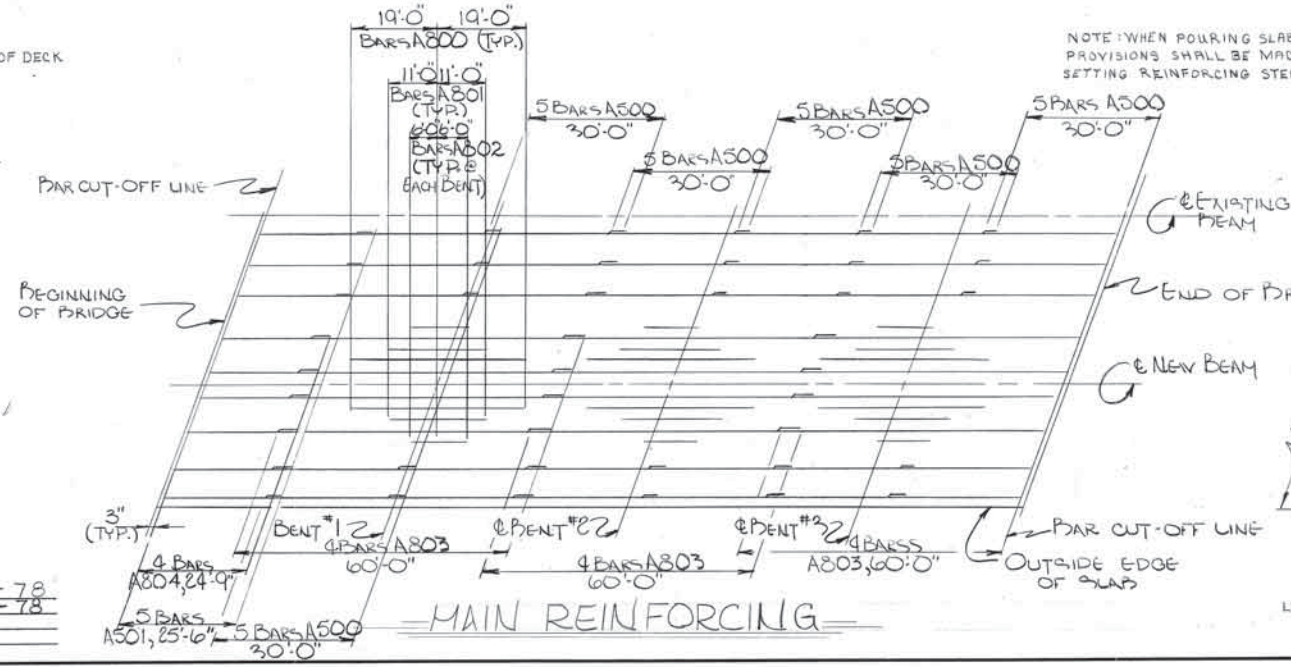


NOTE: Cost of threaded rods and Rs to be included in items bid on.

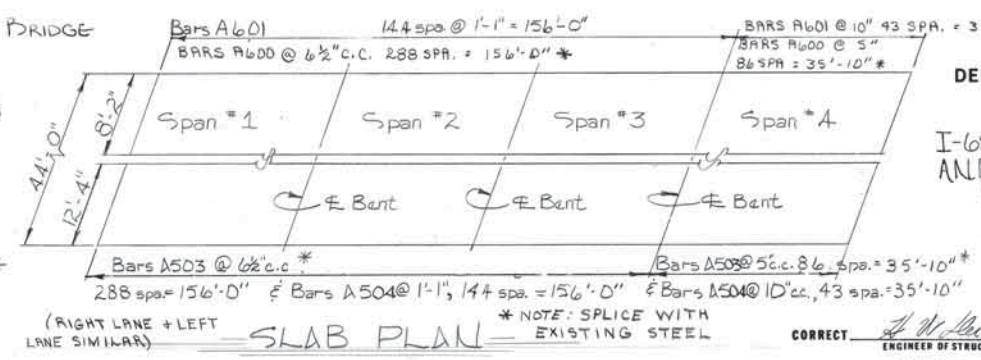


Dimension	LSDC	PMC
A	2"	1 1/2"
B	1/2" MIN	1/4" MIN

DETAIL-B
(LSDC & PMC OVERLAY)



ESTIMATED QUANTITIES	
CLASS "A" CONCRETE (CY)	REINFORCING STEEL (LBS)
106.6	29,085



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
SUPERSTRUCTURE
I-65 OVER STATE ROUTE 106
AND WEST HARPETH RIVER
STATION 248+14.00
WILLIAMSON COUNTY
1978

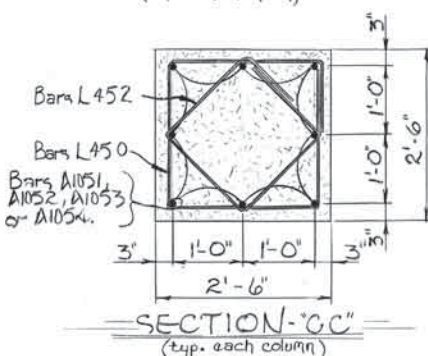
DESIGNED BY W. R. Woods
DRAWN BY JOYCE LAYNE
SUPERVISED BY Jeff and Belda
CHECKED BY W. R. Woods
DATE 1-78
DATE 2-78
DATE

CORRECT
APPROVED
ENGINEER OF STRUCTURES
DIRECTOR OF HIGHWAYS

M-60-111

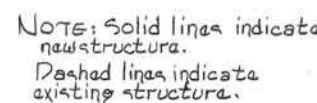
MICROFILMED





When pouring cap beam, provisions shall be made for setting dowel bars. If the Contractor elects to drill holes for the dowel bars, the reinforcing steel shall be placed so as not to interfere with the drilling. Dowel bar projection 9".
Column steel to extend 2'-0" into cap beam.

Elastomeric pads shall be in place a minimum of one day before being disturbed by placing superstructure forms on concrete. Place Rubber Bonding Cement in such a way that column surfaces will not be stained.



NOTE: Column steel to extend 2'-0" into capbeam

*: 1" ϕ , 6" HOLE DRILLED WITH A HIGH SPEED DRILL FILLED WITH EPOXY AND BARS A651 (3'3" LONG). ACCEPTABLE BRANDS OF EPOXY ARE AS SPECIFIED ON THE GENERAL NOTES SHEET.

ELEVATION OF BENTS NO. 1, 2, & 3

END ELEVATION

ESTIMATED QUANTITIES				
	ITEM	CLASS "A" CONCRETE	STEEL BAR REINFORCEMENT	
Left	Bent #1	11.4	(cu)	2056 (lbs)
	Bent #2	11.3	(cu)	2038 (lbs)
	Bent #3	10.9	(cu)	1948 (lbs)
Right	Bent #1	11.3	(cu)	2038 (lbs)
	Bent #2	11.0	(cu)	1985 (lbs)
	Bent #3	10.9	(cu)	1948 (lbs)

ELEVATIONS			DIMENSIONS
	ITEH	A	C
Left Lane	Bent #1	771.06	740.56
	Bent #2	770.80	740.80
	Bent #3	770.54	742.54
Right Lane	Bent #1	771.34	741.34
	Bent #2	771.08	742.33
	Bent #3	770.82	742.82

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

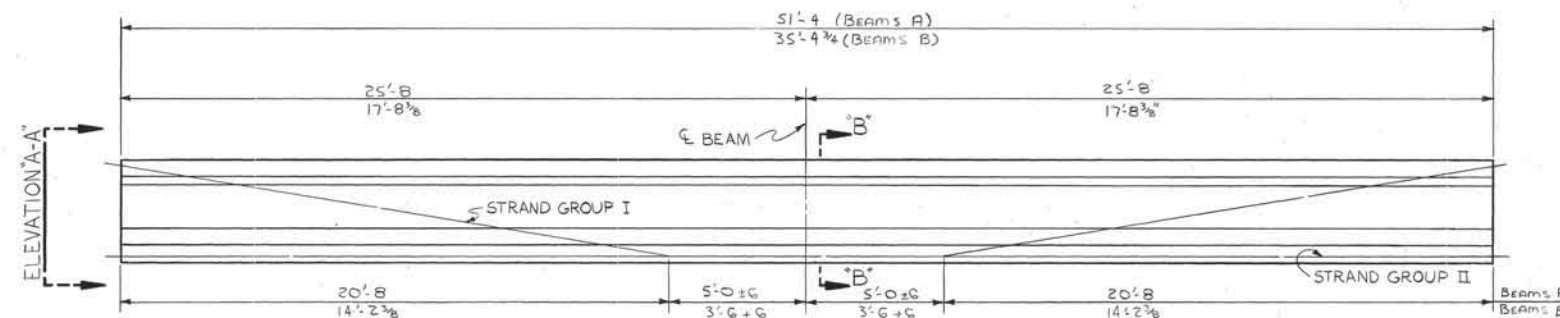
BENTS NO. 1, 2, & 3, (LEFT & RIGHT LANES)
INTERSTATE 65 OVER STATE ROUTE 106
& WEST HARPETH RIVER
STATION 248 + 14.00
WILLIAMSON COUNTY
1978

CORRECT H. W. Dorricks
ENGINEER OF STRUCTURES

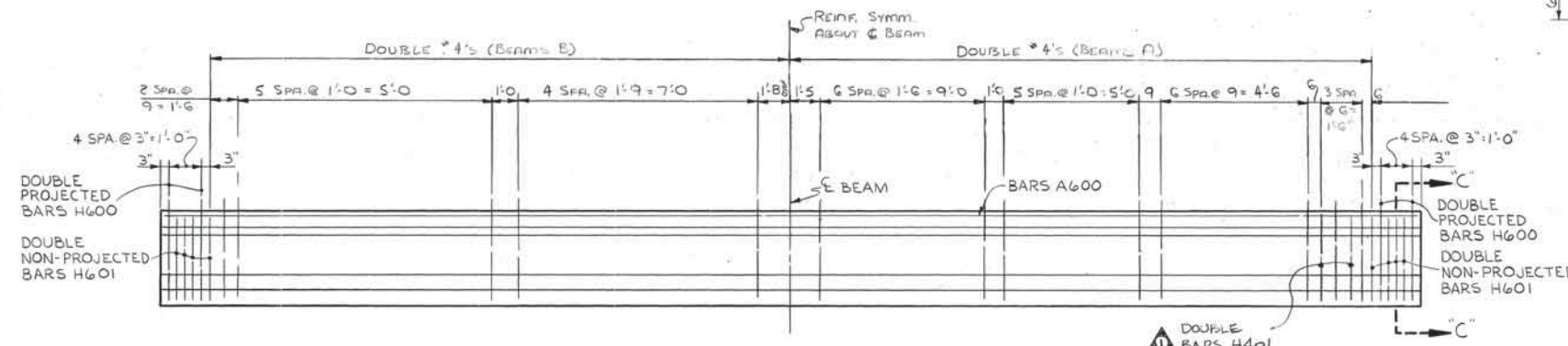
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-60-113

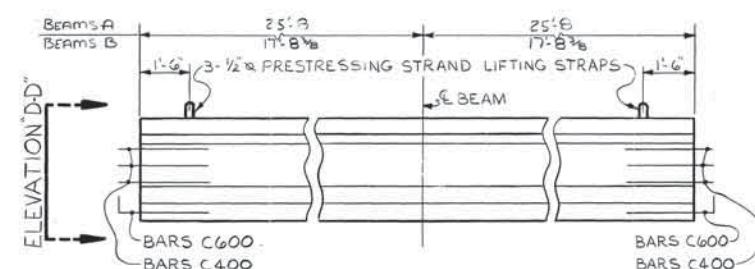
PROJECT NO.	YEAR	SHEET NO.	
2-65-2(47)-46 F-65-2(48)-46	1978	27	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	9-22-78	J.L.J.	Bars H401 location designated.



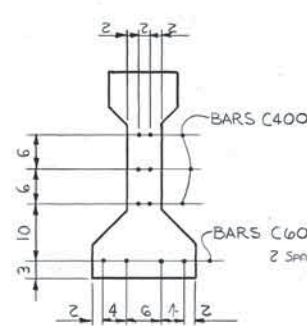
—ELEVATION—
(SHOWING STRAND DEFLECTION ARRANGEMENT)



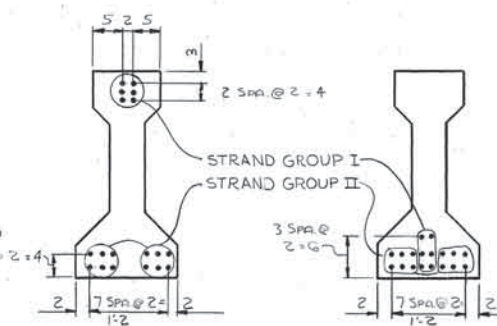
—ELEVATION—
(SHOWING STIRRUP BAR ARRANGEMENT)



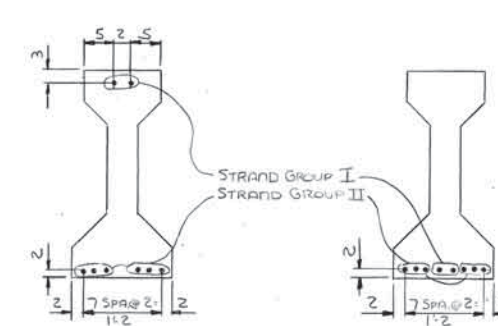
—PART-ELEVATION—



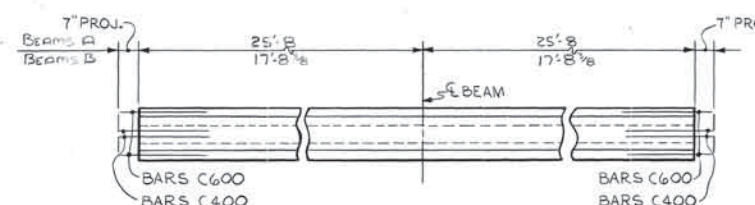
—ELEVATION'D-D'—
(TYP ALL BEAMS)



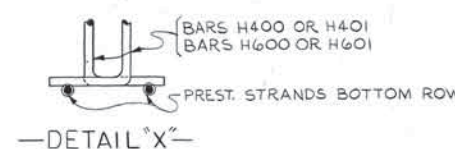
—ELEVATION'A-A'—
(SHOWING 1/2" Ø PRESTRESSED STRANDS)



—ELEVATION'A-A'—
(SHOWING 1/2" Ø PRESTRESSED STRANDS)



—PART-PLAN—



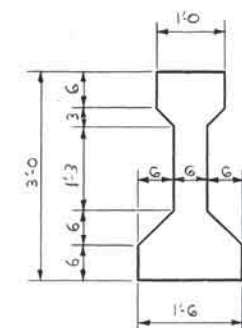
—DETAIL 'X'—

—BILL OF STEEL - PER BEAM—

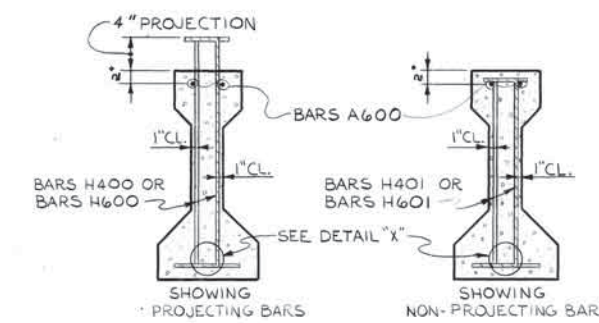
BAR	SIZE	NO. REQ'D	LENGTH
A600	6	2	51'-0"
C400	4	12	3'-1"
C600	6	8	3'-1"
H400	4	88	4'-4"
H401	4	8	3'-8"
H600	6	8	4'-4"
H601	6	16	3'-8"

—BILL OF STEEL - PER BEAM—

BAR	SIZE	NO. REQ'D	LENGTH
A600	6	2	35'-1"
C400	4	12	3'-1"
C600	6	8	3'-1"
H400	4	48	4'-4"
H401	4	8	3'-8"
H600	6	8	4'-4"
H601	6	16	3'-8"



—AASHTO TYPE II—



—SECTION 'C-C'—

—GENERAL NOTES—

1. THE TOPS OF ALL BEAMS ARE TO BE ROUGH FLOATED AT APPROXIMATELY THE TIME OF INITIAL SET, THE TOPS OF THE BEAMS WILL ALSO BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND PRODUCE A ROUGH SURFACE.
2. MILD STEEL REINFORCING TO BE ASTM A615, GRADE 60.
3. ALL PRESTRESSING STRANDS TO BE 1/2" Ø HIGH STRENGTH TYPE 270K 7 WIRE UNCOATED STRESS-RELIEVED STRANDS.
4. THE PRESTRESSING STRANDS SHALL BE LEFT PROJECTING 3"± FROM THE ENDS OF THE BEAMS. THERE SHALL NOT BE ANY PROTECTIVE COATING PLACED ON THE ENDS OF THE BEAMS OR ON THE PROJECTING STRANDS.
5. AN INITIAL FORCE OF 28,910 LBS. SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS.
6. ALL BEAMS ARE AASHTO-PCI STANDARD TYPE II.
7. AFTER THE BEAM IS REMOVED FROM THE PRESTRESSING BED, BARS C600 AND BARS C400 SHALL BE BENT A SUFFICIENT AMOUNT SO AS TO PERMIT THE "C" BARS OF ADJOINING BEAM TO MESH WHEN IN THE ERECTED POSITION.
8. THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 5,000 + PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 4,200 + PSI. SEE LAYOUT SHEET FOR CONCRETE FINISHING NOTE.
9. ANCHORAGE AT BENTS ACCOMPLISHED BY DOWELS 1" Ø x 1'-9"
10. ELASTOMERIC PADS TO BE 1/4" x 6" x 1'-6" AT ABUTMENT ENDS AND 1" x 1'-9" x 1'-6" WITH 1/4" Ø HOLES AT BENTS.

—ESTIMATED QUANTITIES ~ PER BEAM—

BEAM	NO. OF BEAMS REQUIRED	CONCRETE CLASS "A" C.Y.	REINFORCING STEEL LBS.	1/2" Ø TYPE 270 K PREST. STRANDS LBS.
BEAMS 'A'	6	4.9	629	490
BEAMS 'B'	2	3.4	446	151

NOTE: THE COST OF ELASTOMERIC PADS AND 1/2" DOWEL BARS TO BE INCLUDED IN THE COST OF THE PRESTRESSED BEAM.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PRESTRESSED BEAM DETAILS

WIDENING OF LEFT & RIGHT LANES

I-65 OVER STATE ROUTE 106 &

WEST HARPETH RIVER

STATION 248+14.00

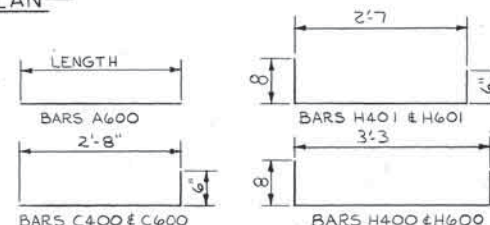
WILLIAMSON COUNTY

CORRECT *[Signature]* 1978

APPROVED *[Signature]* DIRECTOR OF HIGHWAYS

M-20-114

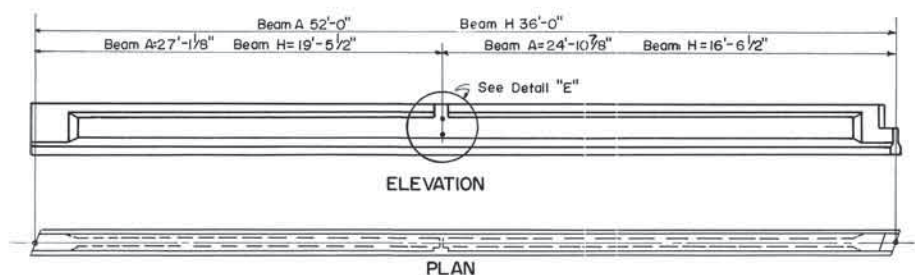
DESIGNED BY R. Woods
DRAWN BY DARRELL JAMES
SUPERVISED BY FIELD J. JETT
CHECKED BY KEENE & Woods
DATE 3-78
DATE 10-76
DATE 3-78
DATE 3-78



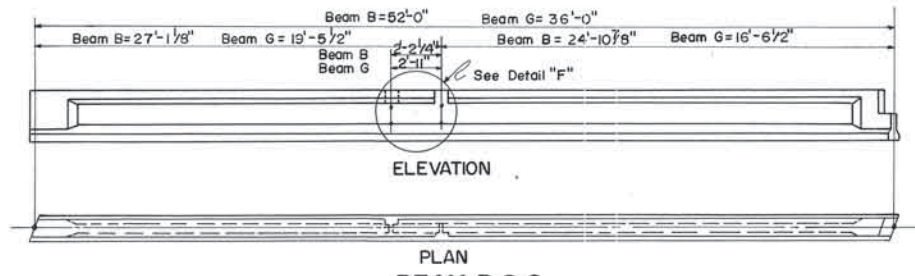
BAR	SIZE	NO. REQ'D	LENGTH
A600	6	2	51'-0"
C400	4	12	3'-1"
C600	6	8	3'-1"
H400	4	88	4'-4"
H401	4	8	3'-8"
H600	6	8	4'-4"
H601	6	16	3'-8"

BAR	SIZE	NO. REQ'D	LENGTH
A600	6	2	35'-1"
C400	4	12	3'-1"
C600	6	8	3'-1"
H400	4	48	4'-4"
H401	4	8	3'-8"
H600	6	8	4'-4"
H601	6	16	3'-8"

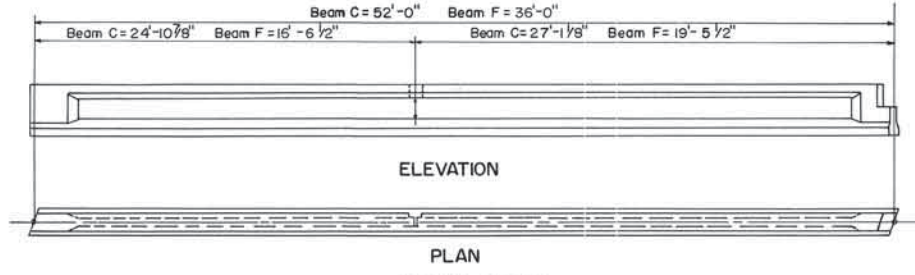
I-65-2(10)57



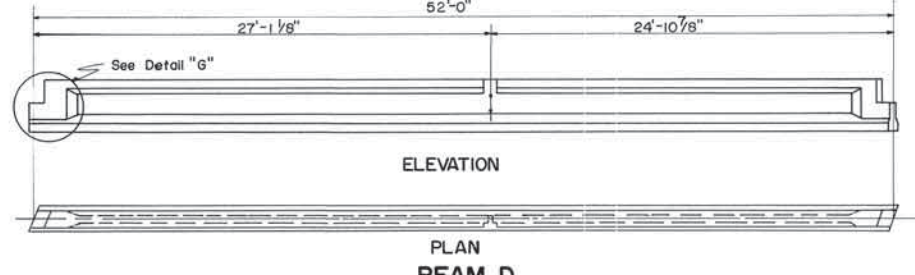
BEAM A & H



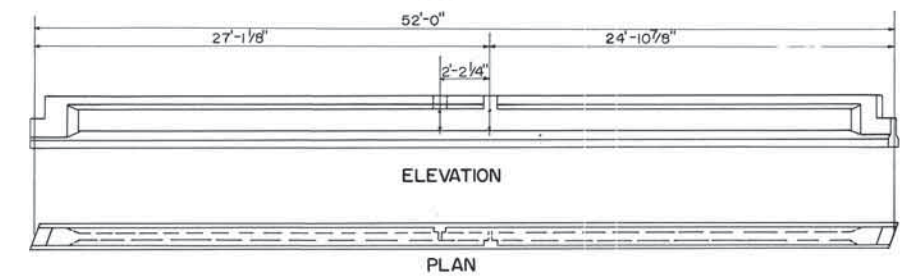
BEAM B & G



BEAM C & F



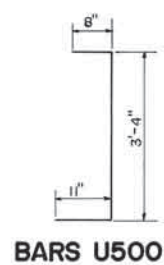
BEAM D



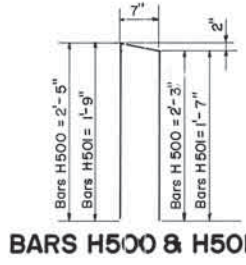
BEAM E



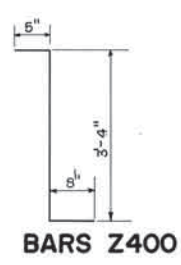
BARS A500-



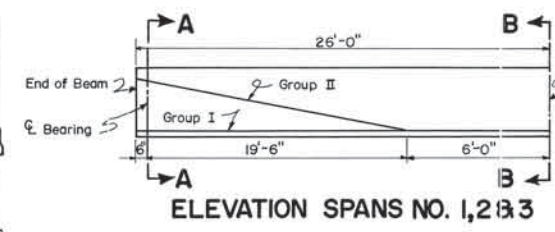
BARS U500



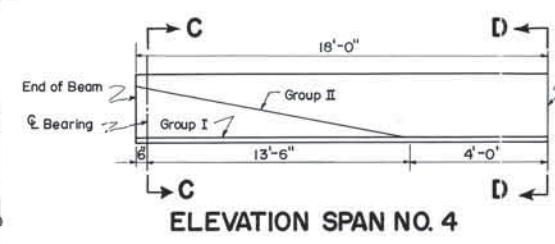
BARS H500 & H501



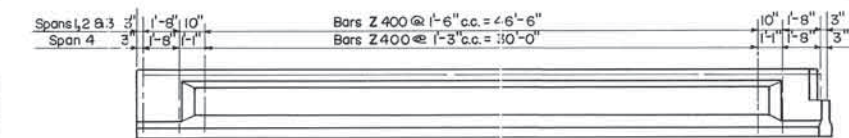
BARS Z400



ELEVATION SPANS NO. 1, 2, & 3

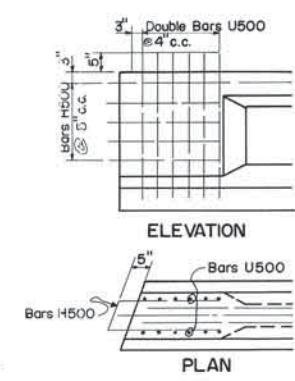


ELEVATION SPAN NO. 4

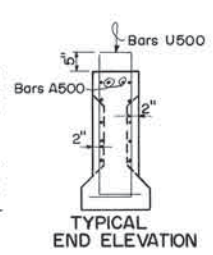


TYPICAL ELEVATION OF BEAM SHOWING REINFORCEMENT

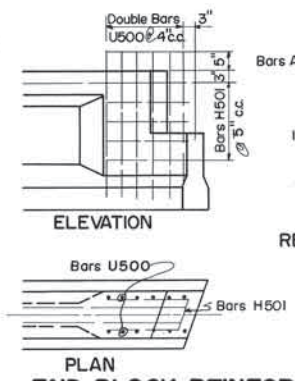
NOTE: Dimensions are measured along center of beam.



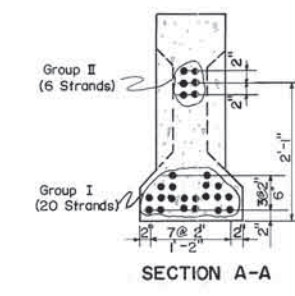
END BLOCK REINFORCING AT ABUTMENTS



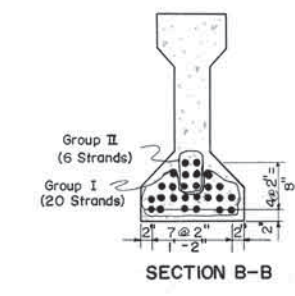
TYPICAL END ELEVATION



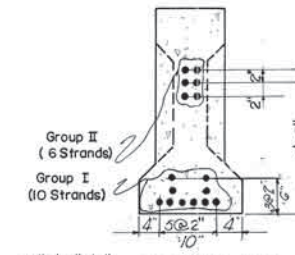
END BLOCK REINFORCING AT BENTS



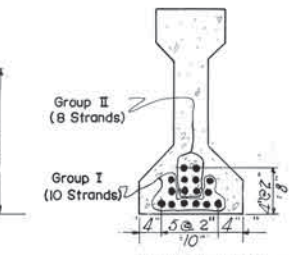
SECTION A-A



SECTION B-B

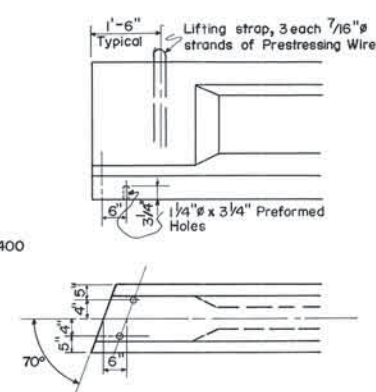


SECTION C-C

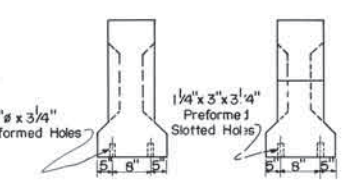


SECTION D-D

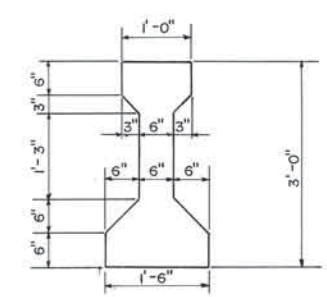
DETAILS SHOWING STRAND DEFLECTION PATTERN



TYPICAL DETAILS AT FIXED END OF BEAMS



TYPICAL DETAILS AT EXPANSION END OF BEAMS



TYPE II AASHTO BEAM

BILL OF STEEL - EACH BEAM

BEAM A, B & C				BEAM D & E				BEAM G, H & E			
Bar No.	Size	Length		Bar No.	Size	Length		Bar No.	Size	Length	
A500	2	5	51'-6"	A500	2	5	51'-6"	A501	2	5	35'-6"
H500	5	5	5'-3"	H501	10	5	3'-11"	H500	5	5	5'-3"
H501	5	5	3'-11"	U500	24	5	4'-11"	H501	5	5	3'-11"
U500	24	5	4'-11"	Z400	64	4	4'-5"	U500	24	5	4'-11"
Z400	64	4	4'-5"					Z400	50	4	4'-5"

ESTIMATED QUANTITIES - PER BEAM

ITEM	Concrete Class "A" Cu Yds.	Reinforcing Steel Lbs.	Prestressing Steel Lbs.
Beam A, B, C	5.0	467	504
Beam D, E	5.0	460	504
Beam G, H, F	3.5	413	242

GENERAL NOTES

- All Prestressing Strands to be 7/16" 7 wire uncoated stress relieved Prestressed Concrete Strands.
- A force of 18,900 # shall be applied to each Strand in all Beams.
- Top of Beam to be rough floated. At approximately the time of initial set, the top of the Beam shall be scrubbed transversely with a coarse wire brush to remove all laitance and to produce a rough surface.
- All Beams are AASHTO-PCI Standard Type II.

ALTERNATE "PI"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS

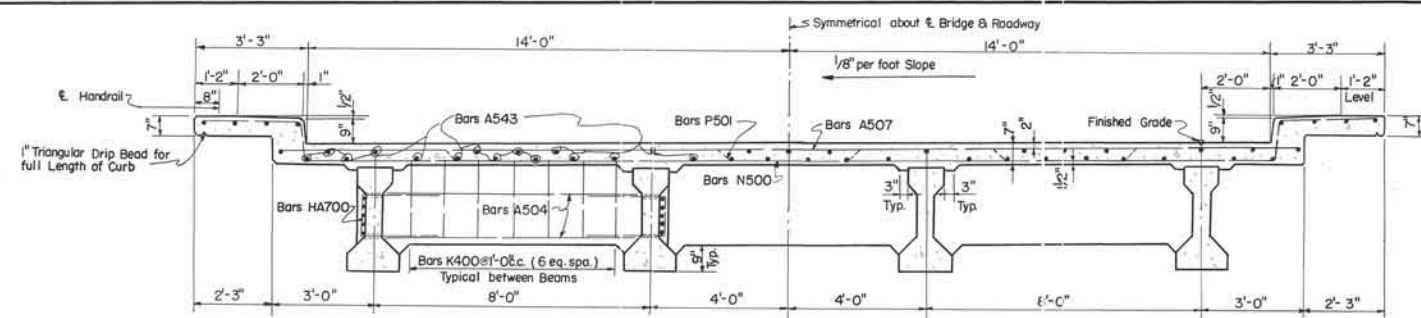
NASHVILLE

PRESTRESSED BEAM DETAILS
LEFT AND RIGHT LANES
INTERSTATE 65 OVER STATE
ROUTE 106 & WEST HARPETH RIVER
STATION 248 +14.00
WILLIAMSON COUNTY
1961

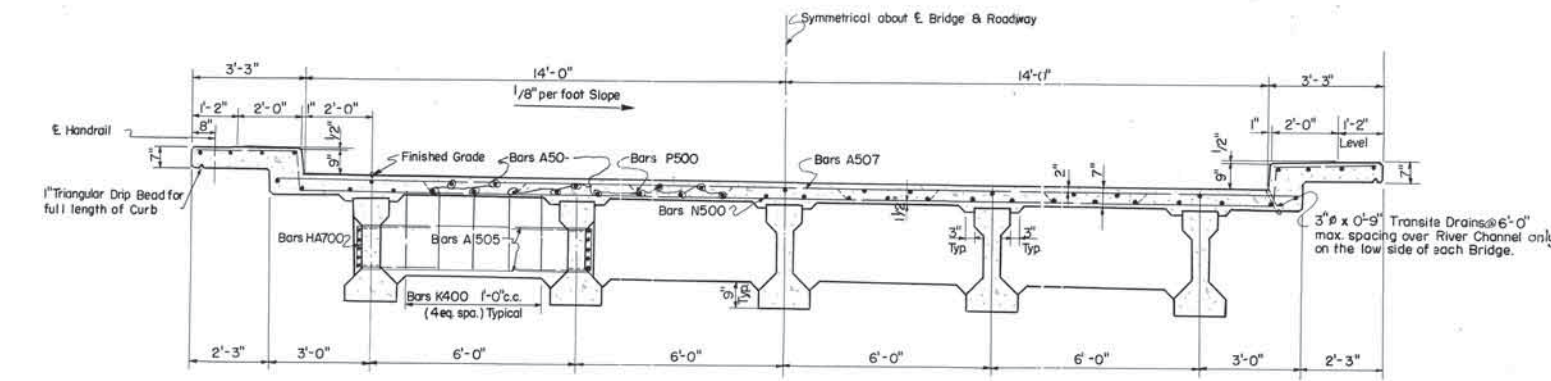
CORRECT: *Frederic G. Gane*
BRIDGE ENGINEER
APPROVED: *Robert Long*
STATE HIGHWAY ENGINEER

DESIGNED BY: P.D. Quarles
DRAWN BY: D.B. Miller
TRACED BY: R.C. Hagar
CHECKED BY: P.D. Quarles, D.E.S.
DATE: 3-3-61
DATE: 3-28-61
DATE: 3-23-61

MICROFILMED
Revised 7-12-61

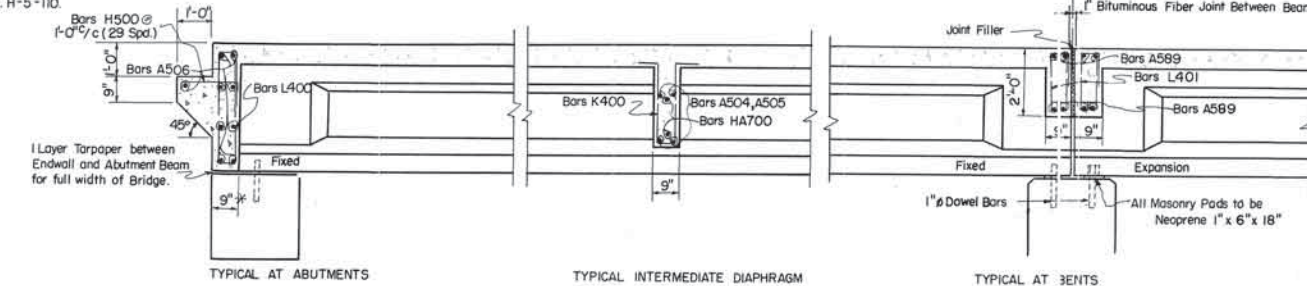


NOTE: For Beam Details See Sheet No. K-8-94
TYPICAL CROSS SECTION - SPANS NO. 4
 Left Lane Looking Forward on Survey - Right Lane Looking Back on Survey

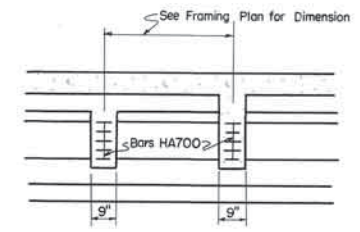
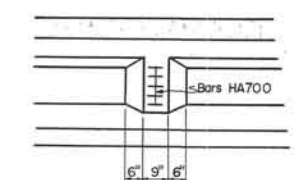
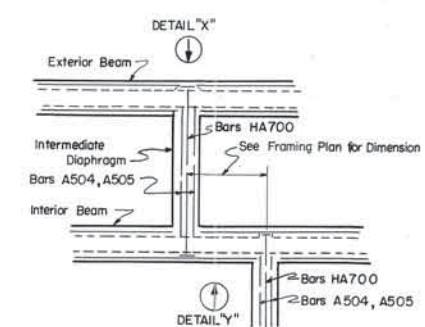


NOTE: For Beam Details See Sheet No. (K-8-94)
TYPICAL CROSS SECTION - SPAN NO. 1, 2 & 3
 Right Lane Looking Forward on Survey - Left Lane Looking Back on Survey

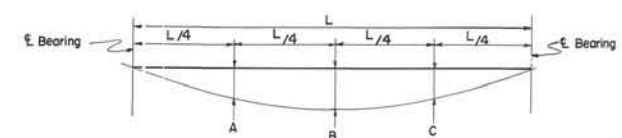
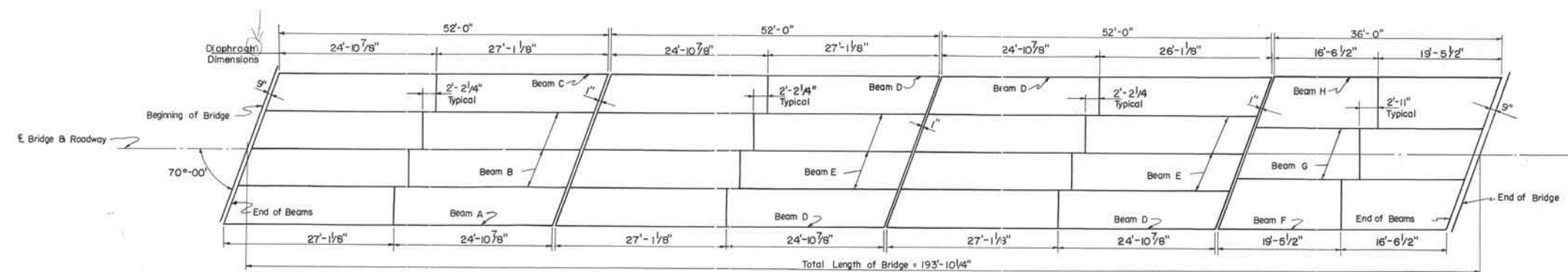
NOTE: When pouring curbs, provisions shall be made for setting reinforcing steel for concrete handrail. See Dwg. NO. H-5-110.



PARTIAL LONGITUDINAL SECTION
 † Measured at R/Ls to E. Joint, Endwall or End Diaphragm

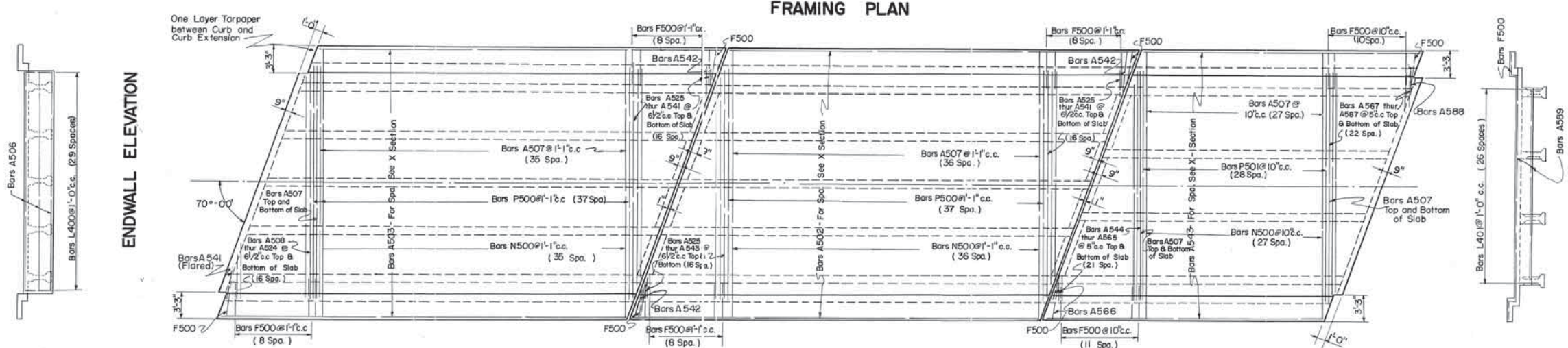


PLAN
 Showing location of Bars HA700 in Beams and Diaphragms



SPAN	A	B	C	L
1, 2, 3	1/4"	3/8"	1/4"	51'-0"
4	0"	1/8"	0"	36'-0"

DEAD LOAD DEFLECTION DUE TO SLAB



SLAB PLAN - SPAN NO. 1

SLAB PLAN - SPANS NO. 2 & 3

SLAB PLAN - SPAN NO. 4

ENDWALL ELEVATION

ELEVATION OF DIAPHRAGM OVER SUPPORT

ESTIMATED QUANTITIES*

Concrete - Class "A"	181.3	Cu Yds
Reinforcing Steel	33,064	Lbs.

* Each Lane

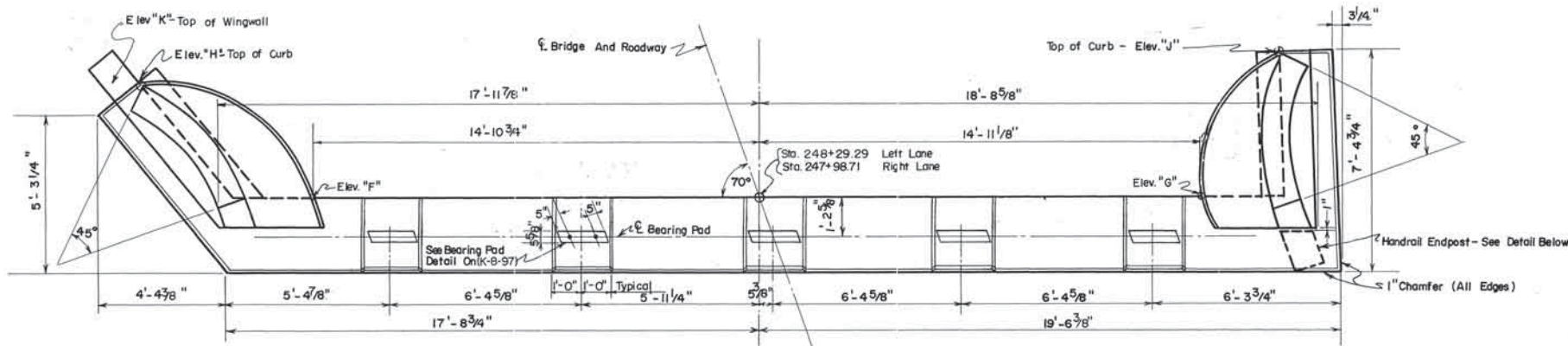
ALTERNATE "PI"
 STATE OF TENNESSEE
 DEPARTMENT OF HIGHWAYS
 NASHVILLE
SUPERSTRUCTURE DETAILS
LEFT AND RIGHT LANES
I-65 OVER STATE ROUTE NO. 106 & WEST HAPETH RIVER
STATION 248+14.00
WILLIAMSON COUNTY
1961

DESIGNED BY: P.D.G.
 DRAWN BY: Brewer & Wilson
 TRACED BY: Kelley & Moore
 CHECKED BY: P.D.G. & D.E.S.
 DATE: 3-20-61
 DATE: 3-30-61
 DATE:

CORRECT: *Red Green*
 APPROVED: *Lee Long*
 STATE HIGHWAY ENGINEER
K-8-95

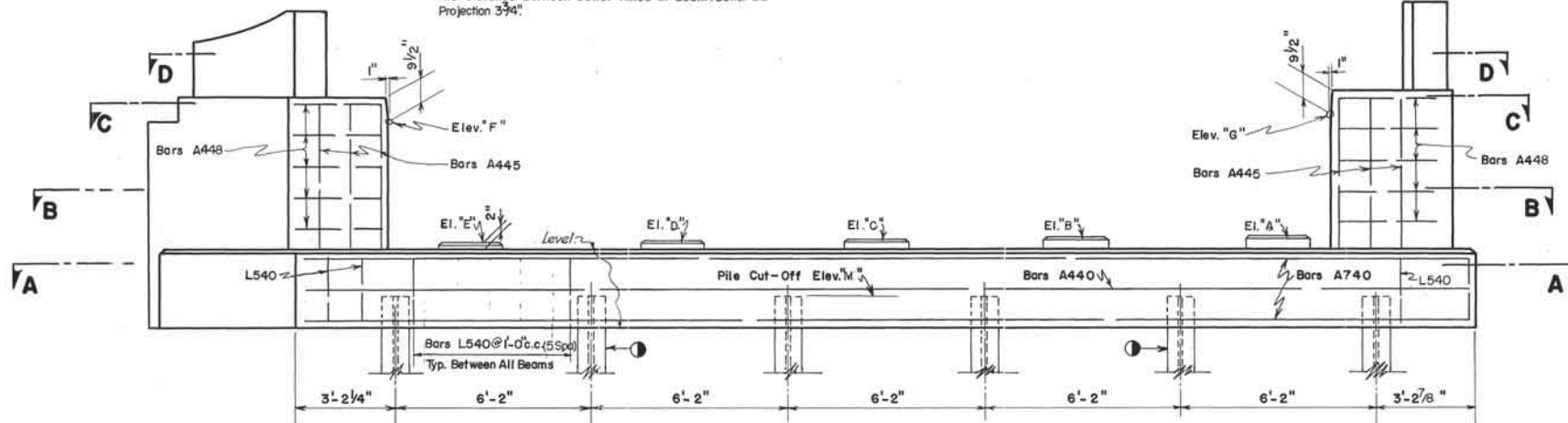
MICROFILMED
 Revised 5-15-63 - Steel Quantities
 Revised 7-12-61

I-65-2(10)57



PLAN

NOTE: Dowel Bars For Abutment No. 1, Shall Be Drilled And Set After The Actual Location Has Been Determined By Measuring The Distance Between Dowel Holes In Beam. Dowel Bar Projection 3/4".

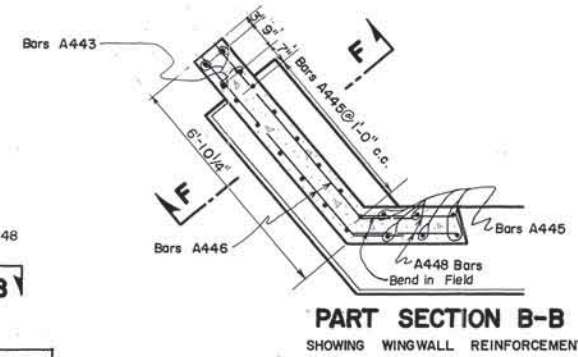


ELEVATION ABUTMENT NO. 1 - RIGHT LANE

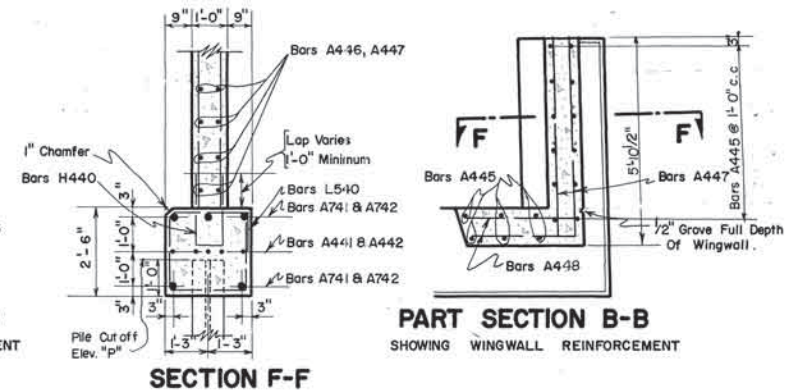
Looking Back On Survey

NOTE: Same For Abutment No. 1 - Left Lane Except For Steps.
NOTE: For Sections not shown this sheet see Dwg. K-8-97.

● Batter These Piles Forward 2:12



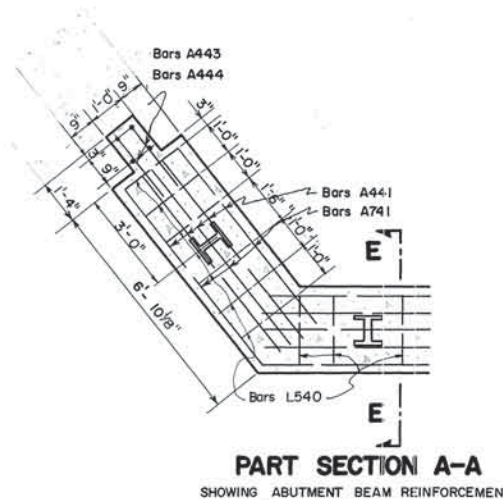
PART SECTION B-B
SHOWING WINGWALL REINFORCEMENT



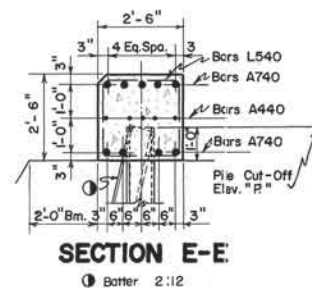
SECTION F-F

TABLE OF ELEVATIONS

Item	Location	Elevations									
		A	B	C	D	E	F	G	H	J	K
Abutment No. 1	Right Lane	771.88	771.84	771.79	771.73	771.68	770.01	775.42	775.65	776.24	776.46
Abutment No. 1	Left Lane	771.48	771.55	771.63	771.70	771.78	769.31	775.56	775.21	776.38	776.02

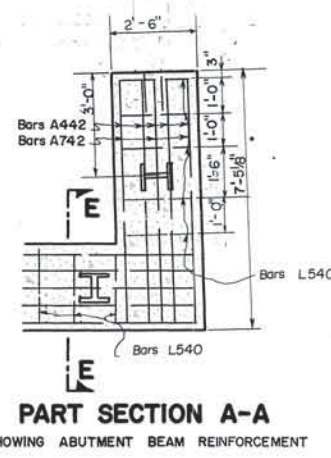


PART SECTION A-A
SHOWING ABUTMENT BEAM REINFORCEMENT

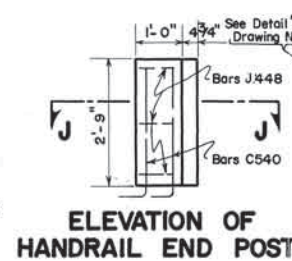


SECTION E-E

● Batter 2:12



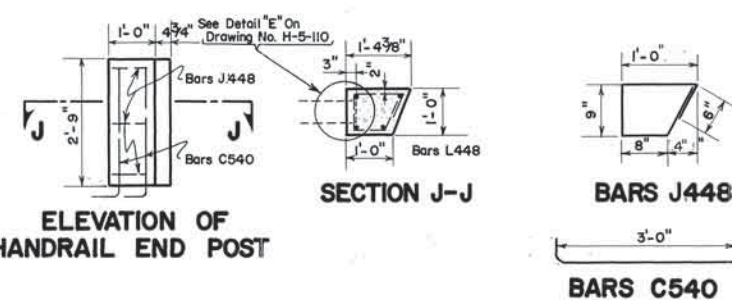
PART SECTION A-A
SHOWING ABUTMENT BEAM REINFORCEMENT



ELEVATION OF
HANDRAIL END POST

END POST - LIST OF MATERIALS - EACH

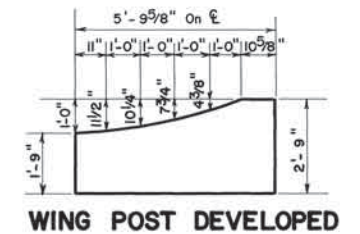
Bar	Size	No.	Length	Quantities	
				Conc. Cu. Yds.	Steel Lbs.
C540	5	4	3'-4"	.12	21
J448	4	3	3'-9"		



SECTION J-J



BARS J448



WING POST DEVELOPED

ALTERNATE "PI"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS

NASHVILLE

ABUTMENT NO. 1

LEFT AND RIGHT LANE BRIDGES
INTERSTATE 65 OVER STATE ROUTE
106 AND WEST HARPEH RIVER
STATION 248+14.00
WILLIAMSON COUNTY
1961

DESIGNED BY PAUL D. QUARLES DATE 3-6-61
DRAWN BY JACK B. CROCKETT DATE 3-20-61
TRACED BY JOE B. CANTRELL JR. DATE 4-5-61
CHECKED BY P.D.Q., D.E.S. DATE 3-24-61

CORRECT Fred Green

APPROVED State Highway Engineer

K-8-96

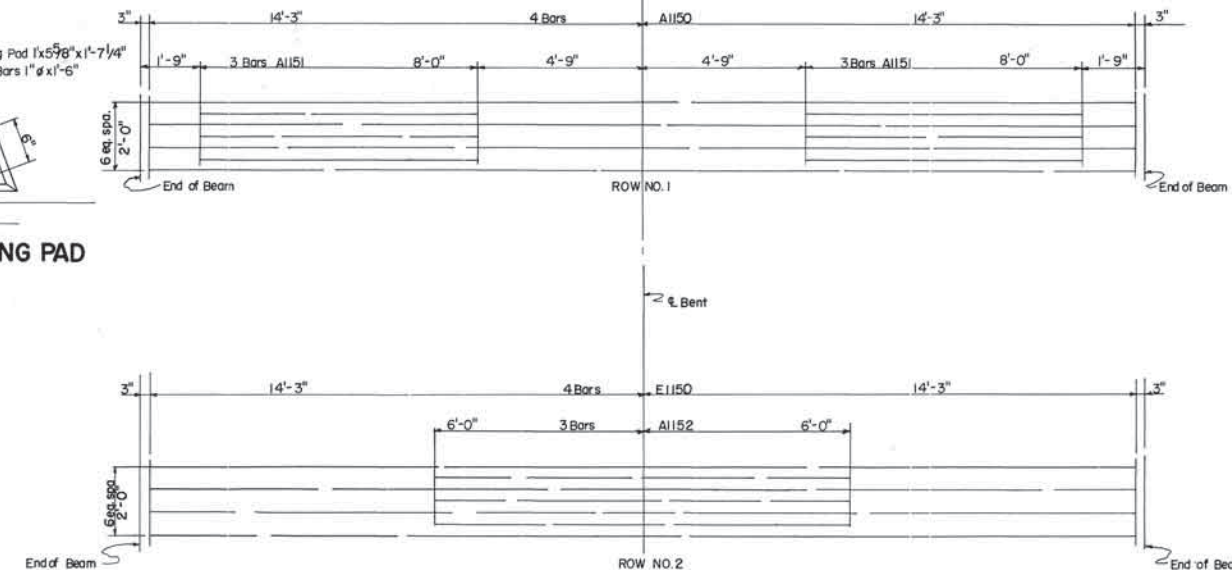
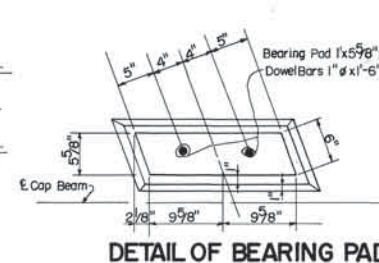
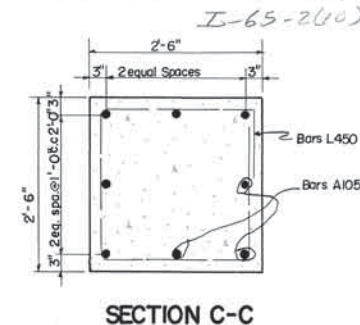
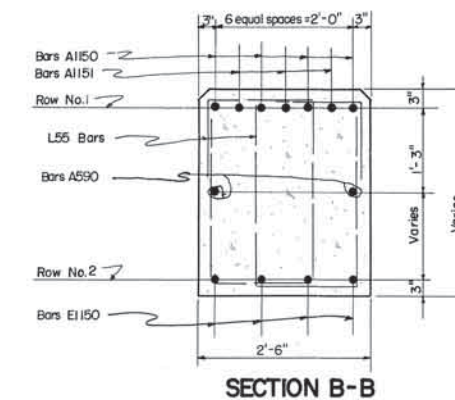
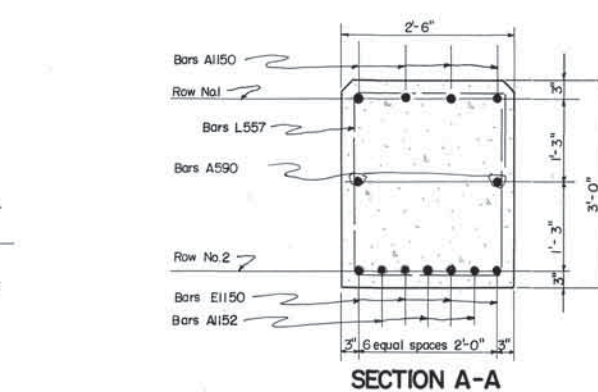
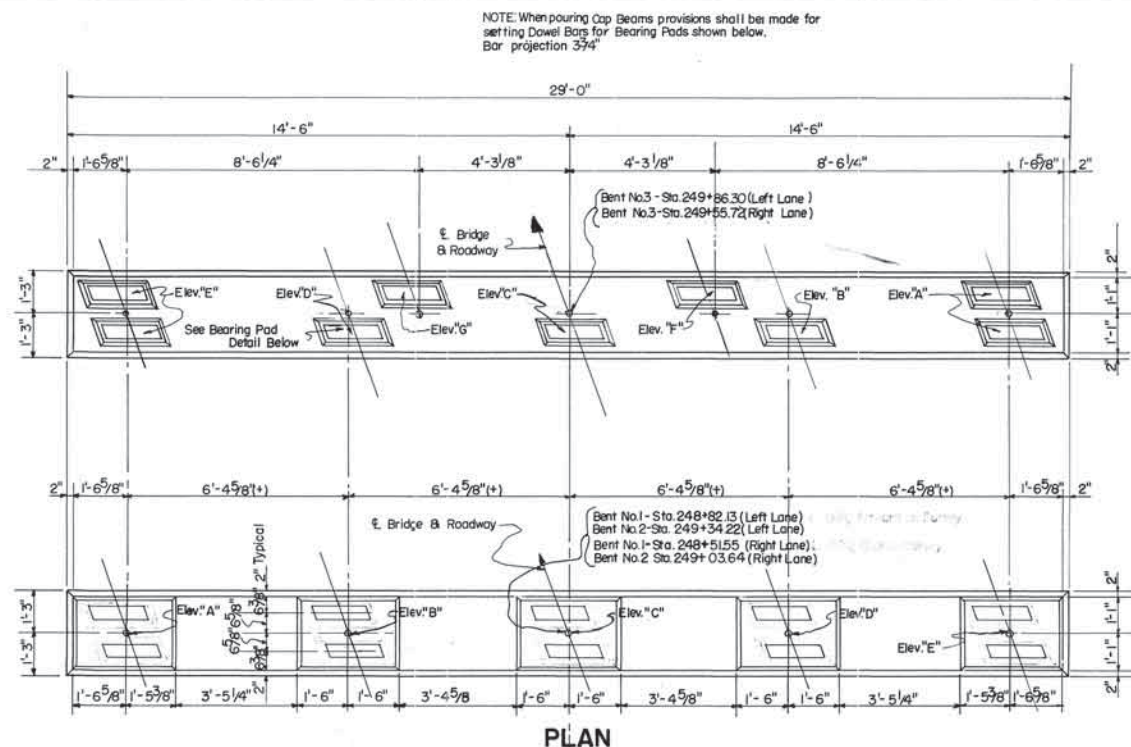
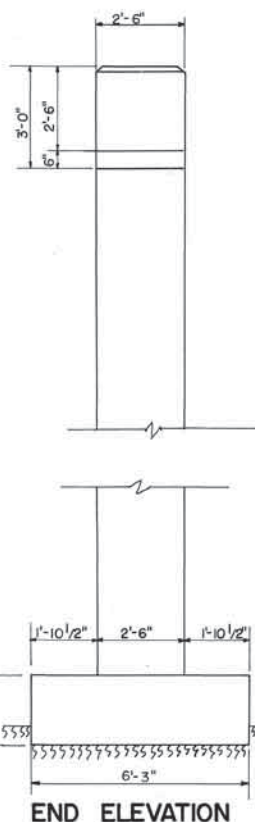
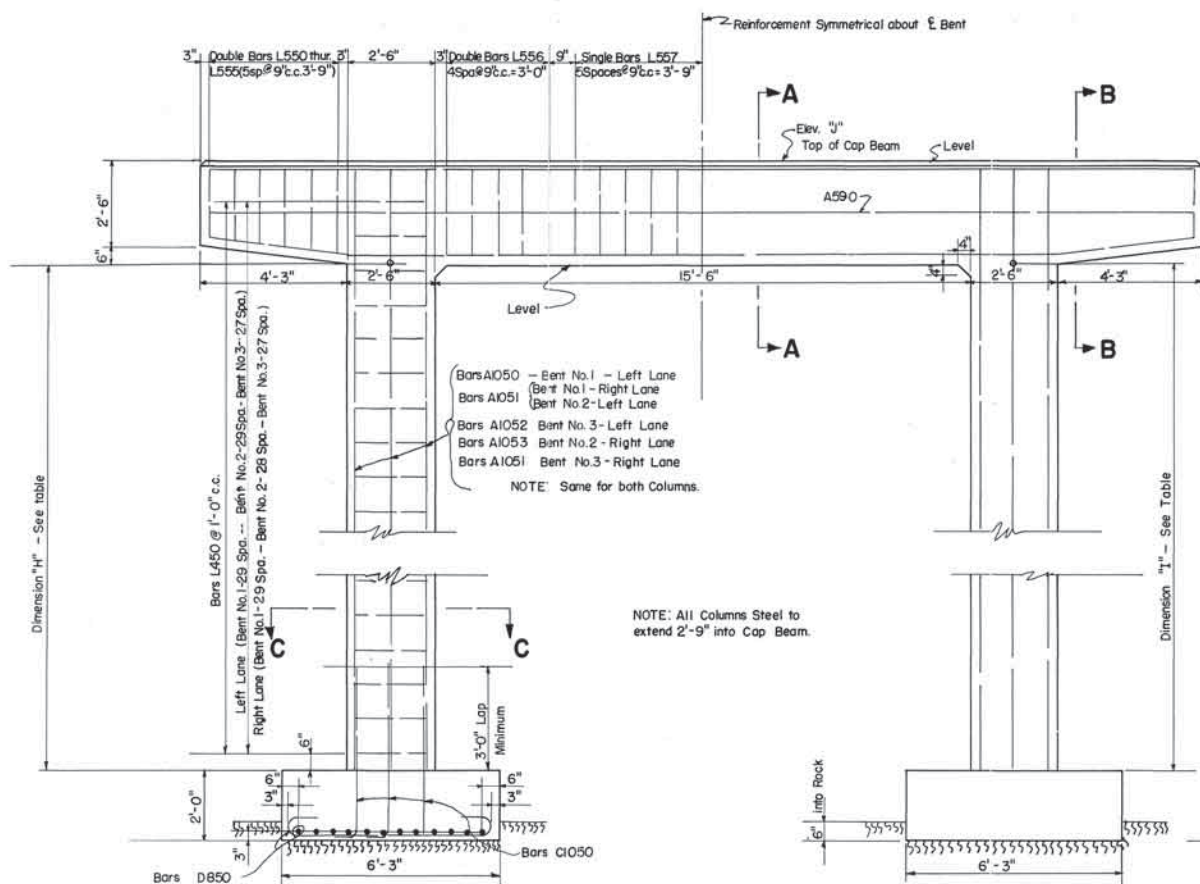


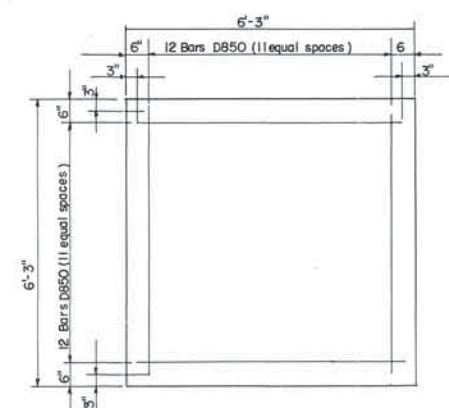
TABLE OF DIMENSIONS AND ELEVATIONS

ITEM	Dimension "H"	Dimension "I"	ELEVATIONS						
			A	B	C	D	E	F	G
LEFT LANE									
Bent No.1	27'-6"	27'-6"	771.23	771.30	771.38	771.45	771.53	—	771.06
Bent No.2	27'-0"	27'-0"	770.97	771.04	771.12	771.19	771.27	—	770.80
Bent No.3	25'-0"	25'-0"	771.00	770.93	770.86	770.78	770.71	770.91	770.54
RIGHT LANE									
Bent No.1	27'-0"	27'-0"	771.63	771.53	771.48	771.43	—	—	771.26
Bent No.2	25'-9"	25'-9"	771.37	771.33	771.27	771.22	771.17	—	771.00
Bent No.3	25'-0"	25'-0"	770.91	770.96	771.01	771.08	771.11	770.93	771.06



ESTIMATED QUANTITIES

ITEM	Concrete Class "A" Cu. Yds.	Reinforcing Steel Lbs.
LEFT LANE		
Bent No.1	26.4	6108
Bent No.2	26.2	6074
Bent No.3	25.2	5910
RIGHT LANE		
Bent No.1	26.2	6074
Bent No.2	25.6	5975
Bent No.3	25.2	5910



ALTERNATE "PI"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE
BENTS NO. 1, 2 & 3
LEFT & RIGHT LANE BRIDGES
I-65 OVER STATE ROUTE 106 & W. HARPETH RIVER
STATION 248+14.00
WILLIAMSON COUNTY
1961

CORRECT: *Fred Gure*
BRIDGE ENGINEER
APPROVED: *Ed Long*
STATE HIGHWAY ENGINEER

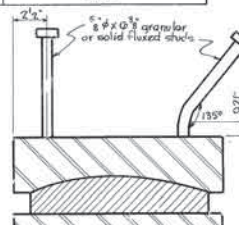
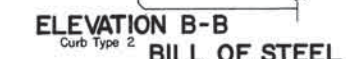


2 1/2"

3/8" x 3/8"

granular or solid fluxed studs

155°

3 END POST ELEVATIONEND POST DETAIL TYPE 2

For One End Post				
Curb Type 2	Bar	No.	Size	Length
	L	6	#4	2'-9" ¹¹
	W	2	#4	2'-10" ¹¹
	W ₁	2	#4	2'-9" ¹¹
	U	2	#4	5'-0" ¹⁰

		For One End Post		
Curb Type - I	Bar	No.	Size	Length
	X	4	#4	8'-2"
	X ₁	1	#4	4'-0"
	Y	4	#4	4'-0"
	Y ₁	2	#4	3'-3"
	Y ₂	2	#4	6'-0"

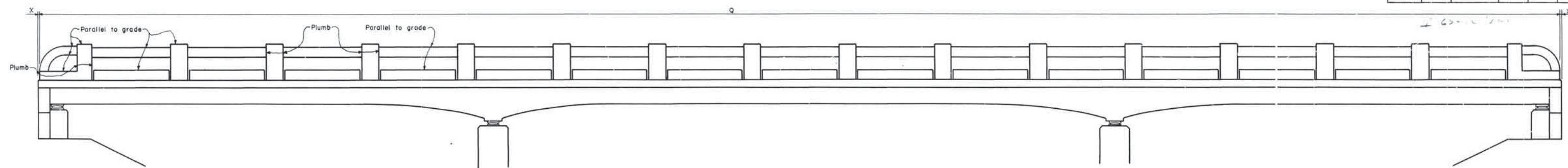
For One End Post		
Concrete Class "A"	0.38	Cu. Yds
Reinforcing Steel	48	Lbs.

For One End Post			
Concrete Class "A"	0.17	Cu. Yds.	
Reinforcing Steel	25	Lbs.	

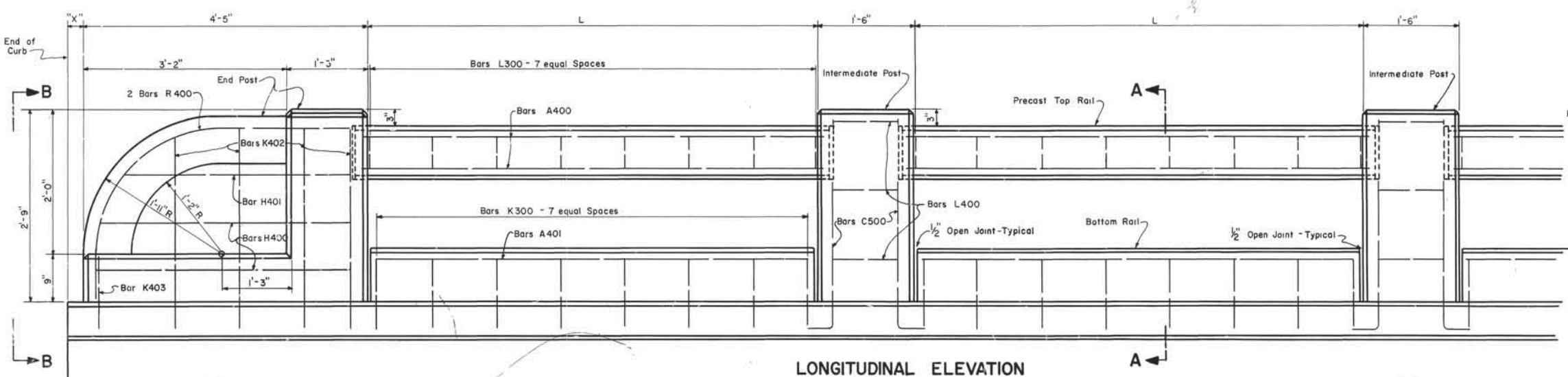


DESIGNED BY _____
DRAWN BY G.P. Mullican
RETRACED BY J. Towery & J.D. Woosley
CHECKED BY _____

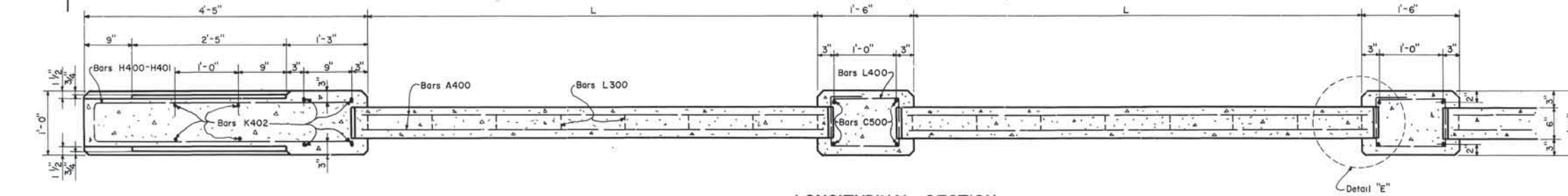
G-10-42



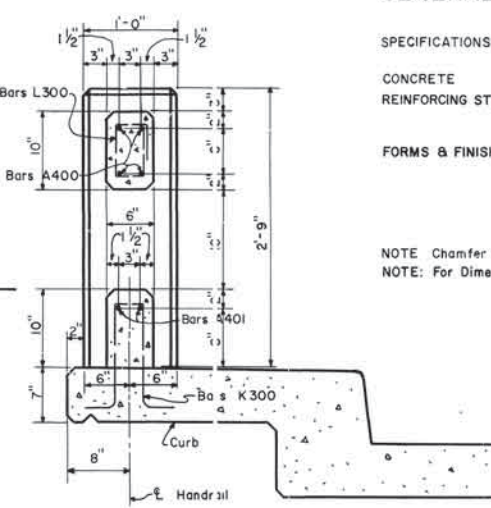
TYPICAL ELEVATION



LONGITUDINAL ELEVATION



LONGITUDINAL SECTION

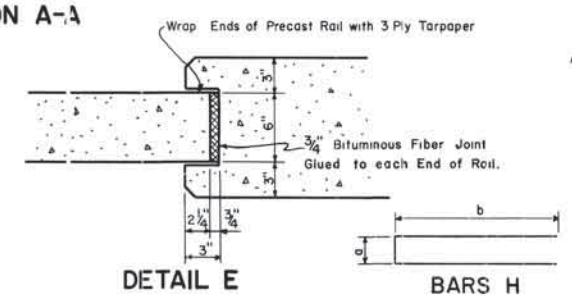


SECTION A-A

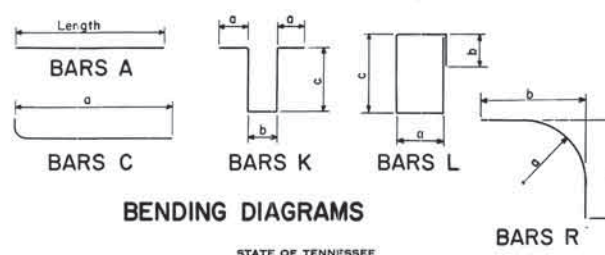
GENERAL NOTES

SPECIFICATIONS Standard Road & Bridge Specifications of the Tennessee Department of Highways.
 CONCRETE To be Class "A".
 REINFORCING STEEL See Specifications. To be intermediate or hard grade with Standard Hook Details as recommended by C R S I.
 FORMS & FINISH See Specifications.

NOTE Chamfer all edges on Handrail Posts and Rails 1/2".
 NOTE: For Dimensions X, Q, & L See Bridge Layout Sheet.



DETAIL E



BENDING DIAGRAMS

STATE OF TENNESSEE
 DEPARTMENT OF HIGHWAYS
 NASHVILLE

STANDARD
 CONCRETE HANDRAIL
 1960

END POST-LIST OF MATERIALS-EACH

Bar	Size	No. Req'd	Bending Dimensions	Length	Quantities
			a b c d		Steel Lbs. Conc. Cu. Yds.
H400	4	2	0'-6" 4'-0"	8'-6"	45.0 0.37
H401	4	1	0'-6" 3'-7"	7'-8"	
K402	4	4	0'-3" 0'-7" 2'-11"	6'-11"	
K403	4	1	0'-3" 0'-7" 1'-2"	3'-5"	
R400	4	2	1'-9" 4'-0" 2'-6"	5'-9"	

INTERMEDIATE POST
 LIST OF MATERIALS-EACH

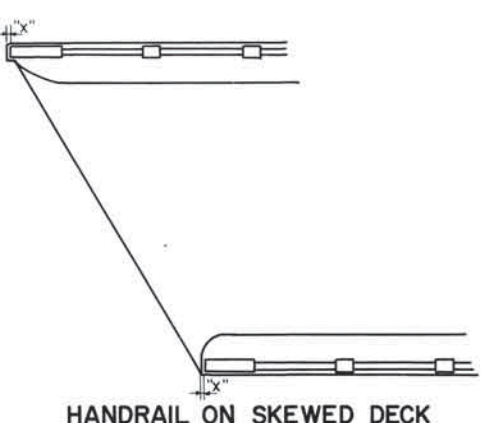
Bar	Size	No. Req'd	Bending Dimensions	Length	Quantities
			a b c d		Steel Lbs. Conc. Cu. Yds.
C500	5	4	3'-0"	3'-4"	22.6 0.15
L400	4	3	0'-9" 0'-6" 1'-2"	4'-4"	

TOP RAIL-LIST OF MATERIALS-EACH

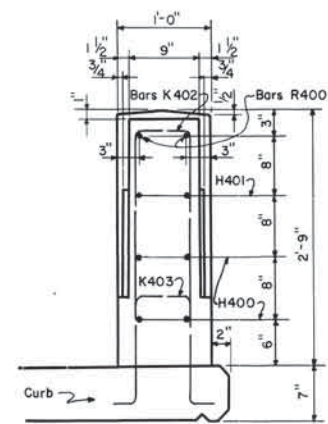
L	Bar	Size	No. Req'd	Bending Dimensions	Length	Quantities
				a b c d		Steel Lbs. Conc. Cu. Yds.
6'-0"	A400	4	4	0'-4" 0'-6" 0'-7"	6'-2"	23.6 0.10
6'-1"	L300	3	8	0'-4" 0'-6" 0'-7"	2'-4"	
6'-1"	A400	4	4	0'-4" 0'-6" 0'-7"	6'-3"	23.8 0.10
6'-2"	L300	3	8	0'-4" 0'-6" 0'-7"	2'-4"	
6'-2"	A400	4	4	0'-4" 0'-6" 0'-7"	6'-4"	24.1 0.10
6'-3"	L300	3	8	0'-4" 0'-6" 0'-7"	2'-4"	
6'-3"	A400	4	4	0'-4" 0'-6" 0'-7"	6'-5"	24.3 0.10
6'-4"	L300	3	8	0'-4" 0'-6" 0'-7"	2'-4"	
6'-4"	A400	4	4	0'-4" 0'-6" 0'-7"	6'-6"	24.5 0.10
6'-5"	L300	3	8	0'-4" 0'-6" 0'-7"	2'-4"	
6'-5"	A400	4	4	0'-4" 0'-6" 0'-7"	6'-7"	24.7 0.11
6'-6"	L300	3	8	0'-4" 0'-6" 0'-7"	2'-4"	
6'-6"	A400	4	4	0'-4" 0'-6" 0'-7"	6'-8"	25.0 0.11
6'-7"	L300	3	8	0'-4" 0'-6" 0'-7"	2'-4"	
6'-7"	A400	4	4	0'-4" 0'-6" 0'-7"	6'-9"	25.2 0.11
6'-8"	L300	3	8	0'-4" 0'-6" 0'-7"	2'-4"	
6'-8"	A400	4	4	0'-4" 0'-6" 0'-7"	6'-10"	25.4 0.11
6'-9"	L300	3	8	0'-4" 0'-6" 0'-7"	2'-4"	
6'-9"	A400	4	4	0'-4" 0'-6" 0'-7"	6'-11"	25.6 0.11
6'-10"	L300	3	8	0'-4" 0'-6" 0'-7"	2'-4"	
6'-10"	A400	4	4	0'-4" 0'-6" 0'-7"	7'-0"	25.9 0.11
6'-11"	L300	3	8	0'-4" 0'-6" 0'-7"	2'-4"	
6'-11"	A400	4	4	0'-4" 0'-6" 0'-7"	7'-1"	26.1 0.11
7'-0"	L300	3	8	0'-4" 0'-6" 0'-7"	2'-4"	

BOTTOM RAIL-LIST OF MATERIALS-EACH

L	Bar	Size	No. Req'd	Bending Dimensions	Length	Quantities
				a b c d		Steel Lbs. Conc. Cu. Yds.
5'-8"	A401	4	2	0'-4" 0'-4" 1'-2"	5'-8"	17.7 0.09
5'-9"	K300	3	8	0'-4" 0'-4" 1'-2"	3'-4"	
5'-9"	A401	4	2	0'-4" 0'-4" 1'-2"	5'-9"	17.8 0.09
5'-10"	K300	3	8	0'-4" 0'-4" 1'-2"	3'-4"	
5'-10"	A401	4	2	0'-4" 0'-4" 1'-2"	5'-10"	17.9 0.09
5'-11"	K300	3	8	0'-4" 0'-4" 1'-2"	3'-4"	
5'-11"	A401	4	2	0'-4" 0'-4" 1'-2"	5'-11"	18.1 0.10
5'-12"	K300	3	8	0'-4" 0'-4" 1'-2"	3'-4"	
5'-12"	A401	4	2	0'-4" 0'-4" 1'-2"	6'-0"	18.2 0.10
6'-0"	K300	3	8	0'-4" 0'-4" 1'-2"	3'-4"	
6'-0"	A401	4	2	0'-4" 0'-4" 1'-2"	6'-1"	18.3 0.10
6'-1"	K300	3	8	0'-4" 0'-4" 1'-2"	3'-4"	
6'-1"	A401	4	2	0'-4" 0'-4" 1'-2"	6'-2"	18.4 0.10
6'-2"	K300	3	8	0'-4" 0'-4" 1'-2"	3'-4"	
6'-2"	A401	4	2	0'-4" 0'-4" 1'-2"	6'-3"	18.5 0.10
6'-3"	K300	3	8	0'-4" 0'-4" 1'-2"	3'-4"	
6'-3"	A401	4	2	0'-4" 0'-4" 1'-2"	6'-4"	18.6 0.10
6'-4"	K300	3	8	0'-4" 0'-4" 1'-2"	3'-4"	
6'-4"	A401	4	2	0'-4" 0'-4" 1'-2"	6'-5"	18.7 0.10
6'-5"	K300	3	8	0'-4" 0'-4" 1'-2"	3'-4"	
6'-5"	A401	4	2	0'-4" 0'-4" 1'-2"	6'-6"	18.8 0.10
6'-6"	K300	3	8	0'-4" 0'-4" 1'-2"	3'-4"	
6'-6"	A401	4	2	0'-4" 0'-4" 1'-2"	6'-7"	19.0 0.11



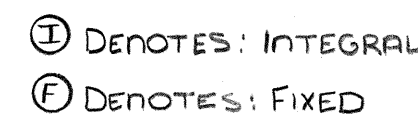
HANDRAIL ON SKEWED DECK



ELEV. B-B

DESIGNED BY: J.L. Parkes
 DRAWN BY: J.L. Parkes
 RECHECKED BY: R. Reagan
 CHECKED BY: R. Reagan
 DATE: 4-4-63

CC RECT. *Hand Green*
 APPROVED *Hand Green*
 H-5-110



—ELEVATION @ RIGHT ANGLES TO STATE ROUTE 106—

LAYOUT OF BRIDGES	M-60-109
GENERAL NOTES & ESTIMATED QUANTITIES	M-60-110
SUPERSTRUCTURE	M-60-111
ABUTMENTS 1&2	M-60-112
BENTS 1,2,&3	M-60-113
PRESTRESSED BEAM DETAILS	M-60-114
BILL OF STEEL	M-60-115

STANDARD PILE DETAILS	FEB. 24, '66	H-5-111
STD. REINF. BAR		
SUPPORT DETAILS	JAN. 14, '75	K-80-14
MISC. ABUT. &		
DRAINAGE DETAILS	JAN. 9, '75	K-85-150
BRIDGE RAILING-		
CONCRETE PARAPET	JAN. 28, '76	M-28-1
PRECAST PRESTRESSED		
CONCRETE DECK PANELS	JAN. 15, '77	K-80-15

LAYOUT OF BRIDGES	K-8-93
PRESTRESSED BEAM DETAILS	K-8-94
SUPERSTRUCTURE DETAILS	K-8-95
ABUTMENT NO. 1	K-8-96
ABUTMENT NO. 2	K-8-97
BENTS NO. 1, 2 & 3	K-8-98
BILL OF STEEL	K-8-99

130-REGARDING SECTION 604- CONCRETE STRUCTURES	10-1-77
420-REGARDING APPROVAL OF SHOP DRAWINGS	9-20-76
450-REGARDING PERMANENT STEEL BRIDGE DECK FORMS	9-19-77
480-LOW SLUMP DENSE & POLYMER MODIFIED CONCRETE BRIDGE DECK OVERLAY	2-13-78
481-LOW SLUMP DENSE & POLYMER MODIFIED CONCRETE BRIDGE DECK OVERLAY FOR EXISTING BRIDGE DECKS	2-13-78
555-REGARDING SECTION 615- PRECAST PRESTRESSED CONCRETE BRIDGE MEMBERS	7-1-77
570-REGARDING HAULING OVER STRUCTURES	7-10-68
710-REGARDING SUBSECTION 908.13- ELASTOMERIC BRG. PADS	12-2-76
TWO 42'x8' ROADWAYS w/ PARAPET	

STATE OF TENNESSEE

LAYOUT OF BRIDGE WIDENING

LEFT & RIGHT LANES

LEFT & RIGHT LANES

T-65 OVER STATE ROUTE 106 &

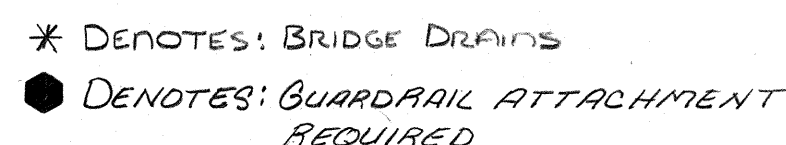
WEST HARPETH RIVER

STATION 248+14.00

WILLIAMSON COUNTY

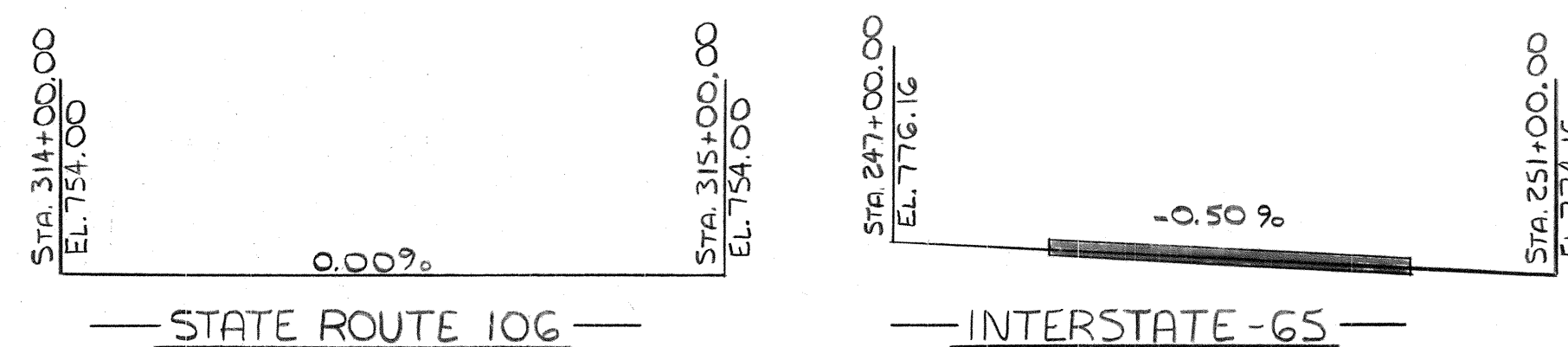
CORRECT *Ed. Berthick* 1978
ENGINEER OF STRUCTURES
APPROVED *Lewis Evans*
DIRECTOR OF HIGHWAYS

M-60-109



DRAINAGE AREA: 5.5 Square Miles
Area Provided: 349 ft²
Discharge Q100: 3800 C.F.S.
Discharge Q50: 3,300 C.F.S.
Velocity: 10.9 ft./second

SPECIAL NOTE: For sequence of construction, see Roadway Plans, sheet no. 2



NOTE: ELEVATIONS SHOWN REPRESENT ELEVATIONS AT TOP OF EXISTING CONCRETE DECK.

DESIGNED BY R. Woods DATE Dec. '77
DRAWN BY G.A. Swindle DATE MAR. '78
SUPERVISED BY FIELDS & JETT DATE MAR. '78
CHECKED BY _____ DATE _____

Class "A" Grading "D" 5 C.Y.

Bridge Deck Sealant 1,780 S.Y.

GENERAL NOTES

CONS'T. NO. 94002-3133-44 + 94002-3134-44

SPECIFICATIONS: Standard Road and Bridge Specifications of The Tennessee Department of Highways, (1968 Edition)

CONCRETE: To be class "A" (cast in place). f'c 3000 psi. See Special Provision No. 130.

PRECAST PRESTRESSED BRIDGE DECK PANELS: A portion of the concrete deck may be constructed of Precast Prestressed Bridge Deck Panels fabricated and used in accordance with Standard Drawing K-80-15.

BRIDGE RAIL SYSTEM: Build parapets according to Standard Drawing M-28-1.

PILES: To be HP10x42 driven to refusal on rock or a minimum bearing of 55 tons for the abutments.

PRECAST, PRESTRESSED BRIDGE MEMBERS: See Special Provision No. 555.

EPOXY: The binder mix, sand aggregate batch, placing method, temperature and humidity limitations and curing times shall be as recommended by the manufacturer. Acceptable brands of epoxy are: Sika-Top 100 - Calanese Coating Co., Colma, DLR-Sika Chemical Corp., Sinmast Mortar Mix Resin #4 - Sinmast Corp., Sikastix 370 - Sika Chemical Corp. and FEL-POXY 102, FEL-PRO BUILDING PRODUCTS INC. COST OF JOINT PREPARATION + EPOXY IN PLACE TO BE INCLUDED IN ITEMS BID ON.

ELASTOMETRIC BEARING PAD: See Special Provision No. 210

LOADING: HS20-44 WITH ALTERNATE MILITARY

DESIGN SPECIFICATIONS: AASHTO 1973 Edition with addenda.

BRIDGE DECK FORMS: BRIDGE DECK FORMS for concrete decks shall be constructed using either removable forms, or permanent forms. In either case, forms shall be attached by means other than welding to support members. See Special Provision No. 450.

REINFORCING STEEL: To be ASTM A615 Grade 60. Standard CRSI hook details apply unless otherwise noted on bill of material. Bending dimensions shown are based on grade 60. Spacing dimensions are center to center unless otherwise noted on detail drawings.

BRIDGE DECK SEALANT: The bridge deck shall be sealed in accordance with Special Provision No. 480 or No. 481. These bridge deck sealant systems shall be paid for under bridge items; 604-03.16 for LSDC or 604-03.17 for PMC. (4,780 sq. required).

WIDENINGS: The contractor shall check the location of all existing substructures and verify span lengths before fabricating girders.

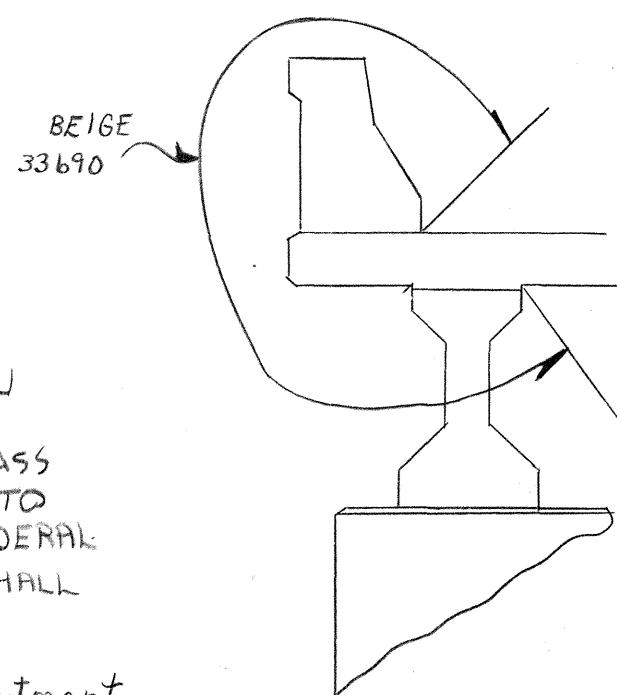
SPECIAL NOTE - Footing For Bents: After excavation to rock for footing has been completed, holes 6" deep shall be drilled at points designated by the Engineer. From the results obtained, the Engineer shall determine the final footing elevations. No reinforcing steel for bent columns shall be ordered until final footing elevations have been determined.

RIP-RAP: Rip-rap shall consist of furnishing and placing by hand, rubble stones, or sacked sand cement.

Rubble stone shall meet the requirements of Section 709 and shall be clean (free from organic matter) durable, angular with fractured faces, nearly rectangular in shape with a breadth or thickness at least one-third its length.

FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.22 OF THE TENNESSEE STANDARD SPECIFICATION EXCEPT AS MODIFIED BY SPECIAL PROVISION NO. 130. A TEXTURED COATED FINISH SHALL BE USED IN LIEU OF A CLASS 2 FINISH. THE COLOR OF THE FINISH SHALL BE SIMILAR TO BEIGE, FEDERAL SPECIFICATION NO. 33690, FEDERAL COLOR STANDARD NO. 595a, AND A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER OF STRUCTURES FOR APPROVAL.

All exposed existing and new bent and abutment surfaces to be texture-coated.



ESTIMATED QUANTITIES

		ALTERNATE LSDC				ALTERNATE PMC				surfaces to be texture-coated.													
ITEM NUMBER	709-01	204-02.01	204-03.01	604-03.01	604-03.16	604-03.01	604-03.17	604-03.02	604-25.03	604-25.04	615-01.02	616-08	616-12	604-10.51	710-10	710-11	604-10.50	204-04.01	204-05	606-02.03			
ITEM	Rubble Stone Rip-Rap (plain) or Sacked Sand-Cement Rip-Rap (Optional) C.Y.	Dry Excavation (Bridges) CY ①	WET Excavation (Bridges) CY ①	Class "A" Concrete (Bridges) ④ (CY)	Bridge Deck Sealant LSDC ④ S.Y.	Class "A" Concrete (Bridges) ④ (CY)	Bridge Deck Sealant PMC ④ S.Y.	Steel Bar Reinforcement (Bridges) lb.	Textured Coating (Existing Structure) ③ S.Y. ②	Textured Coating (New Structure) ③ S.Y. ②	Prestressed Concrete I-Beam (Type II) LF ③	Concrete Parapet (M-28-1) LF	Portable Barrier Rail (K-38-158) LF ⑤	Scarifying S.Y.	6" Perforated C.M. pipe (18 ga.) with porous backfill ④ LF	6" C.M. pipe (18 ga.) underdrains LF ④	Bridge Deck Repairs S.Y. ⑥	ROCK Excavation C.Y.	ROCK Drilling L.F.	STEEL PILES (10 INCH) L.F.			
SUPERSTRUCTURE				106.6	890	97.6	890	29085				412					200						
Abutment #1		10		11.1		11.1		1851							16	11				84			
Bent #1			5	11.2		11.2		2056										2	6				
Bent #2		41		11.1		11.1		2038										2	6				
Bent #3		37		10.6		10.6		1948										2	6				
Abutment #2		10		11.1		11.1		1816							14	11				90			
TOTALS	188	98	5	161.7	890	152.7	890	38,794	1208	915	189	412		528	30	22	200	6	18	174			
RIGHT LANE				106.6		97.6		29085				412					200						
Abutment #1		10		11.1		11.1		1851							14	11				75			
Bent #1	218		3	11.1		11.1		2038										2	6				
Bent #2		41		10.8		10.8		1985										2	6				
Bent #3		37		10.6		10.6		1948										2	6				
Abutment #2	188	10		11.1		11.1		1816							16	11				84			
TOTALS		98	3	161.3	890	152.3	890	38,723	1208	915	189	412		528	30	22	200	6	18	159			
GRAND TOTALS	594	196	8	323.0	1780	305.0	1780	77,517	2416	1830	378	824	564 ▲	1056	60	44	400	12	36	333			

① The cost of removing the exterior portion of the existing slab, portions of the existing abutments, and the bridge rail, shall be included in the unit prices of items bid on. All salvable material shall become property of the contractor.

② The cost of bituminous fiberboard, epoxy joints, & all miscellaneous joint material to be included in bridge items bid on.

③ Cost of elastomeric pads, rubber bonding cement, and dowel bars or anchor bolts to be included in the cost of prestressed beams.

④ The Contractor shall bid either Alternate LSDC or Alternate PMC. The variation in the superstructure quantity of Class "A" Concrete for Alternates LSDC and PMC is due to the difference in depth of the LSDC and PMC systems.

⑤ Quantity of 564 L.F. of Portable Barrier Rail includes 244 Ft. for traffic control on the structure & 15 L.F. for traffic control under the structure (on State Route 106).

⑥ Quantities shown are estimated. The actual quantity will be determined by the Division of Structures, after the Contractor has removed the existing asphalt from the structure. Cost of removal of existing asphalt to be included in cost of scarifying.

⑦ Excavation based on lower road profile.

⑧ Cost of 24 threaded steel inserts and 24 3/8" x 4" hex head bolts (A307) to be included in bridge items bid on.

⑨ Cost of polyethylene sheeting and all miscellaneous items necessary for installation to be included in cost of perforated C.M. Pipe.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

GENERAL NOTES AND ESTIMATED QUANTITIES

I-65 OVER STATE ROUTE 106 &
WEST HARPETH RIVER
STATION 248+14.00
WILLIAMSON COUNTY
1978

DESIGNED BY Ramsey Woods DATE 2-78
DRAWN BY Scotty Moore DATE 3-78
SUPERVISED BY William J. Galt DATE 4-78
CHECKED BY Jeff F. Ramsey DATE 4-78

CORRECT

4/11/78

ENGINEER OF STRUCTURES

APPROVED

William J. Galt
DIRECTOR OF HIGHWAYS

M-60-110

PROJECT NO.	YEAR	SHEET NO.	
I-65-2(47)-46 FI-65-2(48)-46	1978	25	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

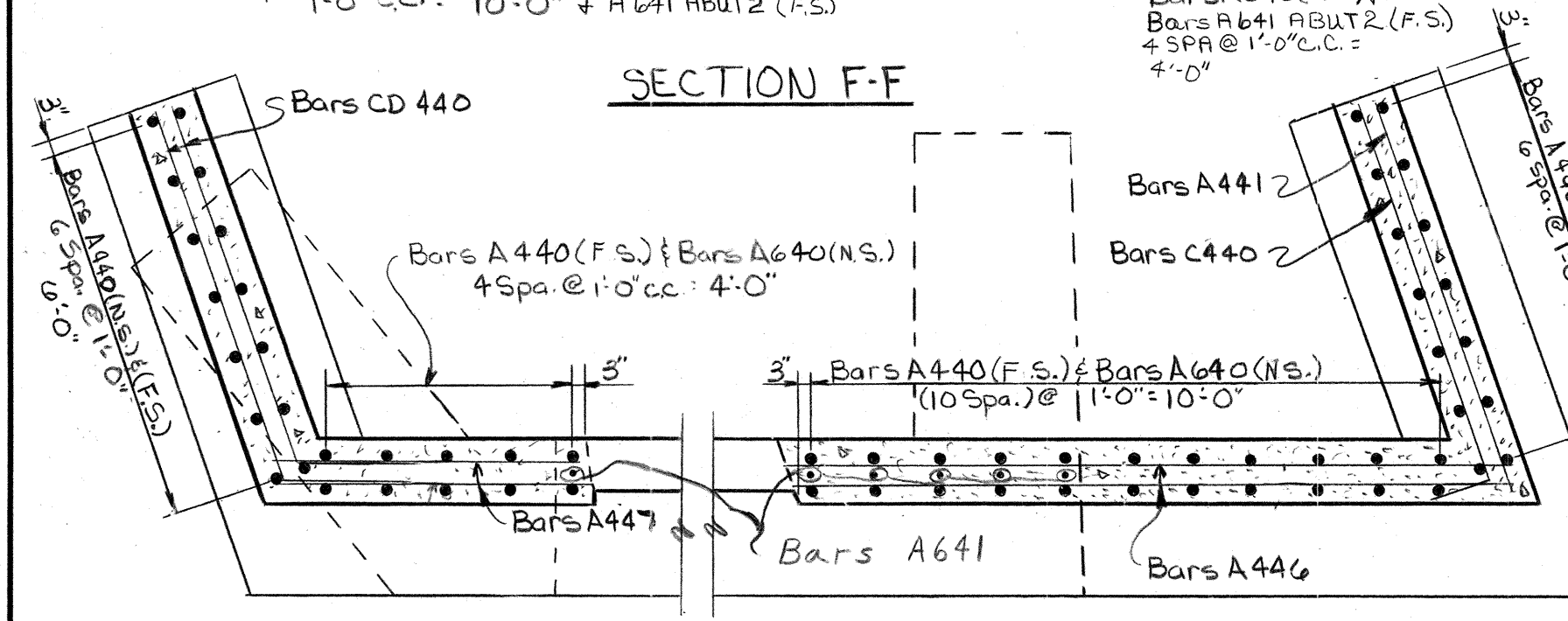
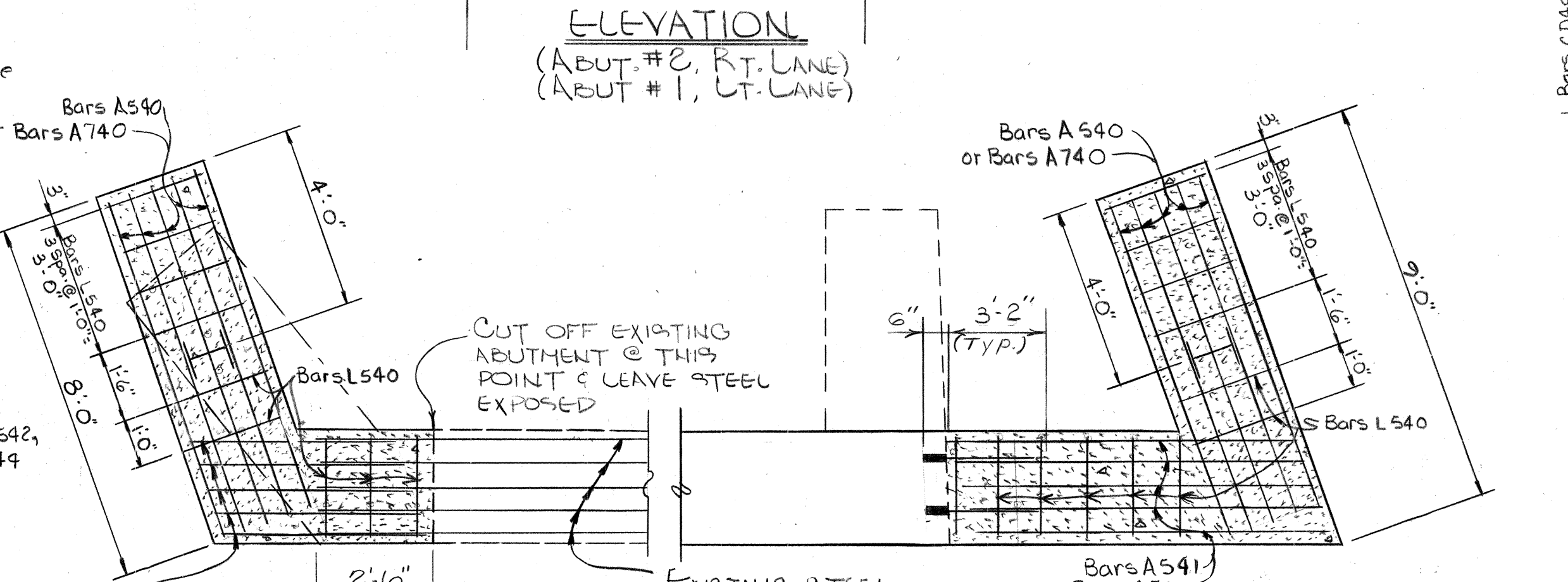
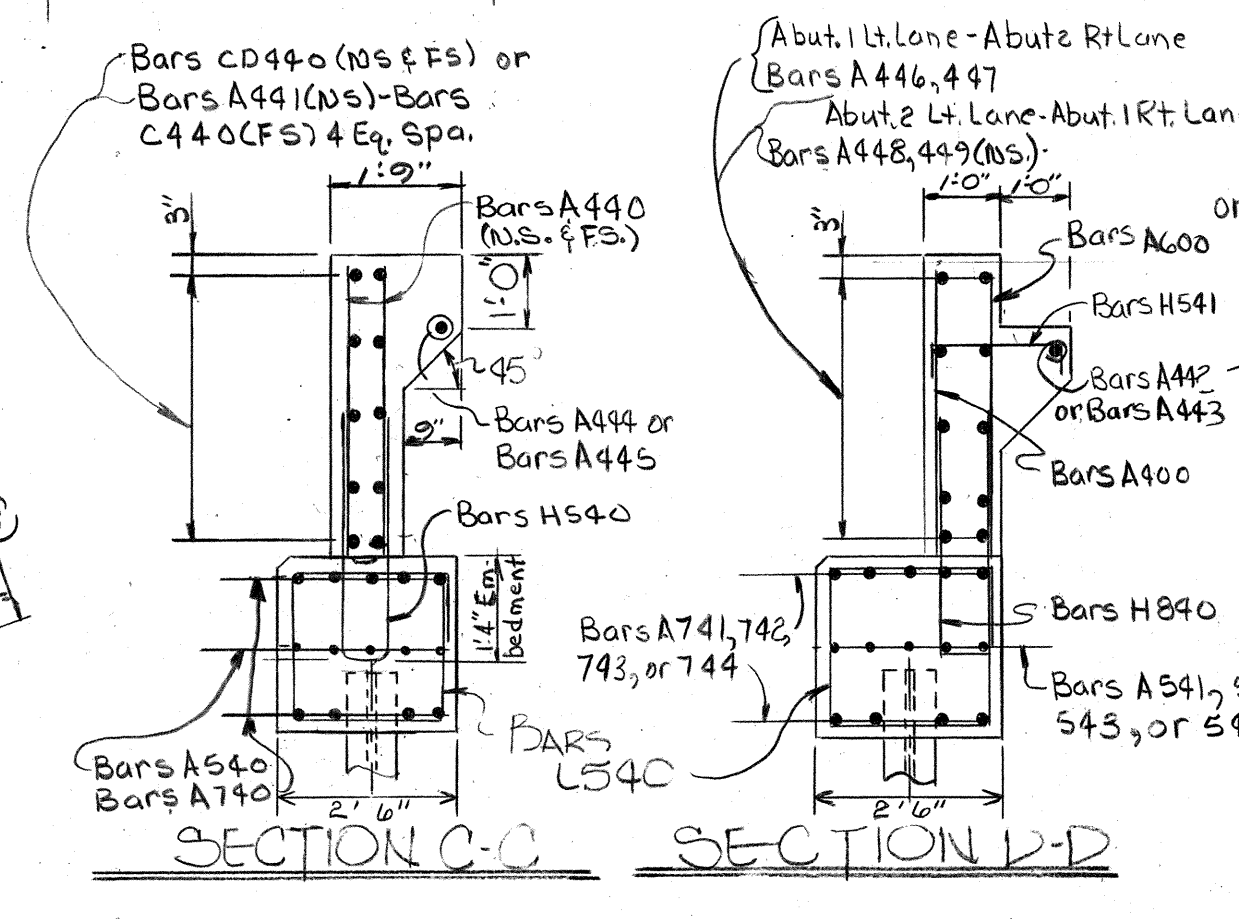
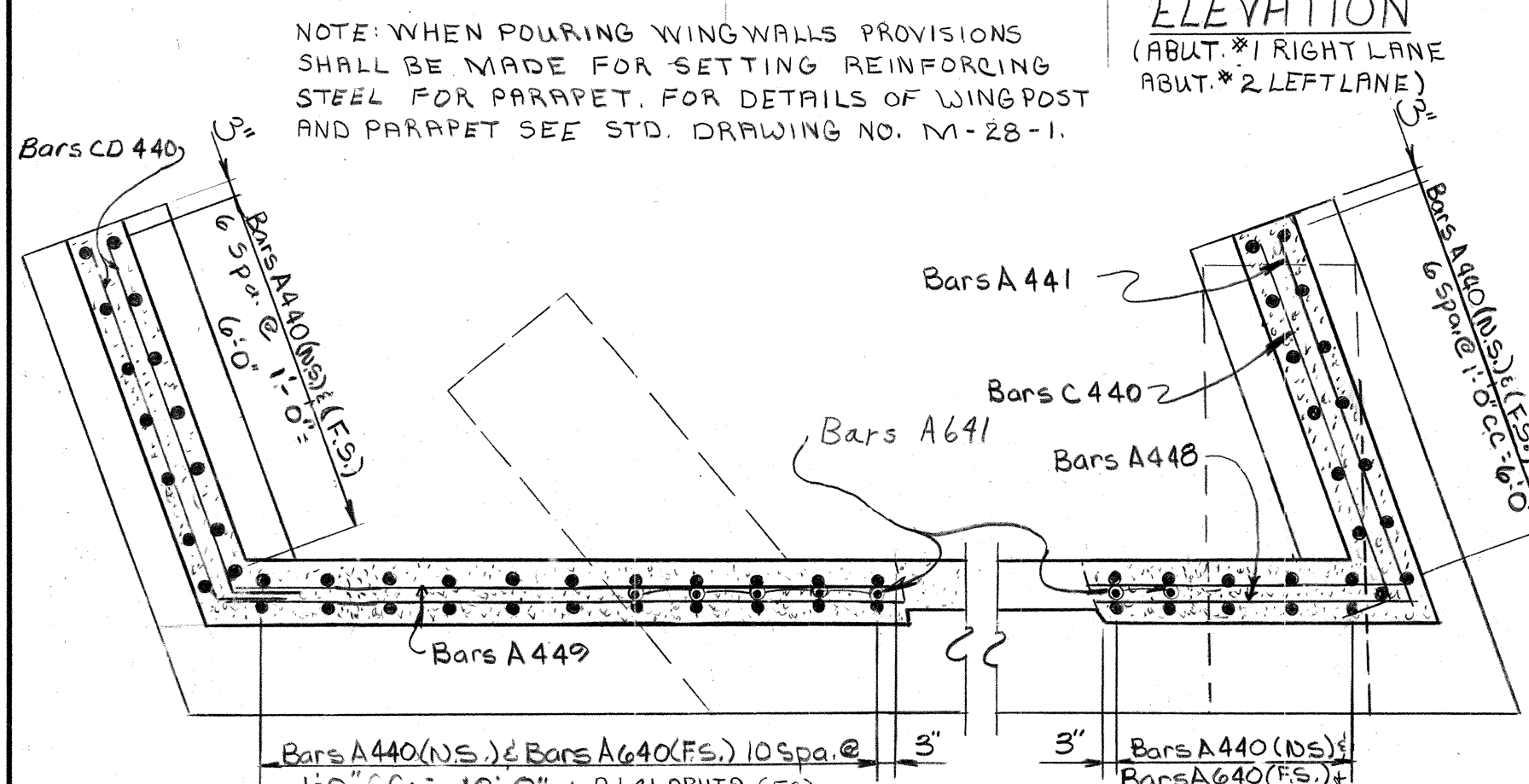
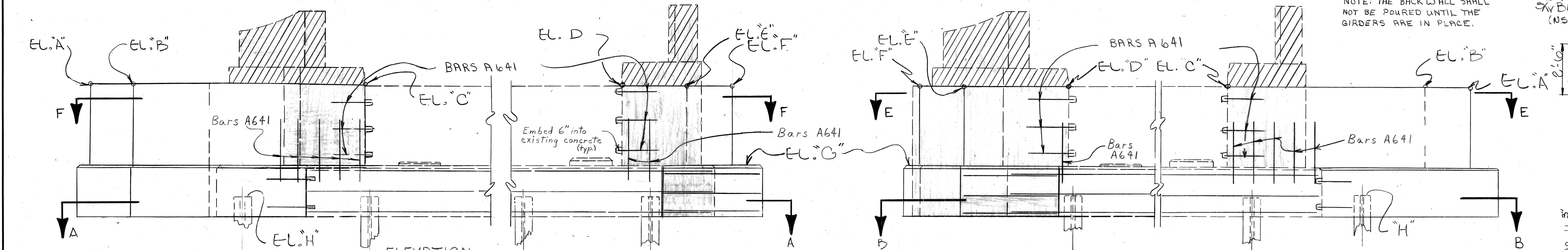
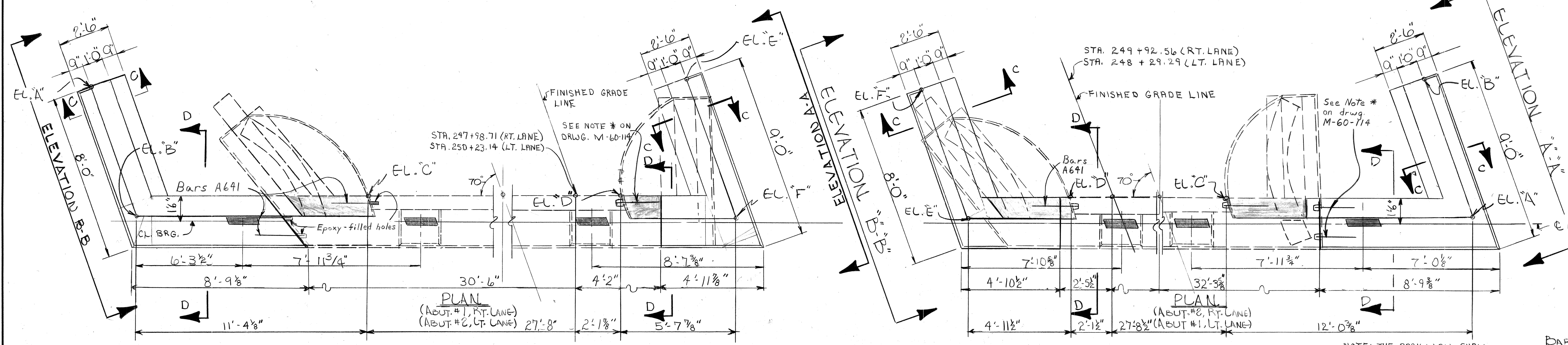
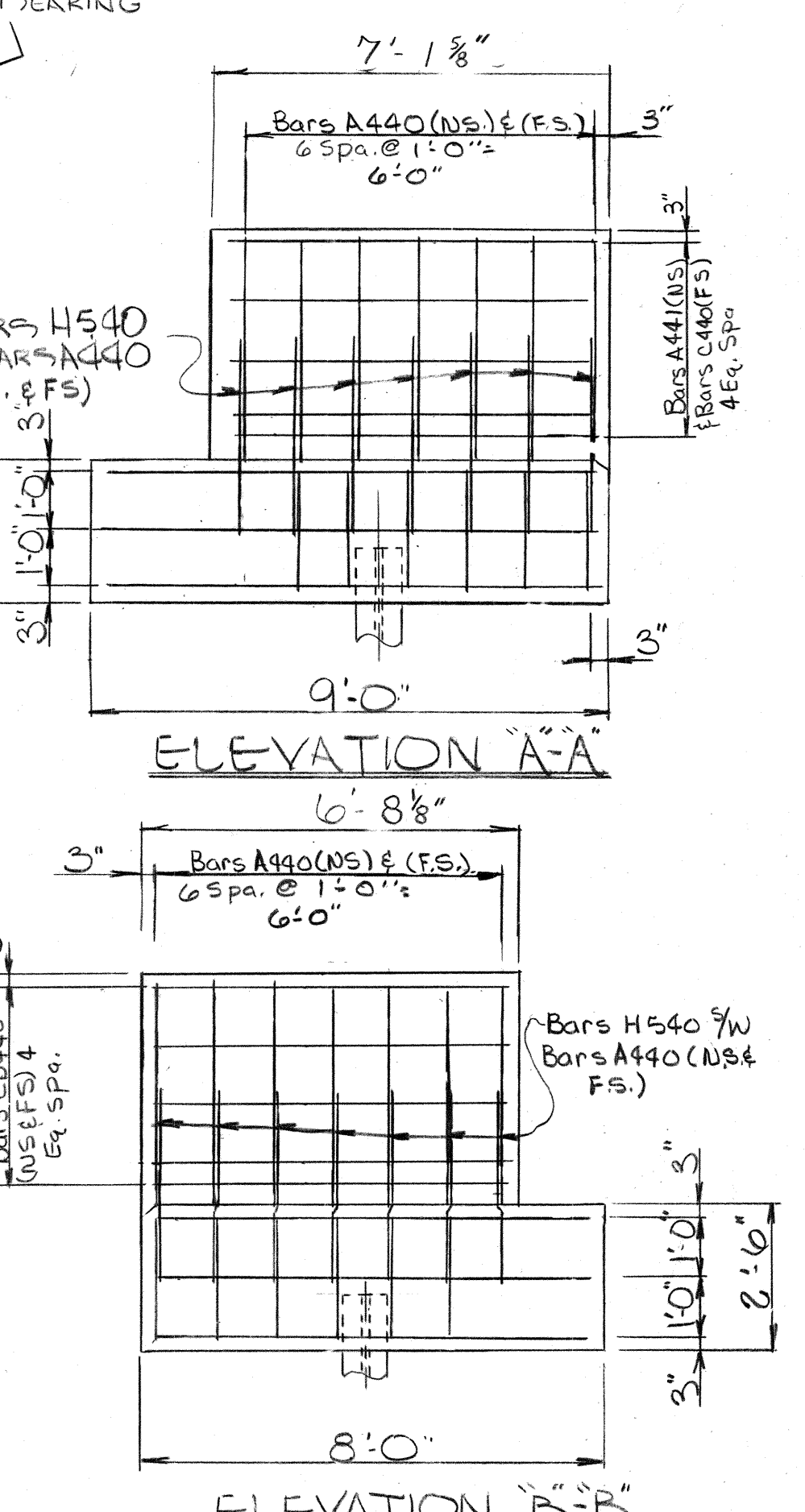


TABLE OF ELEVATIONS

ITEMS	Abut. 1 Lt. Lane	Abut. 2 Rt. Lane	Abut. 1 Rt. Lane	Abut. 2 Lt. Lane
A	775.06	774.06	775.38	774.39
B	775.09	774.10	775.34	774.35
C	775.20	774.23	775.44	774.47
D	775.54	774.57	775.68	774.72
E	775.59	774.60	775.76	774.76
F	775.63	774.64	775.72	774.73
G	771.39	770.44	771.66	770.71
H	769.81	768.94	770.10	769.21

NOTE: ELEVATIONS SHOWN ARE BASED ON ASSUMING FINISHED GRADE TO BE TOP OF EXISTING CONCRETE DECK.



ESTIMATED QUANTITIES

ITEMS	Concrete Class A (cu.)	Reinforcing Steel (lbs.)
Abut. 1 Lt. Lane	11.1	1851
Abut. 2 Lt. Lane	11.1	1816
Abut. 1 Rt. Lane	11.1	1851
Abut. 2 Rt. Lane	11.1	1816

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ABUTMENTS 102 LEFT & RIGHT LANES
WIDENING OF INTERSTATE 65
OVER
STATE ROUTE 106 & WEST HARPETH RIVER
STATION 248+14.00
WILLIAMSON COUNTY
1978

DESIGNED BY: RANLEY WOODS
DRAWN BY: SCOTT KEENE-Hymie
SUPERVISED BY: J. Fields & J. L. Felt
CHECKED BY: _____

DATE: 3-78
DATE: 4-78
DATE: 4-78
DATE: _____

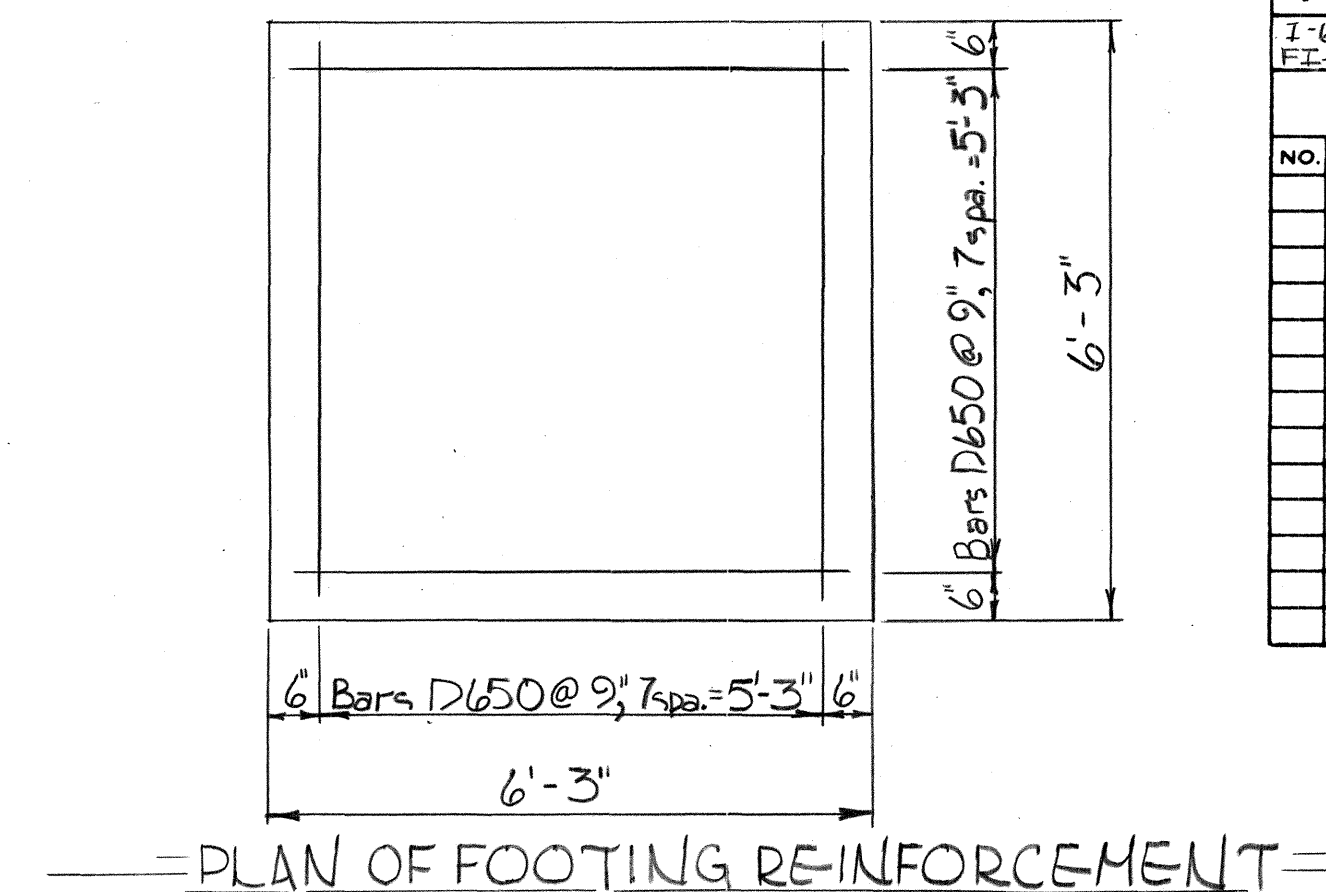
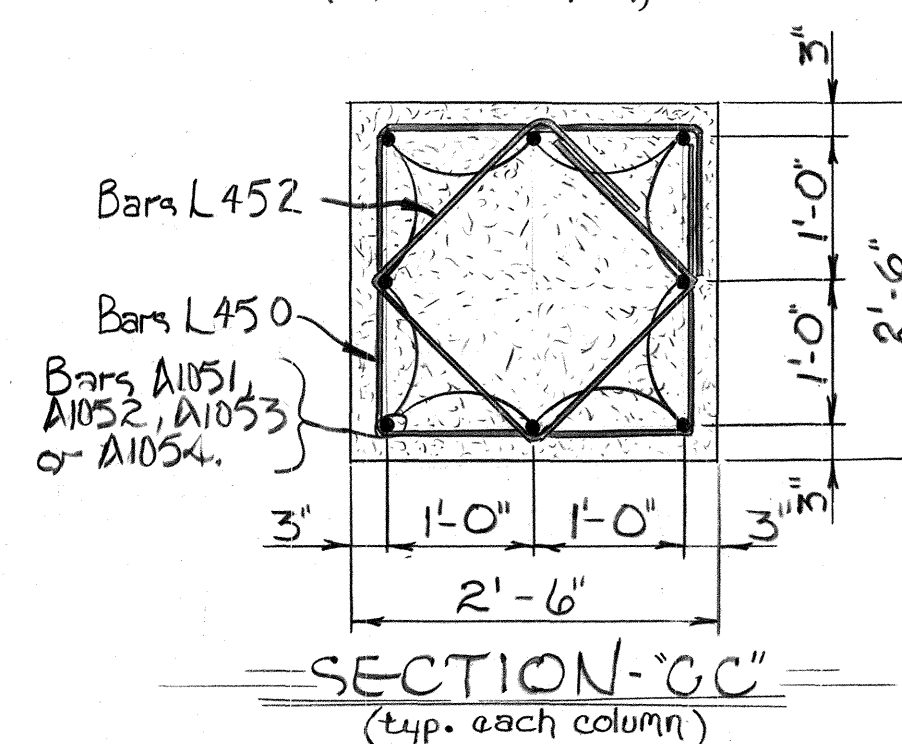
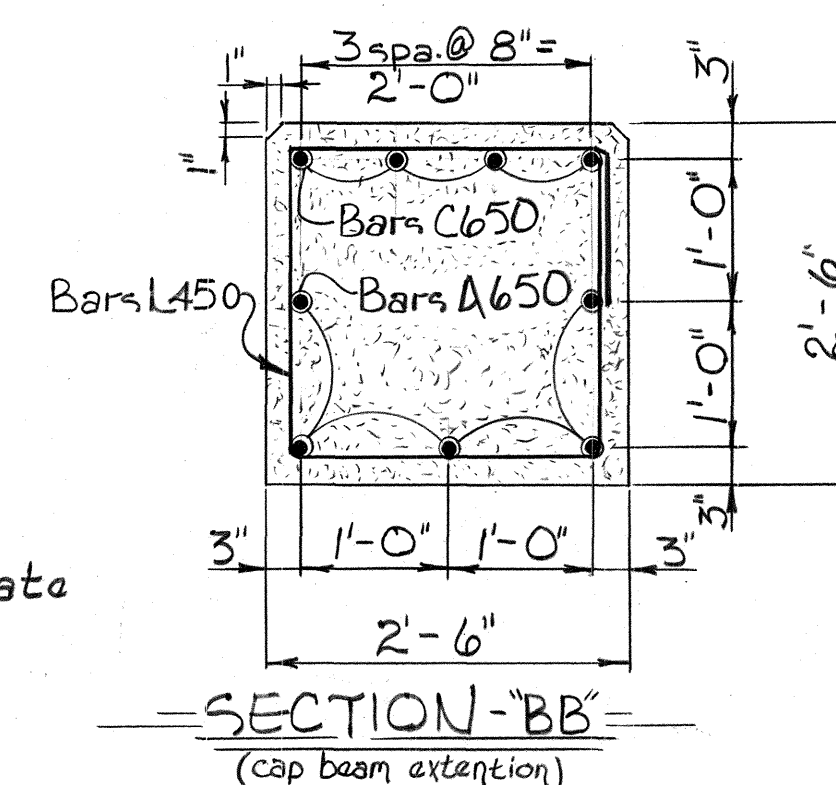
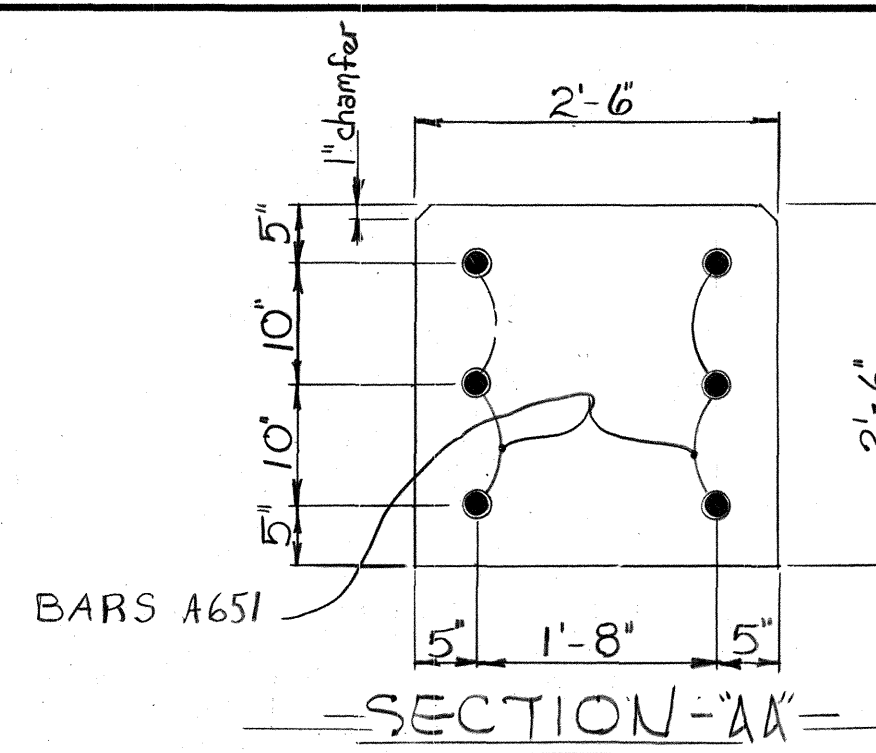
SECTION E-E

SECTION A-A

APPROVED: *James Brown*
DIRECTOR OF HIGHWAYS

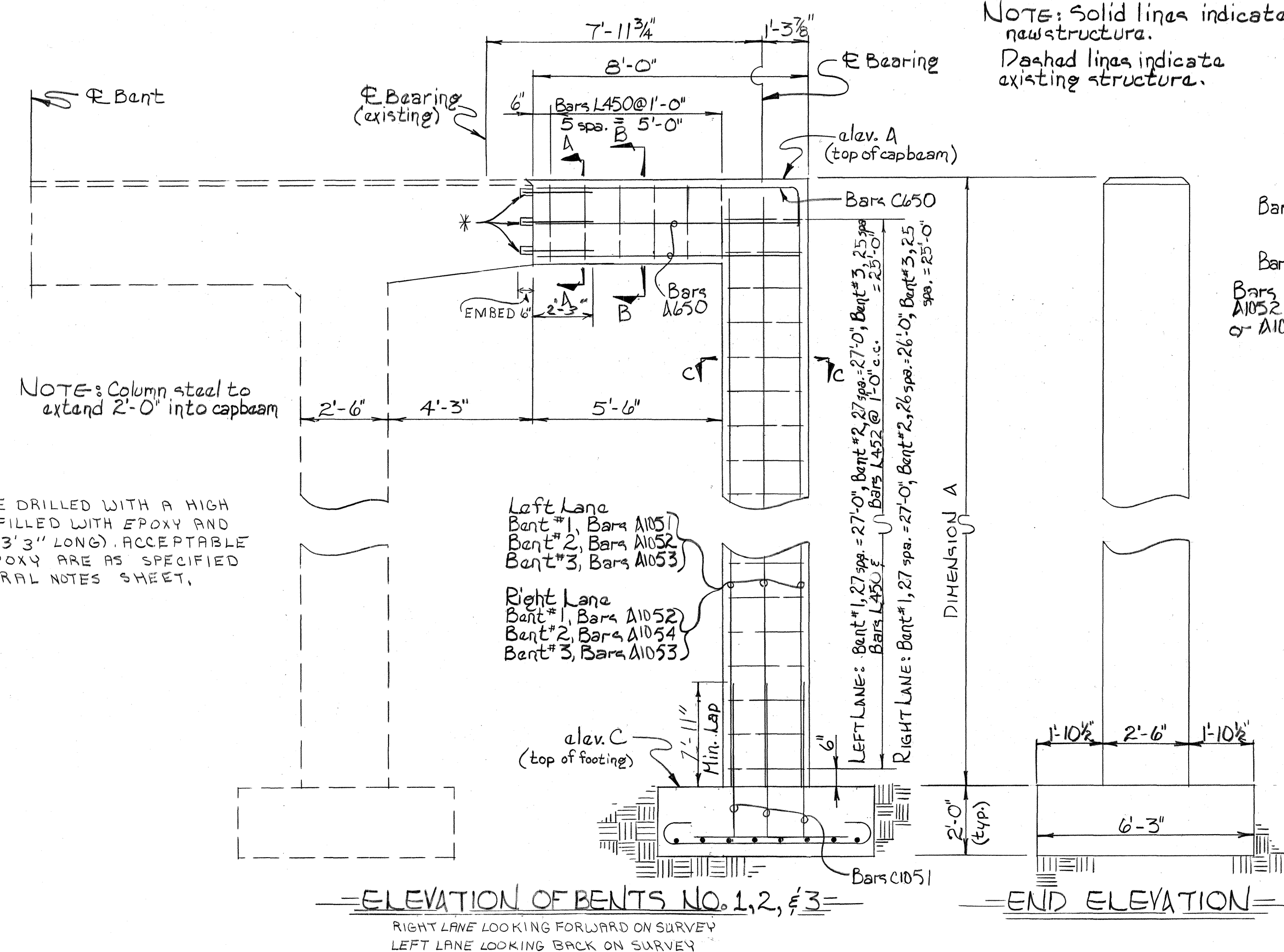
M-60-112

MICROFILMED



NOTES

Elastomeric pads shall be in place a minimum of one day before being disturbed by placing superstructure forms on concrete. Place Rubber Bonding Compound in such a way that column surfaces will not be stained.



*: 1" ϕ , 6" HOLE DRILLED WITH A HIGH SPEED DRILL FILLED WITH EPOXY AND BARS A651 (3'3" LONG). ACCEPTABLE BRANDS OF EPOXY ARE AS SPECIFIED ON THE GENERAL NOTES SHEET.

ESTIMATED QUANTITIES QUANTITIES					
ITEM		CLASS "A" CONCRETE		STEEL BAR REINFORCEMENT	
Left	Bent #1	11.4	(cu)	2056	(lbs)
	Bent #2	11.3	(cu)	2038	(lbs)
	Bent #3	10.9	(cu)	1948	(lbs)
Right	Bent #1	11.3	(cu)	2038	(lbs)
	Bent #2	11.0	(cu)	1985	(lbs)
	Bent #3	10.9	(cu)	1948	(lbs)

ELEVATIONS			DIMENSIONS
	ITEH	A	C
Left	Bent #1	771.06	740.56
	Bent #2	770.80	740.80
	Bent #3	770.54	742.54
Right	Bent #1	771.34	741.34
	Bent #2	771.08	742.33
	Bent #3	770.82	742.82

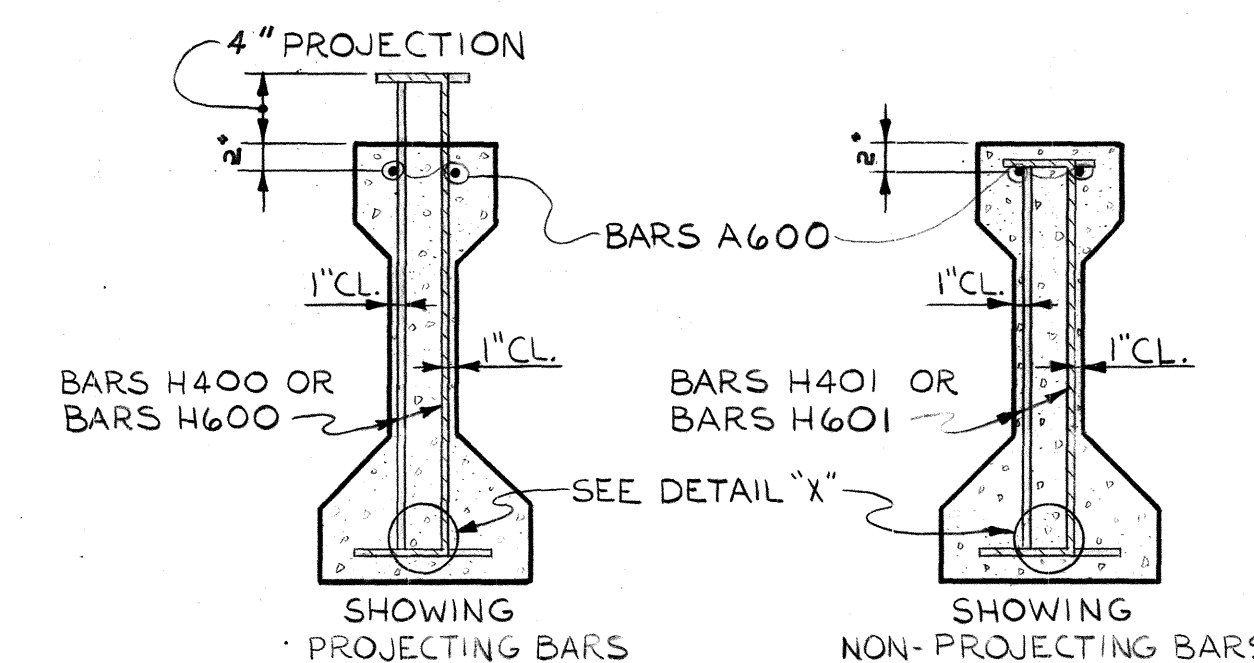
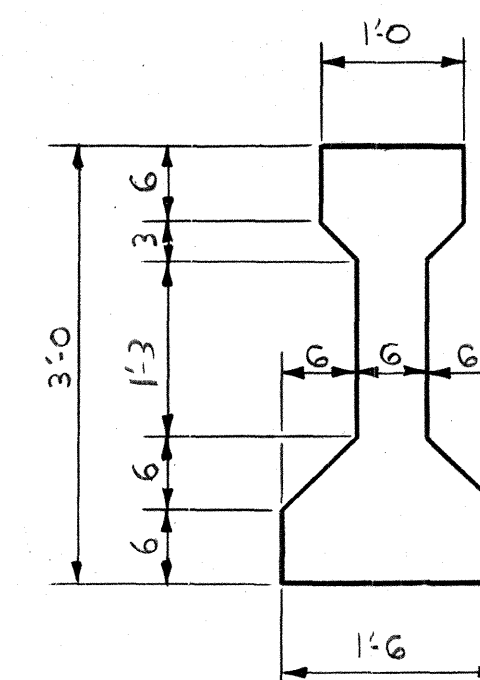
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BENTS NO. 1, 2, & 3, (LEFT & RIGHT LANES)
INTERSTATE 65 OVER STATE ROUTE 106
& WEST HARPETH RIVER
STATION 248 + 14.00
WILLIAMSON COUNTY
1978

CORRECT H. W. Don Rick
ENGINEER OF STRUCTURES

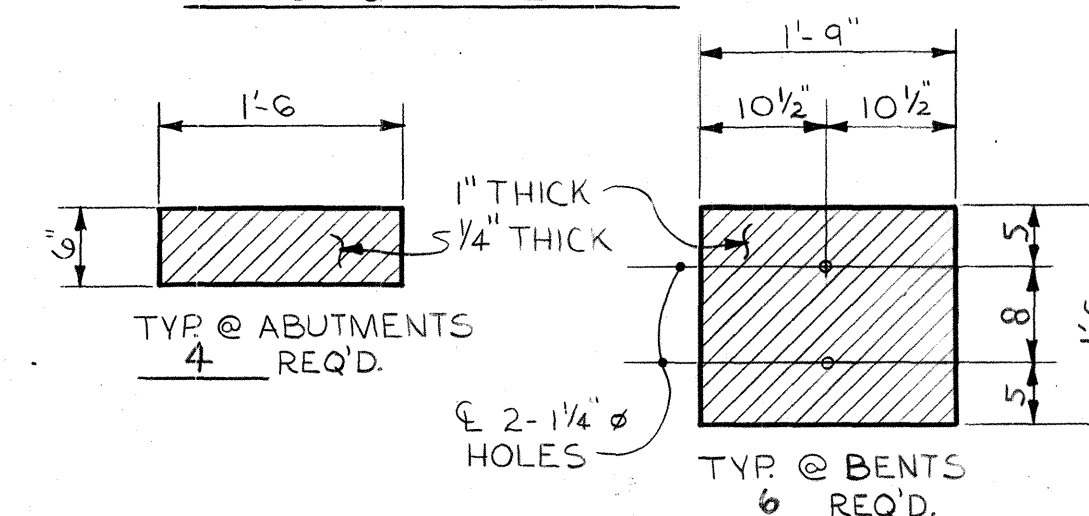
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-60-113

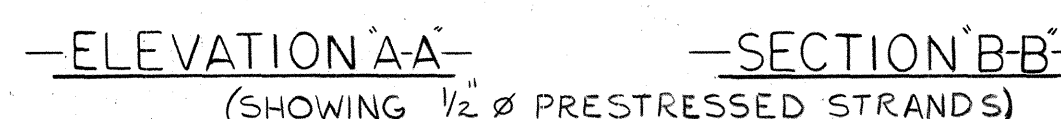
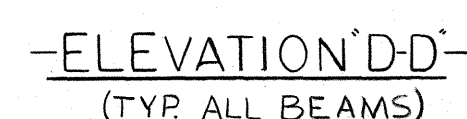


—SECTION "C-C"—

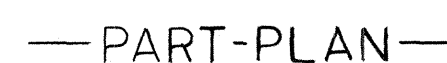
-GENERAL NOTES-



—DETAILS OF
ELASTOMERIC PADS—



— BEAMS B —



—BILL OF STEEL—PER BEAM—

BEAMS "A"			
BAR	SIZE	NO. REQ'D	LENGTH
A600	6	2	5'10"
C400	4	12	3'-1"
C600	6	8	3'-1"
H400	4	88	4'-4"
H401	4	8	3'-8"
H600	6	8	4'-4"
H601	6	16	3'-8"

—BILL OF STEEL - PER BEAM

Beam "B"			
BAR	SIZE	No. Req'd	LENGTH
AG00	G	2	35'-1"
CA00	4	12	3'-1"
CG00	G	8	3'-1"
HA00	4	48	4'-4"
HA01	4		
HG00	G	8	4'-4"
HG01	G	16	3'-8"

BEAM	NO. OF BEAMS REQUIRED	CONCRETE CLASS "A" C.Y.	REINFORCING STEEL LBS.	1/2" TYPE 270 K PREST. STRANDS LBS.
BEAMS "A"	6	4.9	629	490
BEAMS "B"	2	3.4	446	151

NOTE: THE COST OF ELASTOMERIC PADS AND 12 DOWEL BARS TO BE INCLUDED IN THE COST OF THE PRESTRESSED BEAM.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PRESTRESSED BEAM DETAILS
WIDENING OF LEFT & RIGHT LANES
I-65 OVER STATE ROUTE 106 &

WEST HARDETH RIVER

STATION 248+14.00

WILLIAMSON COUNTY

CORRECT H. W. Perlick 1978

APPROVED Louis E. Ryan
DIRECTOR OF HIGHWAYS

M-60-114

